APPENDIX C: Transportation

Contents:

- MassDOT Transportation Scoping Letter
- BPDA TIS Scoping Letter
- Proposed Roadways 80-Scale Plan
- Traffic Volume Count Data
- Seasonal Adjustment Factors
- Crash Data
- No Build Volume Redistribution Calculations
- Mode Share Calculations
- Trip Generation Data – Phase A (2025)
  - Unadjusted ITE Worksheets
  - Internal Capture Worksheets
  - TNC Trip Generation Calculations
- Trip Generation Data – Full Build (2030)
  - Unadjusted ITE Worksheets
  - Internal Capture Worksheets
  - TNC Trip Generation Calculations
- Intersection Queue Diagrams
  - 2025 Conditions
  - 2030 Conditions
- Intersection Capacity Analysis Worksheets
  - 2021 Existing Conditions
  - 2025 No Build Conditions
  - 2025 Build Conditions
  - 2030 No Build Conditions
  - 2030 Build Conditions
  - 2025 Build Conditions with Mitigation
  - 2030 Build Conditions with Mitigation
- Merge/Diverge Analysis Worksheets
- Signal Warrant Analysis Worksheets
  - Build without Mitigation Condition
  - Build with Mitigation Condition
- Automated Passenger Count Data
- Build with Mitigation Volume Redistribution Calculations

www.vhb.com

February 24, 2021

Ref: 15021.00 / EEA No. 16320

J. Lionel Lucien, P.E.
Manager, Public/Private Development Unit
Massachusetts Department of Transportation (MassDOT)
Office of Transportation Planning
10 Park Plaza, Room 4150
Boston, MA 02116

Re: Transportation Impact Analysis (TIA) Scoping Request
Enterprise Research Campus Project, Allston, Massachusetts

Dear Mr. Lucien:

On behalf of Tishman Speyer ERC Developer, LLC, and their team ("the Proponent"), VHB seeks input and concurrence on a proposed scope of work for a Transportation Impact Assessment (TIA) for the Proponent's Enterprise Research Campus Project, in the Allston neighborhood of Boston, Massachusetts. An Environmental Notification Form (ENF) for the Project is listed in the February 10, 2021 Massachusetts Environmental Policy Act (MEPA) *Environmental Monitor* (Volume 97, Issue 03).

VHB outlines in this Transportation Scoping Letter (TSL) the technical assumptions and key travel demand and transportation elements that the TIA will address. As presented at our meeting with you and state agency partners on February 22, the suggested scope outlined below was developed based on MassDOT's transportation impact assessment guidelines, VHB's experience in this area of the City of Boston, and ongoing consultation with the Boston Planning & Development Agency (BPDA) and the Boston Transportation Department (BTD) as part of the local project permitting and development review. Our intent is to submit the TIA as part of a Draft Environmental Impact Report (DEIR).

The Proponent has commenced City of Boston's Article 80B, Large Project Review with the filing of a Letter of Intent with the Boston Planning and Development Agency (BPDA) and a subsequent filing of a Project Notification Form (PNF); the Proponent expects to also file a TIA in a Draft Project Impact Report (DPIR) for City of Boston review by BPDA and Boston Transportation Department (BTD).

Engineers | Scientists | Planners | Designers

99 High Street
10th Floor
Boston, Massachusetts 02110
P 617.728.7777
F 617.728.7782

Project Overview

The Proponent is proposing to build a mixed-use office, lab/R&D, residential, retail, restaurant, and hotel/conference development on an underutilized previously developed urban site along Western Avenue in the Allston neighborhood of Boston, Massachusetts. The 1,940,000 SF development Project will be supported by various streets, sidewalks, and other utility infrastructure elements which are to be constructed by Harvard University (the "Enabling Infrastructure"). Approximately 1,280 parking spaces are proposed for the project.

MEPA Thresholds

Pursuant to the Massachusetts Environmental Policy Act (MEPA) and its implementing regulations, the Proponent filed an Environmental Notification Form (ENF) because the Project requires state agency permits/actions and exceeds a MEPA Review Threshold related to Wastewater.

While the Project does not intersect or abut the State Highway Layout (SHLO), the Project would also exceed the MEPA Review Thresholds related to traffic generation and parking: Based on Section 11.03(6) of the MEPA regulations, using unadjusted Institute of Transportation Engineers (ITE) trip generation rates, the Project exceeds the following Transportation Review Thresholds:

"a trip generation of 3,000 or more new Average Daily Trips (ADT) by motor vehicles on roadways providing access to a single location."

"construction of 1,000 or more new motor vehicle parking spaces at a single location"

Both transportation-related MEPA Review Thresholds would require a mandatory filing of an Environmental Impact Report (EIR).

Trip Generation

Project-generated traffic volume estimates were developed based on data provided in the ITE *Trip Generation*[1], applying trip rates for ITE land use codes. Unadjusted ITE-based project trips for each component are adjusted for vehicle occupancy, mode choice, and internal trip capture. The adjusted trips are the estimate of the expected vehicle trips for the Project and person-trips by transit, walking, and bicycling; these are presented in Table 1 below.

1 *Trip Generation* – Tenth Edition; Institute of Transportation Engineers (ITE); Washington D.C.; 2017.

Table 1: Estimated Project-Generated Trips by Mode

	Vehicles	Transit	Walk	Bike
Daily				
Enter	4,082	2,124	2,877	833
Exit	4,049	2,160	2,889	841
Total	8,141	4,284	5,766	1,674
AM Peak Hour				
Enter	489	408	338	89
Exit	190	131	210	58
Total	679	539	548	147
PM Peak Hour				
Enter	246	133	298	86
Exit	575	507	338	85
Total	821	640	636	171

Adjusted ITE trips based on:

- Trip rates for land use codes (LUC): 710 (Office), 760 (Research and Development Center), 221 (Mid-Rise Residential), 222 (High-Rise Residential), 820 (Retail – Shopping Center), 932 (High-Turnover Restaurant), and 310 (Hotel)
- 2017 National Household Travel Survey: for Average Vehicle Occupancy (AVO)
- 2012-2016 American Community Survey (ACS), U.S. Census, mode share data, adjusted to reflect the projected trends stated in the *Go Boston 2030* plan for Allston (Boston Transportation Department, March 2017, p. 107)
- ITE *Trip Generation Handbook* (3rd Edition) for calculation of the capture of internal trips among site uses

Proposed Analysis Conditions

The TIA would focus on the following analysis conditions:

- 2020 Existing Condition (applying pre-COVID-19 traffic volumes)
- 2030 No-Build Condition (includes background development and transportation projects)
- 2030 Build Condition (the full-build project on top of future background development)
- 2030 Build with Mitigation Condition (if applicable, to mitigate Project-related impacts)

The evaluation will also include a year 2025 analysis to represent an interim phase of the project.

Proposed Traffic Impact Analysis

A TIA would include an intersection capacity analysis to evaluate how well the Project area's roadways would perform under traffic demands placed upon them. It results in an assessment of the intersections under the

traffic volume levels observed and expected during the busiest (peak) hour in the morning and in the afternoon/evening for a typical weekday. This analysis would be completed using Synchro software.

Traffic Count Data

Traffic conditions resulting from the COVID-19 virus pandemic are atypical, and thus, collecting new traffic volume data is not recommended at this time. VHB would follow MassDOT's *Guidance on Traffic Count Data*, as detailed in the Engineering Directive number E-20-005, issued by the Chief Engineer on May 11, 2020, which allows for the use of historical traffic data (no older than 2014) on any project to supplement and/or replace existing traffic counts. Available year 2017 counts would be used to establish the Existing Condition volumes, with the added incorporation of traffic from the study area's development projects that were completed/occupied since 2017 and prior to 2020.

The future conditions analyses would not include a general background growth rate, as is typically incorporated in TIA analyses. This approach follows the City of Boston Transportation Department (BTD) guidance on traffic counts (January 2021),[2] and BPDA direction, to reflect City of Boston's mode share trends and to reflect a better alignment with its goals of reducing vehicle dependency.

Future conditions would include the expected traffic to be generated by nearby planned/approved development projects, including Harvard University's 2013 Institutional Master Plan ("IMP") and non-IMP projects around the Project Site, as directed by BPDA.

Study Area Network

The proposed Transportation Impact Study Area (Figure 1) for the TIA includes the following intersections:

- Western Avenue at Soldiers Field Road (signalized)
- Western Avenue at Kresge Way/Sanofi Genzyme Driveway (unsignalized)
- Western Avenue at Batten Way/Hague Street (signalized)
- North Harvard Street at Soldiers Field Road (signalized)
- North Harvard Street at Western Avenue (signalized)
- North Harvard Street at Franklin Street/Kingsley Street (signalized)
- Cambridge Street at North Harvard Street (signalized)
- Cambridge Street at Windom Street (signalized)
- Cambridge Street at I-90 Ramps/Double Tree Hotel (signalized)
- Cambridge Street at Soldiers Field Road (signalized)

2 www.boston.gov/sites/default/files/file/2021/01/Traffic%20Counts%20During%20and%20Post-Pandemic%20Guidelines_0.pdf

Construction of Harvard University's Science and Engineering Complex (SEC) enabling infrastructure in the vicinity of the Project Site results in three additional intersections, which will be included in the future conditions analyses:

- Western Avenue at Stadium Road (signalized)
- Western Avenue at Academic Way (unsignalized)
- North Harvard Street at Academic Way (unsignalized)

Under a Build Condition analysis, the Enabling Infrastructure will be introduced, including the new intersections on Western Ave at Cattle Drive and at East Drive, the intersection of Interim Cattle Drive at Windom Street, and the intersections internal to the Project Site.

For the year 2030 condition, the analysis assumes that MassDOT will not have completed the proposed Massachusetts Turnpike/I-90 Interchange reconstruction (and West Station), also known as the Allston Multimodal Project. According to the Boston Region MPO's long-range transportation plan, *Destination 2040*, the project is not expected to start construction until the 2030-2034 period.[3]

Safety / Crash Analysis

For each study area intersection, a crash analysis will be completed using the MassDOT crash database for the most recent five years of accepted/available data. These will be supplemented with City of Boston data. A summary of these crashes will be provided along with key crash factors such as time of day, collision type, weather conditions, and non-motorist involved crashes (pedestrian/bicyclist).

A preliminary review of MassDOT crash data indicates that there is one 2008-2017 HSIP bicycle cluster, at the intersection of North Harvard Street at Soldiers Field Road, and two 2015-2017 HSIP vehicle clusters at the intersections of North Harvard Street and Soldiers Field Road and at Cambridge Street at Soldiers Field Road. Both intersections have undergone recent (since 2017) geometric and safety improvements. We seek guidance from MassDOT as to whether road safety audits (RSAs) are required for these locations.

Proposed Transit Capacity Analysis

Transit access to the Project is provided by the existing MBTA Routes 64, 66, 70, and 86 (Figure 2). No changes to existing bus transit route alignments are anticipated. The Proponent will assess capacity impacts to existing MBTA bus routes to determine the need for additional vehicles or services to accommodate Project demand. The Proponent will also explore the need for supplemental shuttle services to enhance access from key area transit nodes and the opportunities to provide this access.

MBTA transit capacity would be analyzed under Fall 2019 weekday conditions (representing the baseline existing conditions prior to COVID-19 impacts and shutdown-related reductions in ridership) and in 2030 under both a No-Build and Build Condition. The transit capacity analyses would be performed in a manner

3 *Destination 2040:* Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization (MPO), CTPS, August 2019. www.ctps.org/data/pdf/plans/LRTP/destination/Destination-2040-LRTP-20191030.pdf#page=119

consistent with MassDOT Office of Performance Management and Innovation (OPMI) methods that are used to evaluate MBTA service according to its *Service Delivery Policy* passenger comfort standards.

Parking

The TIA would include a detailed analysis of shared parking and an evaluation of parking demand. The Proponent will collaborate with BPDA and BTD to determine final parking ratios for the Project that are aligned with the City's guidelines and goals. Parking supply will be constrained, and fair market parking pricing will be deployed, to minimize dependence on automobile travel and encourage the use of alternative means of accessing the Project Site, consistent with the goals of the Harvard Enterprise Research Campus Project.

Bicycle and Pedestrian Accommodations

A TIA would also include a thorough inventory of bicycle and pedestrian accommodations in the immediate study area, including identification of planned and proposed accommodations. The Project's bicycle and pedestrian accommodations and facilities will be designed in a manner consistent with the objectives of BTD's *Complete Streets Guidelines* and MassDOT's *Separated Bike Lane Planning & Design Guide* to encourage strong use of bicycling and walking, as active and sustainable transportation modes. These new accommodations will continue to establish new connections and build on the network development already underway in the area. The Project will support bicycle use by providing a BlueBikes bikeshare station on-site.

Transportation Demand Management (TDM)

Consistent with the City's goals to reduce automobile dependency, the Project will include a robust set of TDM strategies to encourage sustainable (non-vehicular) modes of transportation and enhance mobility by non-automobile travelers. All Project transportation infrastructure improvements and TDM measures will be reflected in a Transportation Access Plan Agreement (TAPA) to be executed between the Proponent and BTD.

Final Remarks

In this TSL, we outline the main assumptions and methods to be used in this project's TIA. The proposed study will provide insight to how the Project may impact the surrounding area and existing transportation infrastructure and operations. We trust that the foregoing information will assist in defining the Commonwealth's requirements for a TIA scope of work for this Project.

We respectfully request your feedback on the suggested transportation study scope of work, assumptions, data sources, and approaches. If you have any questions or need additional information, please contact me at 617-607-2639 or *ldantas@vhb.com*.

Sincerely,

Vanasse Hangen Brustlin, Inc.

Lourenço Dantas, AICP

Transportation Team Lead/Project Manager/Senior Transportation Planner
Transportation Planning & Operations

Cc: Max Cassidy, Tishman Speyer
Steven Morris, Tishman Speyer
Michael Regan, VHB
Jason Novsam, Nelson Nygaard

Attachments:

- Figure 1 – Traffic Study Area
- Figure 2 – Existing Transit Services

1. North Harvard Street at Soldiers Field Road
2. North Harvard Street at Western Avenue
3. North Harvard Street at Franklin Street/Kingsley St
4. Cambridge Street at North Harvard Street
5. Cambridge Street at Windom Street
6. Cambridge Street at I-90 Ramps/Double Tree Hotel
7. Cambridge Street at Soldiers Field Road
8. Western Avenue at Soldiers Field Road
9. Western Avenue at Kresge Way/Genzyme Driveway
10. Western Avenue at Batten Way/Hague Street
11. Western Avenue at Academic Way
12. Western Avenue at Stadium Way
13. N. Harvard Street at Academic Way

9. East Drive at Western Ave
14. Cattle Drive at Western Ave
15. Cattle Drive at DEF Drive
16. Cattle Drive/Almay at Windom St

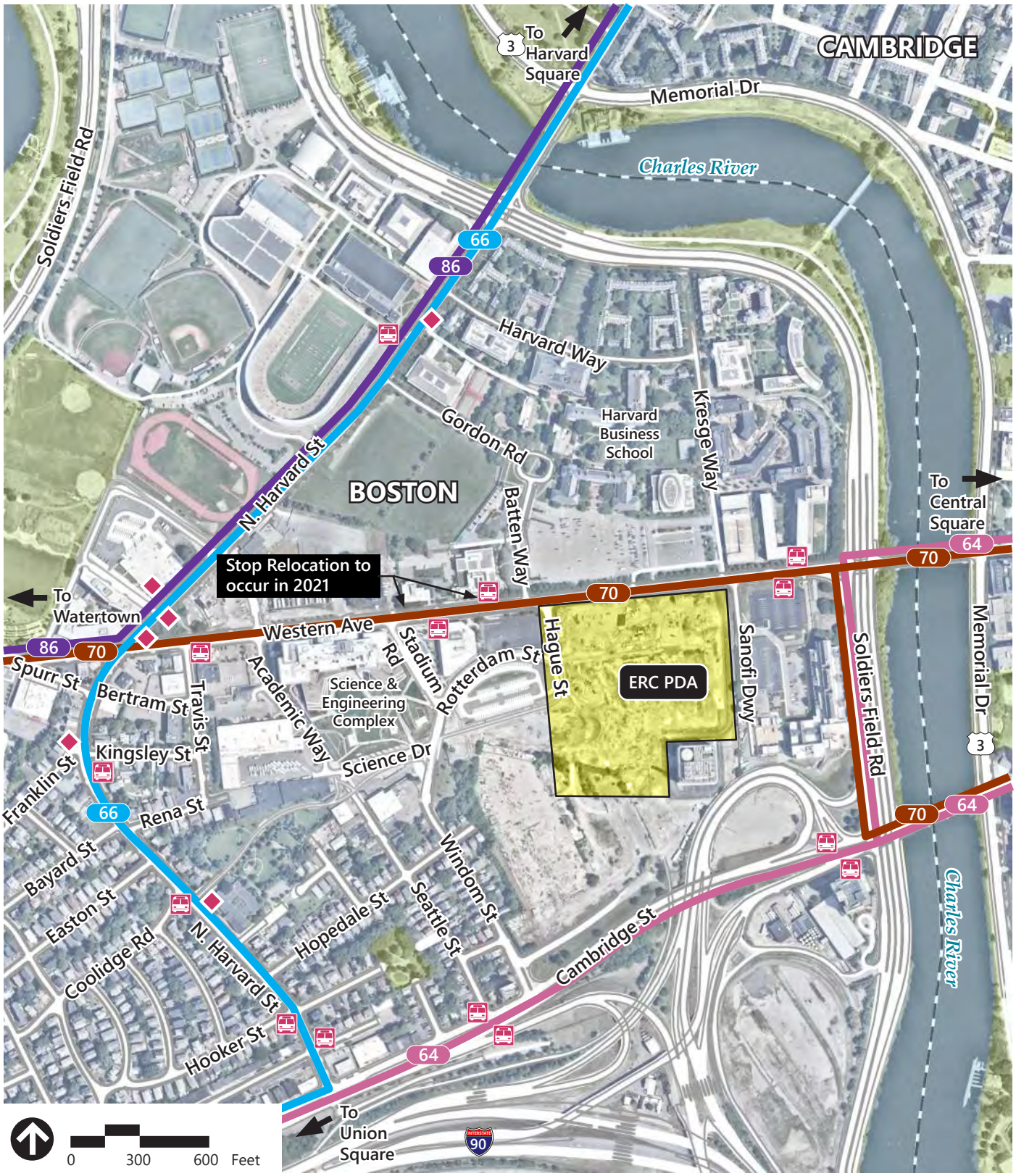
Base map aerial image: Nearmap Aerial (2020)

Existing and No-Build Intersection
ERC Intersection

Figure 1

Proposed Traffic Study Area Intersections

Enterprise Research Campus Project
Boston, MA



Base map aerial image: Nearmap Aerial (2020)

XX MBTA Bus Route

Route 70 – Market Place Drive or Waltham Center - University Park (Cambridge) via Western Ave
Route 66 – Harvard Square – Nubian Station (Roxbury) via N. Harvard St
Route 86 – Sullivan Square - Reservoir (Cleveland Circle) via N. Harvard St (North) & Western Ave (West)
Route 64 – Oak Square – University Park or Kendall/MIT via Cambridge St

MBTA Bus Stop

MBTA Bus Shelter

vhb

Figure 2

Existing Transit Services and Stops

Enterprise Research Campus Project
Boston, MA

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Acting Secretary & CEO

massDOT
Massachusetts Department of Transportation

March 2, 2021

Kathleen Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Boston: Enterprise Research Campus – ENF
(EEA #16320)

ATTN: MEPA Unit
Alex Strysky

Dear Secretary Theoharides:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the Environmental Notification Form for the Enterprise Research Campus project in Boston, as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

Ten Park Plaza, Suite 4150, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

cc: Jonathan Gulliver, Administrator, Highway Division
Patricia Leavenworth, P.E., Chief Engineer, Highway Division
John McInerney, District 6 Highway Director
Neil Boudreau, Assistant Administrator of Traffic and Highway Safety
Metropolitan Area Planning Council
Massachusetts Bay Transportation Authority
Boston Planning and Development Authority, City of Boston
Boston Transportation Department
Department of Conservation and Recreation

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Acting Secretary & CEO

massDOT
Massachusetts Department of Transportation

MEMORANDUM

TO: David Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E, Manager
Public/Private Development Unit

DATE: March 2, 2021

RE: Enterprise Research Campus – ENF
(EEA #16320)

The Public/Private Development Unit (PPDU) has reviewed the Environmental Notification Form (ENF) for the proposed Enterprise Research Campus (ERC) project in the Allston neighborhood of Boston. The project is located at 100 Western Avenue and will be developed by Tishman Speyer ERC Developer ("Proponent"). The project site consists of approximately 14.22 acres of land bounded by Western Avenue to the north, Sanofi-Genzyme to the east, the District Energy Facility and undeveloped land abutting Cambridge Street to the south, and Hague Street to the west. The site has historically been the home of transportation-related industrial uses, most recently by CSX Transportation. In 2000, the site was purchased by Harvard University, and in 2015 CSX Transportation relinquished its rights to the area. The site is currently used as a construction laydown and staging area for other Harvard University facilities. The project site is part of Harvard's vision of eventual development of their land holdings between Western Avenue and Cambridge Street.

The project will include 1,940,000 square feet (sf) of development, including 1,160,000 sf of lab/office uses, 135,000 sf of hotel space (250 keys), 75,000 sf of conference space, and 750 residential units. The project will be constructed in two phases. Phase A will include 900,000 sf of development on six acres, including all the hotel and conference space, 440,000 sf of lab/office space, and 330 residential units. Phase B will include the remainder of the lab/office space (720,000 sf) and residential units (420 units). The project will be supported by 1,280 parking spaces, of which approximately 40 spaces will be located on-street and the remainder will be garage-structured. Phase A will include 620 parking spaces and Phase B will include 940.

Access to the site will be provided via two new roadways that will intersect the south side of Western Avenue, Cattle Drive and East Drive. Access will also be provided from Cambridge Street via Almy Street. A third new roadway will be created, DEF Drive, which will run east-west to connect the new Cattle Drive and East Drive. The existing disused roadways on the project site, Hague Street and Rotterdam Street, will be eliminated. Of the total project site, 3.7 acres will be allocated to private streets and sidewalks open to public

Ten Park Plaza, Suite 4150, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

use. The streets, sidewalks, and other utility infrastructure to support the project will be constructed by Harvard Allston Land Company.

The project is expected to generate 23,984 unadjusted vehicle trips per day and 6,030 adjusted vehicle trips per day. The project trip generation and parking exceed the Massachusetts Environmental Policy Act (MEPA) Environmental Impact Report (EIR) transportation thresholds, 11.03(6)(a)(6), "generation of 3,000 or more New ADT on roadways providing access to a single location," and 11.03(6)(a)(7), "construction of 1,000 or more New parking spaces at a single location." Due to the project's proximity to MassDOT facilities including, Interstate 90 (I-90), the I-90 ramps, and the bridges over I-90 and Soldiers Field Road, the project may require an Access Permit from MassDOT should any off-site mitigation involve modifications to these facilities.

Separate from the ENF, the Proponent provided MassDOT with a Transportation Scoping Letter (TSL), prepared generally in conformance with guidance provided in the MassDOT/EOEEA *Transportation Impact Assessment (TIA) Guidelines*. MassDOT provides the following comments and scope of work for the Draft Environmental Impact Report (DEIR):

Scope of Work

The DEIR should include a TIA prepared in conformance with the current MassDOT/EOEEA *TIA Guidelines*. The study should include a comprehensive multimodal assessment of the transportation impacts of the project. The TIA should provide an evaluation of mobility to and from the project site for the existing conditions, future No-Build conditions, and future Build conditions within the study area. The future Build conditions should include an analysis of conditions both with and without any improvements suggested to mitigate project impacts. The study should propose a mitigation package intended to improve mobility for all users, with a particular focus on increased use of walking, bicycling, and transit by residents, employees, and visitors. Items listed below should be accounted for in preparing the TIA.

Trip Generation

The TSL determined that trip generation projections using Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) Land Use Codes (LUCs) 710 – General Office, 760 – Research & Development Center, 221 – Mid-Rise Residential, 222 – High-Rise Residential, 820 – Shopping Center, 932 – High-Turnover Restaurant, and 310 – Hotel would most accurately reflect the proposed development. MassDOT asks that the TIA consider whether LUC 310 accurately captures the trip generation of the conference facility included in the hotel.

The TSL includes an adjusted trip generation that reflects mode share. The mode share estimates are based on U.S. Census data and projected trends in the *Go Boston 2030* plan for Allston. These adjustments result in a trip generation, presented in the TSL, of 8,141 vehicle

trips on an average weekday, including 679 vehicle trips during the weekday morning peak hour and 821 vehicle trips during the weekday evening peak hour. MassDOT notes that the adjusted vehicle trip generation presented in the TSL is different from the adjusted trip generation presented in the ENF. The TSL also projects 4,284 transit trips on an average weekday, including 539 transit trips during the weekday morning peak hour and 640 transit trips during the weekday evening peak hour. The TIA should provide a detailed description of how the trip generation is calculated and clarify the discrepancy between the ENF and the TSL.

Mode Split

Several MBTA bus routes stop in the vicinity of the project site including routes 64, 66, 70, and 86. The TSL presents the mode split for the proposed project, based on U.S. Census data and the *Go Boston 2030* plan for the Allston area. MassDOT generally accepts and recommends that TIAs use mode share data based on existing data or empirically projected trends. Should the Proponent use aspirational mode share data, MassDOT requires that the Proponent provide quantitative analysis on how the transportation improvements and policies implemented by the project will achieve that mode share goal.

The TIA should include all back up data used to arrive at the mode split estimates to corroborate assumptions included in the analyses. The TIA should also include mode share estimates for taxi/Transportation Network Company (TNC, i.e. Uber and Lyft) trips because this would likely be a popular mode for the hotel and conference patrons. In accounting for these trips, the transportation analysis should take into consideration that one person trip made by a taxi/TNC results in two vehicle trips.

Trip Distribution

Vehicle and transit trips should be assigned to the study area network. The TIA should provide all appropriate back up documentation to verify how the distribution percentages are calculated and assigned to the roadway network and the transit system.

Study Area

The TSL proposes a study area consisting of the following intersections:

- Western Avenue at Soldiers Field Road;
- Western Avenue at Kresge Way/Sanofi Genzyme Driveway/Project Driveway;
- Western Avenue at Batten Way/Hague Street;
- North Harvard Street at Soldiers Field Road;
- North Harvard Street at Western Avenue;
- North Harvard Street at Franklin Street/Kingsley Street;
- Cambridge Street at North Harvard Street;
- Cambridge Street at Windom Street;
- Cambridge Street at I-90 Ramps/Double Tree Hotel; and

- Cambridge Street at Soldiers Field Road.

In addition, by the time of the future scenarios, three additional intersections will be constructed in the study area as part of the Harvard Science and Engineering Complex:

- Western Avenue at Stadium Road;
- Western Avenue at Academic Way; and
- North Harvard Street at Academic Way.

Furthermore, the Build scenarios that include the project will include three additional project driveway intersections (Western Avenue at Kresge Way/Sanofi Genzyme Driveway/Project Driveway will be the fourth project driveway):

- Western Avenue at Cattle Drive;
- Western Avenue at East Drive; and
- Interim Cattle Drive at Windom Street.

MassDOT asks that the study area be expanded to include the following intersections:

- Western Avenue at Memorial Drive (Cambridge);
- River Street at Memorial Drive (Cambridge);
- JFK Street at Memorial Drive (Cambridge);
- Merge of I-90 off-ramp onto Cambridge Street westbound; and
- Diverge of I-90 on-ramp from Cambridge Street eastbound.

Finally, depending on the expected trip distribution, MassDOT may request merge/diverge analyses for the Soldiers Field Road exit and entrance ramps at North Harvard Street and River Street/Western Avenue, as well as the I-90 mainline exit and entrance ramps at the Allston Interchange, including the ramp merge/diverge locations within the interchange.

The I-90 ramps are under MassDOT jurisdiction and the bridges over Soldiers Field Road, the Charles River, and I-90 are also under MassDOT jurisdiction. Soldiers Field Road and the intersections that provide access to Soldiers Field Road are under Department of Conservation and Recreation (DCR) jurisdiction. The study area will be subject to review by MassDOT in coordination with DCR when the comprehensive TIA is submitted. Please note that additional study area intersections should be included in the TIA if project-generated trips are anticipated to increase peak hour traffic volume by five percent or more, or by more than 100 vehicles per hour.

Background Growth

As described in the TSL, baseline traffic volumes should use historic traffic counts adjusted to 2019 conditions, standing in for 2021, according to the revised MassDOT *Guidance on Traffic Count Data*. The TSL notes that counts within the study area from 2017 have been identified.

In developing future No-Build and Build traffic volumes, the TIA should include trips generated by other nearby planned and/or approved projects as part of the background growth. ITE trip rates or completed TIAs should be used to estimate the vehicle trip generation of un-built and/or yet to be occupied space. In addition, an annual growth factor should be superimposed on existing traffic volumes prior to the addition of the volumes associated with background project-specific growth. The TSL proposes using no annual growth factor to develop future scenarios, in accordance with the City of Boston's guidance. However, MassDOT asks that for MassDOT controlled facilities, particularly I-90 and the I-90 ramps, that the analysis reflect a typical positive growth in roadway volumes.

The DEIR should further describe and clarify the other development planned by Harvard near the project site. The DEIR should clarify how this project will relate to and integrate with MassDOT, Boston, and Harvard's vision for development and transportation in the Allston area.

While the planning horizon year for TIAs is typically seven years from the time of submittal of the TIA, the TSL proposes Medium Term and Long Term scenarios in 2025 and 2030, respectively, to reflect the phased development of the site. MassDOT accepts this approach and asks that the Proponent clarify with MassDOT the project-related development that should be included in the 2030 No-Build scenario.

Future scenarios should also incorporate planned transportation projects. The Proponent should coordinate with MassDOT, the MBTA, and the City of Boston about ongoing and planned transportation improvements in the vicinity of the project site. The TSL states that the analysis for the future scenarios will not include the Massachusetts Turnpike/I-90 Interchange reconstruction (and West Station) (the Allston Multimodal Project) because, according to the Boston Region MPO's long-range transportation plan, the project is not expected to start construction until the 2030 to 2034 period. MassDOT concurs with this approach. Nevertheless, the Proponent should ensure that the design and transportation mitigation program for this project is consistent with the vision and mobility goals of the Allston Multimodal Project.

Traffic Operations

Capacity analyses should be conducted for the weekday morning and evening peak hours for both existing and future conditions for each development alternative considered. In addition, capacity analyses for Build with mitigation conditions should be provided for all intersections, particularly those with impacts to the state highway system.

The TIA should provide illustrations depicting the peak hour 50th (average) and 95th percentile queue lengths for each lane group/turning movement at each study area intersection, for all analysis scenarios. The information contained in these illustrations should clearly demonstrate that the project would not result in any extended queues that would block vehicle movements to/from study area intersections, particularly those involving state highways. Appropriate mitigation should be identified at any locations where queue

blockages occur. Color-coded illustrations should also be prepared depicting the level of service (LOS) for each lane group/turning movement for each case.

Safety

The TIA should include a safety analysis for all intersections and roadway segments within the study area. The analysis should calculate crash rates using MassDOT data for the most recent continuous five-year period. Crash rates should be documented, and additional mitigation considered at any locations exceeding the State and/or District 6 averages.

The Proponent should determine if any study area intersections are listed in the Highway Safety Improvement Program (HSIP) and coordinate with the MassDOT Highway Division's Safety Section to determine if a Road Safety Audit (RSA) is necessary. An initial review provided in the TSL identifies North Harvard Street at Soldiers Field Road as an HSIP bicycle cluster and North Harvard Street at Soldiers Field Road and Cambridge Street at Soldiers Field Road as HSIP vehicle clusters. The Proponent should coordinate with MassDOT about the need to complete RSAs at the HSIP eligible intersections before the submission of the DEIR; MassDOT anticipates that RSAs will be required.

Conceptual Plans

The TIA should include sufficiently detailed conceptual plans (minimum of 80-scale) for proposed roadway improvements in order to verify the feasibility of constructing such improvements. These plans should clearly show proposed lane widths and offsets, layout lines and jurisdictions, and land uses adjacent to areas where improvements are proposed.

Transit

As described above, the MBTA currently operates extensive bus service near the site and the project anticipates substantial transit mode share. The TIA should contain an analysis of additional transit demand generated by the project and the capacity on the MBTA bus routes proximate to the project site. Once the transit trip generation is developed and applied to the network, the TIA should address the following issues:

The analysis should be compliant with the MBTA's Office of Performance Management and Innovation's (OPMI) methodology for calculating the existing, future No-Build, and future Build comfort metrics (as evaluated in the Service Delivery Policy [SDP]) for each bus route within the project study area. Mitigation should be proposed for:

- Any bus route receiving new passengers that falls below the 96% route-wise minimum threshold for the SDP comfort metric (share of passenger travel time experienced in comfortable conditions);
- Any trip for which the new passengers would cause the trip to exceed the threshold; and/or

- Any trip which was already above the crowding threshold and to which new passengers would be added.

The Proponent should coordinate with the MassDOT PPDU and MBTA Service Planning in advance proposing of potential solutions to offset these project-related impacts.

The TIA should show how residents, employees, and visitors using the bus network will travel between the site and the bus stops. The TIA should show how pedestrian crossings and bus stops can be coordinated to ensure safe, accessible travel for bus customers. Of particular importance to the MBTA are all codes and standards related to the Americans with Disabilities Act (ADA), the Massachusetts Architectural Access Board (MAAB) along with the Federal Transit Administration (FTA) regulations and guidance. The Proponent should present the existing conditions on routes between nearby bus stops and the project site and how those conditions should be upgraded/improved to ensure a fully accessible path of travel for all customers.

The TIA should also identify and document transit improvement proposals under evaluation by MassDOT, the MBTA, and the City of Boston. Mitigation proposed for the project should be consistent with ongoing transit improvement initiatives of these agencies.

Pedestrian Access

The project will include new roadways internal to the project site, constructed by the Harvard Allston Land Company. All new roadways will include sidewalks on both sides of the roadway. New crosswalks will be added across the roadways that intersect Western Avenue and provide access to the project site. One of the new roadways, Cattle Drive, will include a mid-block raised crosswalk to connect with the new multi-use path to the west of the project site. This multi-use path will travel from east to west across the project site and integrate with a greenway system envisioned for the area.

Because the project anticipates a high pedestrian mode share, it is expected that the Proponent will provide a mitigation package that ensures walking and bicycling will be an attractive way to access the site. The TIA should provide an inventory of existing sidewalks and crosswalks within the study area and should address the quality and condition of those facilities. The TIA should include a commitment to improvements in any areas that are structurally deficient or not meeting current codes for accessibility, including sidewalks, crosswalks, ramps, and pedestrian equipment. Special attention should be given to linking the proposed development to adjacent complementary land uses and transit facilities.

Bicycle Access

As described in the TSL, the project will include new bicycle infrastructure connecting to the protected bike lanes along Western Avenue, including separated bike lanes on both sides of the new roadways, Cattle Drive and East Drive.

The TIA should include a detailed inventory of the bicycle network to include bikeway types, bikeway widths, and bicycle numbers and speeds. The Proponent should identify the likely travel routes for bicyclists within the study area. The degree to which these routes can safely support bicycle travel should also be examined. The TIA should reevaluate these routes based on the origin-destination of potential residents, employees, and visitors. Based on this analysis, the Proponent should consider the feasibility of expanding some of these existing routes or considering new routes to encourage bicycle travel in and around the site. The Proponent should work closely with MassDOT and the City of Boston to provide a seamless connection between the existing and planned bicycle facilities in the study area.

Parking

According to the TSL, the project would include the provision of 1,280 parking spaces. The TSL notes that the parking supply will be constrained and priced at fair market value to discourage accessing the site by single occupancy vehicle (SOV) travel. The TIA should explain the methodology used to determine the total parking required. The ITE *Parking Generation Manual* (5th Edition) generally provides a reasonable basis for comparison to parking requirements under local zoning. The TIA should include a summary of parking need and supply for comparable facilities based on multiple data sources. The TIA should also determine the number of parking spaces occupied at various times of day and identify periods of peak use.

Transportation Demand Management (TDM)

The TSL states that the Proponent is committed to implementing TDM measures. The TIA should include a comprehensive TDM program that would implement measures aimed at minimizing SOV and TNC trip generation to achieve the robust non-SOV mode share presented in the TSL. The TDM program should further investigate measures that would maximize usage of existing and potential new pedestrian, bicycle, and transit facilities. Such measures may include the following:

- Limiting the available parking supply;
- Provision of a parking cash-out program and/or charging for parking;
- Provision of on-site amenities and conveniences that would reduce the need for automobile travel;
- Provision of carpooling and vanpooling programs and perks;
- Provision of free or subsidized transit passes;
- Provision of a mobility hub to centralize multiple modes of transportation including the TNC/taxi trips expected to serve the hotel;
- Provision of seamless, welcoming, and direct pedestrian access to nearby transit hubs; and
- Provision of robust bicycle and pedestrian amenities.

The ENF states that the project will join the Allston/Brighton Transportation Management Association (TMA). The Proponent should work with the TMA to develop a TDM program for the project.

Transportation Monitoring Program

The Proponent will be required to conduct an annual transportation monitoring program for a period of five years, beginning six months after occupancy of the full-build project. The goals of the monitoring program will be to evaluate the assumptions made in the EIR and the adequacy of the mitigation measures, as well as to determine the effectiveness of the TDM program. It would include:

- Simultaneous automatic traffic recorder (ATR) counts at each parking entrance for a continuous 24-hour period on a typical weekday;
- Weekday morning and evening peak hour turning movement counts (TMCs) and operations analysis at "mitigated" intersections, including those involving parking entrances;
- Travel survey of residents, employees, and visitors at the site (to be administered by the Transportation Coordinator); and
- Transit Ridership counts.

The Proponent should continue consultation with the City of Boston, DCR, and appropriate MassDOT units, including PPDU, the MBTA, and the District 6 Office. If you have any questions regarding these comments, please contact me or Catrina Meyer at *Catrina.Meyer@dot.state.ma.us*.

To: Nupoor Monani
RE: Harvard ERC PNF
BPDA Transportation Planning Comments
Date March 16th, 2021

Listed below are the BPDA Transportation Planning Team's comments on the Harvard ERC Project Notification Form ("PNF") filed on February 2nd, 2021. The Proponent has been in close coordination with the City through the development review process, but this letter serves as a written record of Staff comments.

Go Boston 2030

Go Boston 2030, the City of Boston's long-term transportation action plan, envisions a city where all residents have better and more equitable travel choices, where efficient transportation networks foster economic opportunity, and where the City has taken steps to prepare for climate change. Whether traveling by transit, on foot, on a bike, or by car, Bostonians will be able to access all parts of the city safely and reliably. This vision was created with the help of thousands of Bostonians through a significant public engagement process.

This vision establishes foundational priorities for all transportation projects in the City, including development proposals as they impact transportation networks and the public realm. Go Boston 2030's primary goals—expanding access, improving safety, and ensuring reliability—help the City hold all projects accountable to this vision. Its aspirational targets clearly establish a yardstick for measuring success.In short, when reviewing proposals we must ask ourselves: does the project bring the City closer to achieving its transportation vision, goals, and targets?

<u>Mode Shift</u>

Goal: Reduce reliance on single occupancy vehicles and increase trips occurring via transit, walking, and biking.

Aspiration Target: By 2030, reduce single occupancy vehicle commute to work trips by 50%, increase transit trips by a third, increase walking trips by half, and increase biking rates four fold.

<u>Expanding Access</u>

Goal: Make Boston's neighborhoods interconnected for all modes of travel.

Aspirational Target: Every home in Boston will be within a 10-minute walk of a rail station or key bus route stop, and Bluebikes station, and car share.

Improving Safety

Goal: Substantially reduce collisions on every street through education, enforcement, and designs that reallocate street space to prioritize moving people safely rather than faster.
Aspirational Target: Eliminate traffic fatalities and severe injuries in Boston.

Ensuring Reliability

Goal: Prioritize making travel predictable on Boston's transit and roadway networks.
Aspirational Target: Bostonians' average commute to work time will decrease by 10%.

Please articulate how the project's transportation network analysis, proposed interventions and improvements, and Transportation Demand Management strategies help to advance the goals, projects, policies, and overall vision for transportation set out in Go Boston 2030.

Transportation Analysis

Further refinement of any updates to transportation forecasting/modeling should continue to be coordinated with BPDA Transportation and BTD staff. This includes modeling assumptions such as pipeline development, mode splits, and transit analysis methodology among others.

Parking

The proposed parking ratios are acceptable (0.8 for office/lab, 0.5 for residential, 0.2 for hotel).

Greenway Connection

The nature and materiality of the greenway as it crosses Cattle Drive and East Drive must be further refined. We hope that the greenway is legibly carried over across these streets with more than just crosswalks. Possible considerations could be traffic calming interventions, pavement markings, signage, and more.

Bike Network

Please refer to BTD's Bicycle Level of Traffic Stress Map and Methodology and provide us the project team's understanding of the development's surrounding roadway network and proposed roadway conditions' ability to promote low-stress biking as part of the project.

As currently proposed, the bike facilities on Cattle Drive disappear when it turns into "Interim Cattle Drive"/Almy Street. The Proponent should design bike facilities on this interim road to connect the project site with Cambridge Street.

Bike Parking

In accordance with BTD's Bike Parking Guidelines the site plan must include details about the proposed bike parking rooms including number of bike parking spaces, bike rack types, dimensions of the walkway aisles, and a circulation diagram showing how users will access the bike parking rooms.

Bikeshare Requirements

In accordance with BTD's Bike Parking Guidelines the Proponent will be asked to make a monetary contribution to the Bluebikes system based on the table located in the bike parking guidelines. Further, while the final number and location of Bluebikes stations(s) will be coordinated with BTD, at least one space for a 19-dock Bluebikes station should be provided on the site and included in future site plans.

Cross-Sections

The Proponent should provide proposed cross-sections for each street segment with accurate dimensions for all elements in the public realm (travel lanes, parking, buffers, bike lanes, furnishing zones, sidewalks, etc). Final cross-sections will be approved in coordination with BPDA Transportation, BTD, and PIC staff.

Loading and Driveways

All driveways and loading curb cuts should be reduced to 20' wide maximum and consolidated where possible. Further, the sidewalk must continue flush across the driveway to maintain pedestrian accessibility.

Shuttle Participation

The Proponent should confirm that they will participate in the Harvard University shuttle system and provide the location of any shuttle stop(s) on the Project Site.

TDM Measures

Transportation Demand Management efforts should be coordinated specifically with BPDA Transportation and BTD staff to align with updated TDM strategies that have recently been developed by BTD.

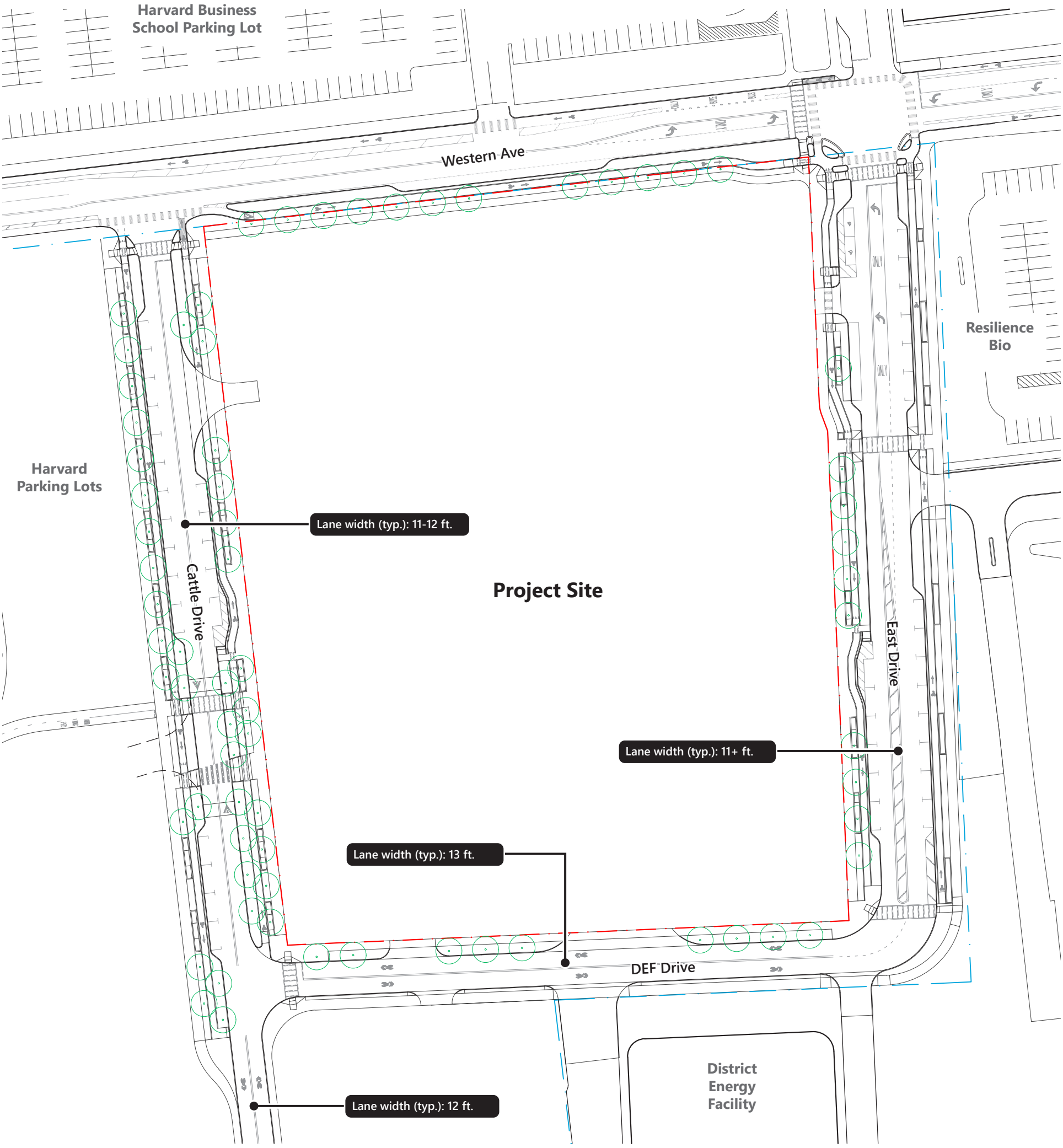


Figure C.1

Supporting Documentation - Enabling Roadways Plan

Enterprise Research Campus Project
Boston, MA

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	2	42	80	0	124	38	3	15	0	56	13	49	20	0	82	11	0	39	0	50	312
7:15 AM	4	35	79	0	118	40	0	13	1	54	13	70	19	0	102	11	3	61	0	75	349
7:30 AM	2	37	82	0	121	49	1	19	0	69	24	72	14	0	110	10	2	68	1	81	381
7:45 AM	5	38	82	0	125	51	1	18	1	71	19	104	14	0	137	14	4	62	0	80	413
Total	13	152	323	0	488	178	5	65	2	250	69	295	67	0	431	46	9	230	1	286	1455
8:00 AM	5	33	93	0	131	61	0	17	2	80	9	61	8	0	78	12	3	66	0	81	370
8:15 AM	2	31	91	0	124	44	1	15	0	60	11	109	10	0	130	19	3	95	0	117	431
8:30 AM	6	30	70	0	106	58	1	14	0	73	10	111	21	0	142	13	1	66	1	81	402
8:45 AM	2	61	63	0	126	54	0	17	0	71	8	96	7	0	111	12	1	87	0	100	408
Total	15	155	317	0	487	217	2	63	2	284	38	377	46	0	461	56	8	314	1	379	1611
Grand Total	28	307	640	0	975	395	7	128	4	534	107	672	113	0	892	102	17	544	2	665	3066
Approach %	2.9	31.5	65.6	0.0		74.0	1.3	24.0	0.7		12.0	75.3	12.7	0.0		15.3	2.6	81.8	0.3		
Total %	0.9	10.0	20.9	0.0	31.8	12.9	0.2	4.2	0.1	17.4	3.5	21.9	3.7	0.0	29.1	3.3	0.6	17.7	0.1	21.7	
Exiting Leg Total					1611					768					537					150	3066
Cars	28	249	637	0	914	395	7	128	4	534	107	576	108	0	791	97	17	540	2	656	2895
% Cars	100.0	81.1	99.5	0.0	93.7	100.0	100.0	100.0	100.0	100.0	100.0	85.7	95.6	0.0	88.7	95.1	100.0	99.3	100.0	98.6	94.4
Exiting Leg Total					1511					765					474					145	2895
Heavy Vehicles	0	31	1	0	32	0	0	0	0	0	0	55	2	0	57	4	0	2	0	6	95
% Heavy Vehicles	0.0	10.1	0.2	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	8.2	1.8	0.0	6.4	3.9	0.0	0.4	0.0	0.9	3.1
Exiting Leg Total					57					1					35					2	95
Buses	0	27	2	0	29	0	0	0	0	0	0	41	3	0	44	1	0	2	0	3	76
% Buses	0.0	8.8	0.3	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	2.7	0.0	4.9	1.0	0.0	0.4	0.0	0.5	2.5
Exiting Leg Total					43					2					28					3	76

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

7:45 AM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	5	38	82	0	125	51	1	18	1	71	19	104	14	0	137	14	4	62	0	80	413
8:00 AM	5	33	93	0	131	61	0	17	2	80	9	61	8	0	78	12	3	66	0	81	370
8:15 AM	2	31	91	0	124	44	1	15	0	60	11	109	10	0	130	19	3	95	0	117	431
8:30 AM	6	30	70	0	106	58	1	14	0	73	10	111	21	0	142	13	1	66	1	81	402
Total Volume	18	132	336	0	486	214	3	64	3	284	49	385	53	0	487	58	11	289	1	359	1616
% Approach Total	3.7	27.2	69.1	0.0		75.4	1.1	22.5	1.1		10.1	79.1	10.9	0.0		16.2	3.1	80.5	0.3		
PHF	0.750	0.868	0.903	0.000	0.927	0.877	0.750	0.889	0.375	0.888	0.645	0.867	0.631	0.000	0.857	0.763	0.688	0.761	0.250	0.767	0.937
Cars	18	107	335	0	460	214	3	64	3	284	49	341	52	0	442	54	11	286	1	352	1538
Cars %	100.0	81.1	99.7	0.0	94.7	100.0	100.0	100.0	100.0	100.0	100.0	88.6	98.1	0.0	90.8	93.1	100.0	99.0	100.0	98.1	95.2
Heavy Vehicles	0	13	0	0	13	0	0	0	0	0	0	26	1	0	27	3	0	1	0	4	44
Heavy Vehicles %	0.0	9.8	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	6.8	1.9	0.0	5.5	5.2	0.0	0.3	0.0	1.1	2.7
Buses	0	12	1	0	13	0	0	0	0	0	0	18	0	0	18	1	0	2	0	3	34
Buses %	0.0	9.1	0.3	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	3.7	1.7	0.0	0.7	0.0	0.8	2.1
Cars Enter Leg	18	107	335	0	460	214	3	64	3	284	49	341	52	0	442	54	11	286	1	352	1538
Heavy Enter Leg	0	13	0	0	13	0	0	0	0	0	0	26	1	0	27	3	0	1	0	4	44
Bus Enter Leg	0	12	1	0	13	0	0	0	0	0	0	18	0	0	18	1	0	2	0	3	34
Total Entering Leg	18	132	336	0	486	214	3	64	3	284	49	385	53	0	487	58	11	289	1	359	1616
Cars Exiting Leg					841					398					225					74	1538
Heavy Exiting Leg					27					0					16					1	44
Buses Exiting Leg					20					1					13					0	34
Total Exiting Leg					888					399					254					75	1616

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	2	35	79	0	116	38	3	15	0	56	13	37	19	0	69	11	0	39	0	50	291
7:15 AM	4	26	79	0	109	40	0	13	1	54	13	59	17	0	89	11	3	61	0	75	327
7:30 AM	2	30	82	0	114	49	1	19	0	69	24	58	13	0	95	10	2	67	1	80	358
7:45 AM	5	32	82	0	119	51	1	18	1	71	19	93	14	0	126	14	4	62	0	80	396
Total	13	123	322	0	458	178	5	65	2	250	69	247	63	0	379	46	9	229	1	285	1372
8:00 AM	5	27	92	0	124	61	0	17	2	80	9	54	8	0	71	11	3	65	0	79	354
8:15 AM	2	23	91	0	116	44	1	15	0	60	11	97	10	0	118	17	3	95	0	115	409
8:30 AM	6	25	70	0	101	58	1	14	0	73	10	97	20	0	127	12	1	64	1	78	379
8:45 AM	2	51	62	0	115	54	0	17	0	71	8	81	7	0	96	11	1	87	0	99	381
Total	15	126	315	0	456	217	2	63	2	284	38	329	45	0	412	51	8	311	1	371	1523
Grand Total	28	249	637	0	914	395	7	128	4	534	107	576	108	0	791	97	17	540	2	656	2895
Approach %	3.1	27.2	69.7	0.0		74.0	1.3	24.0	0.7		13.5	72.8	13.7	0.0		14.8	2.6	82.3	0.3		
Total %	1.0	8.6	22.0	0.0	31.6	13.6	0.2	4.4	0.1	18.4	3.7	19.9	3.7	0.0	27.3	3.4	0.6	18.7	0.1	22.7	
Exiting Leg Total					1511					765					474					145	2895

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

7:45 AM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	5	32	82	0	119	51	1	18	1	71	19	93	14	0	126	14	4	62	0	80	396
8:00 AM	5	27	92	0	124	61	0	17	2	80	9	54	8	0	71	11	3	65	0	79	354
8:15 AM	2	23	91	0	116	44	1	15	0	60	11	97	10	0	118	17	3	95	0	115	409
8:30 AM	6	25	70	0	101	58	1	14	0	73	10	97	20	0	127	12	1	64	1	78	379
Total Volume	18	107	335	0	460	214	3	64	3	284	49	341	52	0	442	54	11	286	1	352	1538
% Approach Total	3.9	23.3	72.8	0.0		75.4	1.1	22.5	1.1		11.1	77.1	11.8	0.0		15.3	3.1	81.3	0.3		
PHF	0.750	0.836	0.910	0.000	0.927	0.877	0.750	0.889	0.375	0.888	0.645	0.879	0.650	0.000	0.870	0.794	0.688	0.753	0.250	0.765	0.940
Entering Leg	18	107	335	0	460	214	3	64	3	284	49	341	52	0	442	54	11	286	1	352	1538
Exiting Leg					841					398					225					74	1538
Total					1301					682					667					426	3076

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	4	1	0	5	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	12
7:15 AM	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
7:30 AM	0	5	0	0	5	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	14
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	13
Total	0	16	1	0	17	0	0	0	0	0	0	30	1	0	31	0	0	1	0	1	49
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:15 AM	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	13
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	8	1	0	9	1	0	1	0	2	14
8:45 AM	0	5	0	0	5	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	15
Total	0	15	0	0	15	0	0	0	0	0	0	25	1	0	26	4	0	1	0	5	46
Grand Total	0	31	1	0	32	0	0	0	0	0	0	55	2	0	57	4	0	2	0	6	95
Approach %	0.0	96.9	3.1	0.0		0.0	0.0	0.0	0.0		0.0	96.5	3.5	0.0		66.7	0.0	33.3	0.0		
Total %	0.0	32.6	1.1	0.0	33.7	0.0	0.0	0.0	0.0	0.0	0.0	57.9	2.1	0.0	60.0	4.2	0.0	2.1	0.0	6.3	
Exiting Leg Total					57					1					35					2	95

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

7:00 AM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	4	1	0	5	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	12
7:15 AM	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
7:30 AM	0	5	0	0	5	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	14
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	13
Total Volume	0	16	1	0	17	0	0	0	0	0	0	30	1	0	31	0	0	1	0	1	49
% Approach Total	0.0	94.1	5.9	0.0		0.0	0.0	0.0	0.0		0.0	96.8	3.2	0.0		0.0	0.0	100.0	0.0		
PHF	0.000	0.800	0.250	0.000	0.850	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.775	0.000	0.000	0.250	0.000	0.250	0.875
Entering Leg	0	16	1	0	17	0	0	0	0	0	0	30	1	0	31	0	0	1	0	1	49
Exiting Leg					31					1					16					1	49
Total					48					1					47					2	98

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	3	0	0	3	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	9
7:15 AM	0	5	0	0	5	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	12
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Total	0	13	0	0	13	0	0	0	0	0	0	18	3	0	21	0	0	0	0	0	34
8:00 AM	0	4	1	0	5	0	0	0	0	0	0	5	0	0	5	1	0	1	0	2	12
8:15 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	9
8:45 AM	0	5	1	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
Total	0	14	2	0	16	0	0	0	0	0	0	23	0	0	23	1	0	2	0	3	42
Grand Total	0	27	2	0	29	0	0	0	0	0	0	41	3	0	44	1	0	2	0	3	76
Approach %	0.0	93.1	6.9	0.0		0.0	0.0	0.0	0.0		0.0	93.2	6.8	0.0		33.3	0.0	66.7	0.0		
Total %	0.0	35.5	2.6	0.0	38.2	0.0	0.0	0.0	0.0	0.0	0.0	53.9	3.9	0.0	57.9	1.3	0.0	2.6	0.0	3.9	
Exiting Leg Total					43					2					28					3	76

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

8:00 AM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	4	1	0	5	0	0	0	0	0	0	5	0	0	5	1	0	1	0	2	12
8:15 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	9
8:45 AM	0	5	1	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
Total Volume	0	14	2	0	16	0	0	0	0	0	0	23	0	0	23	1	0	2	0	3	42
% Approach Total	0.0	87.5	12.5	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		33.3	0.0	66.7	0.0		
PHF	0.000	0.700	0.500	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.958	0.000	0.000	0.958	0.250	0.000	0.500	0.000	0.375	0.875
Entering Leg	0	14	2	0	16	0	0	0	0	0	0	23	0	0	23	1	0	2	0	3	42
Exiting Leg					25					2					15					0	42
Total					41					2					38					3	84

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
7:00 AM	1	1	0	0	10	4	16	0	0	0	0	0	1	1	0	10	0	0	0	0	10	0	0	0	0	0	0	0	27
7:15 AM	0	1	0	0	11	5	17	0	0	0	0	0	0	0	0	5	0	0	0	2	7	0	0	0	0	1	0	1	25
7:30 AM	0	4	0	0	7	1	12	0	0	0	0	0	0	0	0	18	0	0	0	0	18	0	0	0	0	0	1	1	31
7:45 AM	0	8	0	0	9	5	22	0	0	0	0	0	0	0	0	14	0	0	0	1	15	0	0	0	0	1	0	1	38
Total	1	14	0	0	37	15	67	0	0	0	0	0	1	1	0	47	0	0	0	3	50	0	0	0	0	2	1	3	121
8:00 AM	1	8	0	0	5	2	16	0	2	0	0	1	0	3	0	16	0	0	0	1	17	0	0	0	0	0	0	0	36
8:15 AM	0	8	0	0	19	2	29	0	1	0	0	0	1	2	0	24	0	0	0	1	25	0	0	1	0	0	1	2	58
8:30 AM	0	8	1	0	16	0	25	0	0	0	0	0	0	0	0	14	0	0	0	0	14	0	0	0	0	0	0	0	39
8:45 AM	0	9	0	0	16	2	27	0	0	0	0	0	0	0	0	27	0	0	0	0	27	0	0	0	0	0	0	0	54
Total	1	33	1	0	56	6	97	0	3	0	0	1	1	5	0	81	0	0	0	2	83	0	0	1	0	0	1	2	187
Grand Total	2	47	1	0	93	21	164	0	3	0	0	1	2	6	0	128	0	0	0	5	133	0	0	1	0	2	2	5	308
Approach %	1.2	28.7	0.6	0.0	56.7	12.8		0.0	50.0	0.0	0.0	16.7	33.3		0.0	96.2	0.0	0.0	0.0	3.8		0.0	0.0	20.0	0.0	40.0	40.0		
Total %	0.6	15.3	0.3	0.0	30.2	6.8	53.2	0.0	1.0	0.0	0.0	0.3	0.6	1.9	0.0	41.6	0.0	0.0	0.0	1.6	43.2	0.0	0.0	0.3	0.0	0.6	0.6	1.6	
Exiting Leg Total							243							4							52							9	308

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

8:00 AM	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
8:00 AM	1	8	0	0	5	2	16	0	2	0	0	1	0	3	0	16	0	0	0	1	17	0	0	0	0	0	0	0	36
8:15 AM	0	8	0	0	19	2	29	0	1	0	0	0	1	2	0	24	0	0	0	1	25	0	0	1	0	0	1	2	58
8:30 AM	0	8	1	0	16	0	25	0	0	0	0	0	0	0	0	14	0	0	0	0	14	0	0	0	0	0	0	0	39
8:45 AM	0	9	0	0	16	2	27	0	0	0	0	0	0	0	0	27	0	0	0	0	27	0	0	0	0	0	0	0	54
Total Volume	1	33	1	0	56	6	97	0	3	0	0	1	1	5	0	81	0	0	0	2	83	0	0	1	0	0	1	2	187
% Approach Total	1.0	34.0	1.0	0.0	57.7	6.2		0.0	60.0	0.0	0.0	20.0	20.0		0.0	97.6	0.0	0.0	0.0	2.4		0.0	0.0	50.0	0.0	0.0	50.0		
PHF	0.250	0.917	0.250	0.000	0.737	0.750	0.836	0.000	0.375	0.000	0.000	0.250	0.250	0.417	0.000	0.750	0.000	0.000	0.000	0.500	0.769	0.000	0.000	0.250	0.000	0.000	0.250	0.250	0.806
Entering Leg	1	33	1	0	56	6	97	0	3	0	0	1	1	5	0	81	0	0	0	2	83	0	0	1	0	0	1	2	187
Exiting Leg							144							3							35							5	187
Total							241							8							118							7	374

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
7:00 AM	0	0	0	0	8	9	17	0	0	0	0	18	40	58	0	0	0	0	8	4	12	0	0	0	0	8	16	24	111
7:15 AM	0	0	0	0	12	4	16	0	0	0	0	23	21	44	0	0	0	0	12	1	13	0	0	0	0	16	16	32	105
7:30 AM	0	0	0	0	16	8	24	0	0	0	0	22	25	47	0	0	0	0	3	2	5	0	0	0	0	44	15	59	135
7:45 AM	0	0	0	0	12	3	15	0	0	0	0	42	34	76	0	0	0	0	5	3	8	0	0	0	0	25	10	35	134
Total	0	0	0	0	48	24	72	0	0	0	0	105	120	225	0	0	0	0	28	10	38	0	0	0	0	93	57	150	485
8:00 AM	0	0	0	0	14	4	18	0	0	0	0	36	14	50	0	0	0	0	1	4	5	0	0	0	0	21	9	30	103
8:15 AM	0	0	0	0	8	3	11	0	0	0	0	39	21	60	0	0	0	0	4	3	7	0	0	0	0	21	18	39	117
8:30 AM	0	0	0	0	10	3	13	0	0	0	0	33	41	74	0	0	0	0	1	13	14	0	0	0	0	34	13	47	148
8:45 AM	0	0	0	0	11	3	14	0	0	0	0	47	35	82	0	0	0	0	1	15	16	0	0	0	0	63	17	80	192
Total	0	0	0	0	43	13	56	0	0	0	0	155	111	266	0	0	0	0	7	35	42	0	0	0	0	139	57	196	560
Grand Total	0	0	0	0	91	37	128	0	0	0	0	260	231	491	0	0	0	0	35	45	80	0	0	0	0	232	114	346	1045
Approach %	0.0	0.0	0.0	0.0	71.1	28.9		0.0	0.0	0.0	0.0	53.0	47.0		0.0	0.0	0.0	0.0	43.8	56.3		0.0	0.0	0.0	0.0	67.1	32.9		
Total %	0.0	0.0	0.0	0.0	8.7	3.5	12.2	0.0	0.0	0.0	0.0	24.9	22.1	47.0	0.0	0.0	0.0	0.0	3.3	4.3	7.7	0.0	0.0	0.0	0.0	22.2	10.9	33.1	
Exiting Leg Total							128							491							80							346	1045

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

8:00 AM	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
8:00 AM	0	0	0	0	14	4	18	0	0	0	0	36	14	50	0	0	0	0	1	4	5	0	0	0	0	21	9	30	103
8:15 AM	0	0	0	0	8	3	11	0	0	0	0	39	21	60	0	0	0	0	4	3	7	0	0	0	0	21	18	39	117
8:30 AM	0	0	0	0	10	3	13	0	0	0	0	33	41	74	0	0	0	0	1	13	14	0	0	0	0	34	13	47	148
8:45 AM	0	0	0	0	11	3	14	0	0	0	0	47	35	82	0	0	0	0	1	15	16	0	0	0	0	63	17	80	192
Total Volume	0	0	0	0	43	13	56	0	0	0	0	155	111	266	0	0	0	0	7	35	42	0	0	0	0	139	57	196	560
% Approach Total	0.0	0.0	0.0	0.0	76.8	23.2		0.0	0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	0.0	16.7	83.3		0.0	0.0	0.0	0.0	70.9	29.1		
PHF	0.000	0.000	0.000	0.000	0.768	0.813	0.778	0.000	0.000	0.000	0.000	0.824	0.677	0.811	0.000	0.000	0.000	0.000	0.438	0.583	0.656	0.000	0.000	0.000	0.000	0.552	0.792	0.613	0.729
Entering Leg	0	0	0	0	43	13	56	0	0	0	0	155	111	266	0	0	0	0	7	35	42	0	0	0	0	139	57	196	560
Exiting Leg							56							266							42							196	560
Total							112							532							84							392	1120

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	10	39	81	0	130	69	3	11	5	88	12	62	19	0	93	16	7	52	0	75	386
4:15 PM	9	54	68	0	131	64	10	17	2	93	6	71	24	0	101	15	4	51	3	73	398
4:30 PM	8	57	75	0	140	66	3	14	0	83	18	90	13	0	121	11	2	48	0	61	405
4:45 PM	4	37	77	0	118	67	6	20	2	95	12	91	17	0	120	15	6	60	0	81	414
Total	31	187	301	0	519	266	22	62	9	359	48	314	73	0	435	57	19	211	3	290	1603
5:00 PM	3	59	68	0	130	73	6	23	0	102	9	73	29	0	111	19	7	68	0	94	437
5:15 PM	6	63	57	0	126	68	3	39	1	111	12	88	28	0	128	17	4	75	1	97	462
5:30 PM	6	75	64	0	145	81	2	40	1	124	6	73	26	0	105	26	5	89	0	120	494
5:45 PM	9	78	58	0	145	81	0	33	0	114	5	72	24	0	101	32	2	85	0	119	479
Total	24	275	247	0	546	303	11	135	2	451	32	306	107	0	445	94	18	317	1	430	1872
Grand Total	55	462	548	0	1065	569	33	197	11	810	80	620	180	0	880	151	37	528	4	720	3475
Approach %	5.2	43.4	51.5	0.0		70.2	4.1	24.3	1.4		9.1	70.5	20.5	0.0		21.0	5.1	73.3	0.6		
Total %	1.6	13.3	15.8	0.0	30.6	16.4	0.9	5.7	0.3	23.3	2.3	17.8	5.2	0.0	25.3	4.3	1.1	15.2	0.1	20.7	
Exiting Leg Total					1717					676					810					272	3475
Cars	55	433	546	0	1034	569	33	195	11	808	80	575	179	0	834	145	37	528	4	714	3390
% Cars	100.0	93.7	99.6	0.0	97.1	100.0	100.0	99.0	100.0	99.8	100.0	92.7	99.4	0.0	94.8	96.0	100.0	100.0	100.0	99.2	97.6
Exiting Leg Total					1672					674					773					271	3390
Heavy Vehicles	0	9	2	0	11	0	0	0	0	0	0	8	0	0	8	2	0	0	0	2	21
% Heavy Vehicles	0.0	1.9	0.4	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.9	1.3	0.0	0.0	0.0	0.3	0.6
Exiting Leg Total					8					2					11					0	21
Buses	0	20	0	0	20	0	0	2	0	2	0	37	1	0	38	4	0	0	0	4	64
% Buses	0.0	4.3	0.0	0.0	1.9	0.0	0.0	1.0	0.0	0.2	0.0	6.0	0.6	0.0	4.3	2.6	0.0	0.0	0.0	0.6	1.8
Exiting Leg Total					37					0					26					1	64

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

5:00 PM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	3	59	68	0	130	73	6	23	0	102	9	73	29	0	111	19	7	68	0	94	437
5:15 PM	6	63	57	0	126	68	3	39	1	111	12	88	28	0	128	17	4	75	1	97	462
5:30 PM	6	75	64	0	145	81	2	40	1	124	6	73	26	0	105	26	5	89	0	120	494
5:45 PM	9	78	58	0	145	81	0	33	0	114	5	72	24	0	101	32	2	85	0	119	479
Total Volume	24	275	247	0	546	303	11	135	2	451	32	306	107	0	445	94	18	317	1	430	1872
% Approach Total	4.4	50.4	45.2	0.0		67.2	2.4	29.9	0.4		7.2	68.8	24.0	0.0		21.9	4.2	73.7	0.2		
PHF	0.667	0.881	0.908	0.000	0.941	0.935	0.458	0.844	0.500	0.909	0.667	0.869	0.922	0.000	0.869	0.734	0.643	0.890	0.250	0.896	0.947
Cars	24	260	246	0	530	303	11	133	2	449	32	287	106	0	425	92	18	317	1	428	1832
Cars %	100.0	94.5	99.6	0.0	97.1	100.0	100.0	98.5	100.0	99.6	100.0	93.8	99.1	0.0	95.5	97.9	100.0	100.0	100.0	99.5	97.9
Heavy Vehicles	0	5	1	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
Heavy Vehicles %	0.0	1.8	0.4	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4
Buses	0	10	0	0	10	0	0	2	0	2	0	17	1	0	18	2	0	0	0	2	32
Buses %	0.0	3.6	0.0	0.0	1.8	0.0	0.0	1.5	0.0	0.4	0.0	5.6	0.9	0.0	4.0	2.1	0.0	0.0	0.0	0.5	1.7
Cars Enter Leg	24	260	246	0	530	303	11	133	2	449	32	287	106	0	425	92	18	317	1	428	1832
Heavy Enter Leg	0	5	1	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
Bus Enter Leg	0	10	0	0	10	0	0	2	0	2	0	17	1	0	18	2	0	0	0	2	32
Total Entering Leg	24	275	247	0	546	303	11	135	2	451	32	306	107	0	445	94	18	317	1	430	1872
Cars Exiting Leg					907					298					485					142	1832
Heavy Exiting Leg					2					1					5					0	8
Buses Exiting Leg					17					0					14					1	32
Total Exiting Leg					926					299					504					143	1872

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	10	36	80	0	126	69	3	11	5	88	12	59	19	0	90	15	7	52	0	74	378
4:15 PM	9	52	68	0	129	64	10	17	2	93	6	62	24	0	92	14	4	51	3	72	386
4:30 PM	8	53	75	0	136	66	3	14	0	83	18	84	13	0	115	9	2	48	0	59	393
4:45 PM	4	32	77	0	113	67	6	20	2	95	12	83	17	0	112	15	6	60	0	81	401
Total	31	173	300	0	504	266	22	62	9	359	48	288	73	0	409	53	19	211	3	286	1558
5:00 PM	3	56	68	0	127	73	6	22	0	101	9	67	29	0	105	19	7	68	0	94	427
5:15 PM	6	58	57	0	121	68	3	39	1	111	12	82	28	0	122	16	4	75	1	96	450
5:30 PM	6	72	64	0	142	81	2	40	1	124	6	70	25	0	101	25	5	89	0	119	486
5:45 PM	9	74	57	0	140	81	0	32	0	113	5	68	24	0	97	32	2	85	0	119	469
Total	24	260	246	0	530	303	11	133	2	449	32	287	106	0	425	92	18	317	1	428	1832
Grand Total	55	433	546	0	1034	569	33	195	11	808	80	575	179	0	834	145	37	528	4	714	3390
Approach %	5.3	41.9	52.8	0.0		70.4	4.1	24.1	1.4		9.6	68.9	21.5	0.0		20.3	5.2	73.9	0.6		
Total %	1.6	12.8	16.1	0.0	30.5	16.8	1.0	5.8	0.3	23.8	2.4	17.0	5.3	0.0	24.6	4.3	1.1	15.6	0.1	21.1	
Exiting Leg Total					1672					674					773					271	3390

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

5:00 PM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	3	56	68	0	127	73	6	22	0	101	9	67	29	0	105	19	7	68	0	94	427
5:15 PM	6	58	57	0	121	68	3	39	1	111	12	82	28	0	122	16	4	75	1	96	450
5:30 PM	6	72	64	0	142	81	2	40	1	124	6	70	25	0	101	25	5	89	0	119	486
5:45 PM	9	74	57	0	140	81	0	32	0	113	5	68	24	0	97	32	2	85	0	119	469
Total Volume	24	260	246	0	530	303	11	133	2	449	32	287	106	0	425	92	18	317	1	428	1832
% Approach Total	4.5	49.1	46.4	0.0		67.5	2.4	29.6	0.4		7.5	67.5	24.9	0.0		21.5	4.2	74.1	0.2		
PHF	0.667	0.878	0.904	0.000	0.933	0.935	0.458	0.831	0.500	0.905	0.667	0.875	0.914	0.000	0.871	0.719	0.643	0.890	0.250	0.899	0.942
Entering Leg	24	260	246	0	530	303	11	133	2	449	32	287	106	0	425	92	18	317	1	428	1832
Exiting Leg					907					298					485					142	1832
Total					1437					747					910					570	3664

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
4:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	1	0	5	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	13
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
5:15 PM	0	1	0	0	1	0	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	1	0	0	1	0	0	0	0	0	1
5:45 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	5	1	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
Grand Total	0	9	2	0	11	0	0	0	0	0	0	8	0	0	8	2	0	0	0	2	21
Approach %	0.0	81.8	18.2	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		
Total %	0.0	42.9	9.5	0.0	52.4	0.0	0.0	0.0	0.0	0.0	0.0	38.1	0.0	0.0	38.1	9.5	0.0	0.0	0.0	9.5	
Exiting Leg Total					8					2					11					0	21

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

4:00 PM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	3
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
4:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	4	1	0	5	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	13
% Approach Total	0.0	80.0	20.0	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		
PHF	0.000	0.500	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.500	0.000	0.000	0.000	0.500	0.542
Entering Leg	0	4	1	0	5	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	13
Exiting Leg					6					1					6					0	13
Total					11					1					12					2	26

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	6
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	6
4:45 PM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
Total	0	10	0	0	10	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	32
5:00 PM	0	2	0	0	2	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	8
5:15 PM	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	11
5:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	7
5:45 PM	0	1	0	0	1	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	6
Total	0	10	0	0	10	0	0	2	0	2	0	17	1	0	18	2	0	0	0	2	32
Grand Total	0	20	0	0	20	0	0	2	0	2	0	37	1	0	38	4	0	0	0	4	64
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	97.4	2.6	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	31.3	0.0	0.0	31.3	0.0	0.0	3.1	0.0	3.1	0.0	57.8	1.6	0.0	59.4	6.3	0.0	0.0	0.0	6.3	
Exiting Leg Total					37					0					26					1	64

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

4:00 PM	Larz Anderson Bridge					Soldiers Field Road Ramps					North Harvard Street					Soldiers Field Road Ramps					
	North					East					South					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	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	6
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	6
4:45 PM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
Total Volume	0	10	0	0	10	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	32
% 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		100.0	0.0	0.0	0.0		
PHF	0.000	0.833	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.500	0.000	0.000	0.000	0.500	0.727
Entering Leg	0	10	0	0	10	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	32
Exiting Leg					20					0					12					0	32
Total					30					0					32					2	64

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
4:00 PM	1	12	0	0	0	1	14	0	0	0	0	0	1	1	0	2	0	0	1	0	3	0	0	0	0	0	0	0	18
4:15 PM	0	10	0	0	0	1	11	0	1	0	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	16
4:30 PM	0	2	0	0	1	2	5	0	0	0	0	0	1	1	0	10	0	0	0	0	10	0	0	0	0	1	0	1	17
4:45 PM	0	8	0	0	1	4	13	0	0	0	0	1	1	2	0	6	0	0	0	1	7	0	0	0	0	0	0	0	22
Total	1	32	0	0	2	8	43	0	1	0	0	1	3	5	0	22	0	0	1	1	24	0	0	0	0	1	0	1	73
5:00 PM	0	10	1	0	1	3	15	0	0	0	0	0	2	2	0	5	0	0	0	0	5	0	0	0	0	0	0	0	22
5:15 PM	0	10	0	0	3	8	21	0	0	1	0	0	2	3	0	11	0	0	1	0	12	0	0	0	0	0	0	0	36
5:30 PM	0	11	0	0	8	6	25	0	0	0	0	0	0	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	40
5:45 PM	0	8	0	0	3	13	24	0	2	0	0	0	0	2	2	15	0	0	1	0	18	0	0	0	0	0	0	0	44
Total	0	39	1	0	15	30	85	0	2	1	0	0	4	7	2	46	0	0	2	0	50	0	0	0	0	0	0	0	142
Grand Total	1	71	1	0	17	38	128	0	3	1	0	1	7	12	2	68	0	0	3	1	74	0	0	0	0	1	0	1	215
Approach %	0.8	55.5	0.8	0.0	13.3	29.7		0.0	25.0	8.3	0.0	8.3	58.3		2.7	91.9	0.0	0.0	4.1	1.4		0.0	0.0	0.0	0.0	100.0	0.0		
Total %	0.5	33.0	0.5	0.0	7.9	17.7	59.5	0.0	1.4	0.5	0.0	0.5	3.3	5.6	0.9	31.6	0.0	0.0	1.4	0.5	34.4	0.0	0.0	0.0	0.0	0.5	0.0	0.5	
Exiting Leg Total							123							11							76							5	215

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

5:00 PM	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
5:00 PM	0	10	1	0	1	3	15	0	0	0	0	0	2	2	0	5	0	0	0	0	5	0	0	0	0	0	0	0	22
5:15 PM	0	10	0	0	3	8	21	0	0	1	0	0	2	3	0	11	0	0	1	0	12	0	0	0	0	0	0	0	36
5:30 PM	0	11	0	0	8	6	25	0	0	0	0	0	0	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	40
5:45 PM	0	8	0	0	3	13	24	0	2	0	0	0	0	2	2	15	0	0	1	0	18	0	0	0	0	0	0	0	44
Total Volume	0	39	1	0	15	30	85	0	2	1	0	0	4	7	2	46	0	0	2	0	50	0	0	0	0	0	0	0	142
% Approach Total	0.0	45.9	1.2	0.0	17.6	35.3		0.0	28.6	14.3	0.0	0.0	57.1		4.0	92.0	0.0	0.0	4.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.886	0.250	0.000	0.469	0.577	0.850	0.000	0.250	0.250	0.000	0.000	0.500	0.583	0.250	0.767	0.000	0.000	0.500	0.000	0.694	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.807
Entering Leg	0	39	1	0	15	30	85	0	2	1	0	0	4	7	2	46	0	0	2	0	50	0	0	0	0	0	0	0	142
Exiting Leg							91							7							42							2	142
Total							176							14							92							2	284

PDI File #: **175597 A**
Location: **N: Larz Anderson Bridge S: North Harvard Street**
Location: **E: Soldiers Field Road Ramps W: Soldiers Field Road Ramps**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	28	31	59	0	0	0	0	3	7	10	0	0	0	0	15	30	45	115
4:15 PM	0	0	0	0	2	8	10	0	0	0	0	56	17	73	0	0	0	0	7	6	13	0	0	0	0	15	38	53	149
4:30 PM	0	0	0	0	2	2	4	0	0	0	0	25	19	44	0	0	0	0	9	2	11	0	0	0	0	18	22	40	99
4:45 PM	0	0	0	0	4	3	7	0	0	0	0	21	21	42	0	0	0	0	5	5	10	0	0	0	0	26	23	49	108
Total	0	0	0	0	8	14	22	0	0	0	0	130	88	218	0	0	0	0	24	20	44	0	0	0	0	74	113	187	471
5:00 PM	0	0	0	0	8	5	13	0	0	0	0	21	61	82	0	0	0	0	7	3	10	0	0	0	0	19	38	57	162
5:15 PM	0	0	0	0	7	3	10	0	0	0	0	41	48	89	0	0	0	0	21	9	30	0	0	0	0	25	29	54	183
5:30 PM	0	0	0	0	10	3	13	0	0	0	0	40	36	76	0	0	0	0	5	1	6	0	0	0	0	35	33	68	163
5:45 PM	0	0	0	0	11	9	20	0	0	0	0	23	40	63	0	0	0	0	7	3	10	0	0	0	0	11	34	45	138
Total	0	0	0	0	36	20	56	0	0	0	0	125	185	310	0	0	0	0	40	16	56	0	0	0	0	90	134	224	646
Grand Total	0	0	0	0	44	34	78	0	0	0	0	255	273	528	0	0	0	0	64	36	100	0	0	0	0	164	247	411	1117
Approach %	0.0	0.0	0.0	0.0	56.4	43.6		0.0	0.0	0.0	0.0	48.3	51.7		0.0	0.0	0.0	0.0	64.0	36.0		0.0	0.0	0.0	0.0	39.9	60.1		
Total %	0.0	0.0	0.0	0.0	3.9	3.0	7.0	0.0	0.0	0.0	0.0	22.8	24.4	47.3	0.0	0.0	0.0	0.0	5.7	3.2	9.0	0.0	0.0	0.0	0.0	14.7	22.1	36.8	
Exiting Leg Total							78							528							100							411	1117

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

5:00 PM	Larz Anderson Bridge							Soldiers Field Road Ramps							North Harvard Street							Soldiers Field Road Ramps							
	North							East							South							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	Total
5:00 PM	0	0	0	0	8	5	13	0	0	0	0	21	61	82	0	0	0	0	7	3	10	0	0	0	0	19	38	57	162
5:15 PM	0	0	0	0	7	3	10	0	0	0	0	41	48	89	0	0	0	0	21	9	30	0	0	0	0	25	29	54	183
5:30 PM	0	0	0	0	10	3	13	0	0	0	0	40	36	76	0	0	0	0	5	1	6	0	0	0	0	35	33	68	163
5:45 PM	0	0	0	0	11	9	20	0	0	0	0	23	40	63	0	0	0	0	7	3	10	0	0	0	0	11	34	45	138
Total Volume	0	0	0	0	36	20	56	0	0	0	0	125	185	310	0	0	0	0	40	16	56	0	0	0	0	90	134	224	646
% Approach Total	0.0	0.0	0.0	0.0	64.3	35.7		0.0	0.0	0.0	0.0	40.3	59.7		0.0	0.0	0.0	0.0	71.4	28.6		0.0	0.0	0.0	0.0	40.2	59.8		
PHF	0.000	0.000	0.000	0.000	0.818	0.556	0.700	0.000	0.000	0.000	0.000	0.762	0.758	0.871	0.000	0.000	0.000	0.000	0.476	0.444	0.467	0.000	0.000	0.000	0.000	0.643	0.882	0.824	0.883
Entering Leg	0	0	0	0	36	20	56	0	0	0	0	125	185	310	0	0	0	0	40	16	56	0	0	0	0	90	134	224	646
Exiting Leg							56							310							56							224	646
Total							112							620							112							448	1292

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	29	24	8	0	61	13	60	17	0	90	12	37	32	0	81	0	41	12	0	53	285
7:15 AM	31	22	3	0	56	17	45	9	0	71	15	45	27	0	87	1	66	29	0	96	310
7:30 AM	41	38	11	0	90	16	64	16	0	96	12	51	30	0	93	1	56	38	0	95	374
7:45 AM	28	37	6	0	71	26	62	16	0	104	8	46	44	0	98	0	73	23	0	96	369
Total	129	121	28	0	278	72	231	58	0	361	47	179	133	0	359	2	236	102	0	340	1338
8:00 AM	23	27	4	0	54	14	75	14	0	103	8	25	41	0	74	3	72	34	0	109	340
8:15 AM	22	30	5	0	57	26	70	16	0	112	10	70	44	0	124	0	53	35	0	88	381
8:30 AM	19	23	2	0	44	18	68	19	0	105	4	40	26	0	70	1	63	40	0	104	323
8:45 AM	35	35	9	0	79	21	57	28	0	106	12	58	38	0	108	1	61	52	0	114	407
Total	99	115	20	0	234	79	270	77	0	426	34	193	149	0	376	5	249	161	0	415	1451
Grand Total	228	236	48	0	512	151	501	135	0	787	81	372	282	0	735	7	485	263	0	755	2789
Approach %	44.5	46.1	9.4	0.0		19.2	63.7	17.2	0.0		11.0	50.6	38.4	0.0		0.9	64.2	34.8	0.0		
Total %	8.2	8.5	1.7	0.0	18.4	5.4	18.0	4.8	0.0	28.2	2.9	13.3	10.1	0.0	26.4	0.3	17.4	9.4	0.0	27.1	
Exiting Leg Total					786					614					378					1011	2789
Cars	206	211	41	0	458	123	453	122	0	698	74	320	254	0	648	6	439	243	0	688	2492
% Cars	90.4	89.4	85.4	0.0	89.5	81.5	90.4	90.4	0.0	88.7	91.4	86.0	90.1	0.0	88.2	85.7	90.5	92.4	0.0	91.1	89.4
Exiting Leg Total					686					554					339					913	2492
Heavy Vehicles	13	14	7	0	34	18	39	9	0	66	7	31	22	0	60	1	32	11	0	44	204
% Heavy Vehicles	5.7	5.9	14.6	0.0	6.6	11.9	7.8	6.7	0.0	8.4	8.6	8.3	7.8	0.0	8.2	14.3	6.6	4.2	0.0	5.8	7.3
Exiting Leg Total					60					46					24					74	204
Buses	9	11	0	0	20	10	9	4	0	23	0	21	6	0	27	0	14	9	0	23	93
% Buses	3.9	4.7	0.0	0.0	3.9	6.6	1.8	3.0	0.0	2.9	0.0	5.6	2.1	0.0	3.7	0.0	2.9	3.4	0.0	3.0	3.3
Exiting Leg Total					40					14					15					24	93

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

7:30 AM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	41	38	11	0	90	16	64	16	0	96	12	51	30	0	93	1	56	38	0	95	374
7:45 AM	28	37	6	0	71	26	62	16	0	104	8	46	44	0	98	0	73	23	0	96	369
8:00 AM	23	27	4	0	54	14	75	14	0	103	8	25	41	0	74	3	72	34	0	109	340
8:15 AM	22	30	5	0	57	26	70	16	0	112	10	70	44	0	124	0	53	35	0	88	381
Total Volume	114	132	26	0	272	82	271	62	0	415	38	192	159	0	389	4	254	130	0	388	1464
% Approach Total	41.9	48.5	9.6	0.0		19.8	65.3	14.9	0.0		9.8	49.4	40.9	0.0		1.0	65.5	33.5	0.0		
PHF	0.695	0.868	0.591	0.000	0.756	0.788	0.903	0.969	0.000	0.926	0.792	0.686	0.903	0.000	0.784	0.333	0.870	0.855	0.000	0.890	0.961
Cars	106	119	22	0	247	69	241	56	0	366	35	169	144	0	348	3	228	119	0	350	1311
Cars %	93.0	90.2	84.6	0.0	90.8	84.1	88.9	90.3	0.0	88.2	92.1	88.0	90.6	0.0	89.5	75.0	89.8	91.5	0.0	90.2	89.5
Heavy Vehicles	5	8	4	0	17	9	27	3	0	39	3	15	12	0	30	1	19	7	0	27	113
Heavy Vehicles %	4.4	6.1	15.4	0.0	6.3	11.0	10.0	4.8	0.0	9.4	7.9	7.8	7.5	0.0	7.7	25.0	7.5	5.4	0.0	7.0	7.7
Buses	3	5	0	0	8	4	3	3	0	10	0	8	3	0	11	0	7	4	0	11	40
Buses %	2.6	3.8	0.0	0.0	2.9	4.9	1.1	4.8	0.0	2.4	0.0	4.2	1.9	0.0	2.8	0.0	2.8	3.1	0.0	2.8	2.7
Cars Enter Leg	106	119	22	0	247	69	241	56	0	366	35	169	144	0	348	3	228	119	0	350	1311
Heavy Enter Leg	5	8	4	0	17	9	27	3	0	39	3	15	12	0	30	1	19	7	0	27	113
Bus Enter Leg	3	5	0	0	8	4	3	3	0	10	0	8	3	0	11	0	7	4	0	11	40
Total Entering Leg	114	132	26	0	272	82	271	62	0	415	38	192	159	0	389	4	254	130	0	388	1464
Cars Exiting Leg					357					285					178					491	1311
Heavy Exiting Leg					31					26					12					44	113
Buses Exiting Leg					16					7					8					9	40
Total Exiting Leg					404					318					198					544	1464

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	27	22	7	0	56	11	54	15	0	80	11	30	28	0	69	0	36	11	0	47	252
7:15 AM	25	19	3	0	47	12	41	7	0	60	14	40	22	0	76	1	63	26	0	90	273
7:30 AM	38	36	10	0	84	11	55	13	0	79	11	40	26	0	77	0	52	34	0	86	326
7:45 AM	25	34	5	0	64	25	57	14	0	96	7	43	39	0	89	0	63	21	0	84	333
Total	115	111	25	0	251	59	207	49	0	315	43	153	115	0	311	1	214	92	0	307	1184
8:00 AM	23	22	3	0	48	10	68	14	0	92	8	23	39	0	70	3	67	32	0	102	312
8:15 AM	20	27	4	0	51	23	61	15	0	99	9	63	40	0	112	0	46	32	0	78	340
8:30 AM	14	20	2	0	36	13	67	17	0	97	4	36	24	0	64	1	54	37	0	92	289
8:45 AM	34	31	7	0	72	18	50	27	0	95	10	45	36	0	91	1	58	50	0	109	367
Total	91	100	16	0	207	64	246	73	0	383	31	167	139	0	337	5	225	151	0	381	1308
Grand Total	206	211	41	0	458	123	453	122	0	698	74	320	254	0	648	6	439	243	0	688	2492
Approach %	45.0	46.1	9.0	0.0		17.6	64.9	17.5	0.0		11.4	49.4	39.2	0.0		0.9	63.8	35.3	0.0		
Total %	8.3	8.5	1.6	0.0	18.4	4.9	18.2	4.9	0.0	28.0	3.0	12.8	10.2	0.0	26.0	0.2	17.6	9.8	0.0	27.6	
Exiting Leg Total					686					554					339					913	2492

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

7:30 AM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	38	36	10	0	84	11	55	13	0	79	11	40	26	0	77	0	52	34	0	86	326
7:45 AM	25	34	5	0	64	25	57	14	0	96	7	43	39	0	89	0	63	21	0	84	333
8:00 AM	23	22	3	0	48	10	68	14	0	92	8	23	39	0	70	3	67	32	0	102	312
8:15 AM	20	27	4	0	51	23	61	15	0	99	9	63	40	0	112	0	46	32	0	78	340
Total Volume	106	119	22	0	247	69	241	56	0	366	35	169	144	0	348	3	228	119	0	350	1311
% Approach Total	42.9	48.2	8.9	0.0		18.9	65.8	15.3	0.0		10.1	48.6	41.4	0.0		0.9	65.1	34.0	0.0		
PHF	0.697	0.826	0.550	0.000	0.735	0.690	0.886	0.933	0.000	0.924	0.795	0.671	0.900	0.000	0.777	0.250	0.851	0.875	0.000	0.858	0.964
Entering Leg	106	119	22	0	247	69	241	56	0	366	35	169	144	0	348	3	228	119	0	350	1311
Exiting Leg					357					285					178					491	1311
Total					604					651					526					841	2622

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	North Harvard Street (North)					Western Avenue (East)					North Harvard Street (South)					Western Avenue (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	1	1	1	0	3	0	3	1	0	4	1	4	2	0	7	0	4	0	0	4	18
7:15 AM	3	1	0	0	4	4	3	2	0	9	1	3	4	0	8	0	2	1	0	3	24
7:30 AM	2	2	1	0	5	4	7	1	0	12	1	6	4	0	11	1	4	3	0	8	36
7:45 AM	2	2	1	0	5	1	4	1	0	6	1	3	4	0	8	0	7	2	0	9	28
Total	8	6	3	0	17	9	17	5	0	31	4	16	14	0	34	1	17	6	0	24	106
8:00 AM	0	1	1	0	2	2	7	0	0	9	0	2	1	0	3	0	3	0	0	3	17
8:15 AM	1	3	1	0	5	2	9	1	0	12	1	4	3	0	8	0	5	2	0	7	32
8:30 AM	4	1	0	0	5	4	1	2	0	7	0	2	2	0	4	0	6	1	0	7	23
8:45 AM	0	3	2	0	5	1	5	1	0	7	2	7	2	0	11	0	1	2	0	3	26
Total	5	8	4	0	17	9	22	4	0	35	3	15	8	0	26	0	15	5	0	20	98
Grand Total	13	14	7	0	34	18	39	9	0	66	7	31	22	0	60	1	32	11	0	44	204
Approach %	38.2	41.2	20.6	0.0		27.3	59.1	13.6	0.0		11.7	51.7	36.7	0.0		2.3	72.7	25.0	0.0		
Total %	6.4	6.9	3.4	0.0	16.7	8.8	19.1	4.4	0.0	32.4	3.4	15.2	10.8	0.0	29.4	0.5	15.7	5.4	0.0	21.6	
Exiting Leg Total					60					46					24					74	204

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

7:30 AM	North Harvard Street (North)					Western Avenue (East)					North Harvard Street (South)					Western Avenue (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	2	2	1	0	5	4	7	1	0	12	1	6	4	0	11	1	4	3	0	8	36
7:45 AM	2	2	1	0	5	1	4	1	0	6	1	3	4	0	8	0	7	2	0	9	28
8:00 AM	0	1	1	0	2	2	7	0	0	9	0	2	1	0	3	0	3	0	0	3	17
8:15 AM	1	3	1	0	5	2	9	1	0	12	1	4	3	0	8	0	5	2	0	7	32
Total Volume	5	8	4	0	17	9	27	3	0	39	3	15	12	0	30	1	19	7	0	27	113
% Approach Total	29.4	47.1	23.5	0.0		23.1	69.2	7.7	0.0		10.0	50.0	40.0	0.0		3.7	70.4	25.9	0.0		
PHF	0.625	0.667	1.000	0.000	0.850	0.563	0.750	0.750	0.000	0.813	0.750	0.625	0.750	0.000	0.682	0.250	0.679	0.583	0.000	0.750	0.785
Entering Leg	5	8	4	0	17	9	27	3	0	39	3	15	12	0	30	1	19	7	0	27	113
Exiting Leg					31					26					12					44	113
Total					48					65					42					71	226

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	1	1	0	0	2	2	3	1	0	6	0	3	2	0	5	0	1	1	0	2	15
7:15 AM	3	2	0	0	5	1	1	0	0	2	0	2	1	0	3	0	1	2	0	3	13
7:30 AM	1	0	0	0	1	1	2	2	0	5	0	5	0	0	5	0	0	1	0	1	12
7:45 AM	1	1	0	0	2	0	1	1	0	2	0	0	1	0	1	0	3	0	0	3	8
Total	6	4	0	0	10	4	7	4	0	15	0	10	4	0	14	0	5	4	0	9	48
8:00 AM	0	4	0	0	4	2	0	0	0	2	0	0	1	0	1	0	2	2	0	4	11
8:15 AM	1	0	0	0	1	1	0	0	0	1	0	3	1	0	4	0	2	1	0	3	9
8:30 AM	1	2	0	0	3	1	0	0	0	1	0	2	0	0	2	0	3	2	0	5	11
8:45 AM	1	1	0	0	2	2	2	0	0	4	0	6	0	0	6	0	2	0	0	2	14
Total	3	7	0	0	10	6	2	0	0	8	0	11	2	0	13	0	9	5	0	14	45
Grand Total	9	11	0	0	20	10	9	4	0	23	0	21	6	0	27	0	14	9	0	23	93
Approach %	45.0	55.0	0.0	0.0		43.5	39.1	17.4	0.0		0.0	77.8	22.2	0.0		0.0	60.9	39.1	0.0		
Total %	9.7	11.8	0.0	0.0	21.5	10.8	9.7	4.3	0.0	24.7	0.0	22.6	6.5	0.0	29.0	0.0	15.1	9.7	0.0	24.7	
Exiting Leg Total					40					14					15					24	93

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

7:00 AM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	1	1	0	0	2	2	3	1	0	6	0	3	2	0	5	0	1	1	0	2	15
7:15 AM	3	2	0	0	5	1	1	0	0	2	0	2	1	0	3	0	1	2	0	3	13
7:30 AM	1	0	0	0	1	1	2	2	0	5	0	5	0	0	5	0	0	1	0	1	12
7:45 AM	1	1	0	0	2	0	1	1	0	2	0	0	1	0	1	0	3	0	0	3	8
Total Volume	6	4	0	0	10	4	7	4	0	15	0	10	4	0	14	0	5	4	0	9	48
% Approach Total	60.0	40.0	0.0	0.0		26.7	46.7	26.7	0.0		0.0	71.4	28.6	0.0		0.0	55.6	44.4	0.0		
PHF	0.500	0.500	0.000	0.000	0.500	0.500	0.583	0.500	0.000	0.625	0.000	0.500	0.500	0.000	0.700	0.000	0.417	0.500	0.000	0.750	0.800
Entering Leg	6	4	0	0	10	4	7	4	0	15	0	10	4	0	14	0	5	4	0	9	48
Exiting Leg					18					5					8					17	48
Total					28					20					22					26	96

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	7	0	0	0	1	8	0	3	0	0	1	0	4	14
7:15 AM	0	3	0	0	0	0	3	1	1	0	0	0	0	2	2	3	0	0	0	0	5	0	3	0	0	0	0	3	13
7:30 AM	0	10	4	0	1	0	15	0	1	1	0	0	0	2	2	7	0	0	0	0	9	0	4	0	0	0	0	4	30
7:45 AM	1	5	0	0	0	0	6	1	1	0	0	1	0	3	1	8	0	0	0	0	9	0	5	1	0	1	0	7	25
Total	1	18	4	0	1	0	24	2	3	1	0	1	2	9	5	25	0	0	0	1	31	0	15	1	0	2	0	18	82
8:00 AM	0	3	1	0	0	0	4	0	4	0	0	0	0	4	1	10	1	0	0	1	13	0	2	2	0	0	0	4	25
8:15 AM	0	6	0	0	0	0	6	3	4	0	0	0	0	7	3	11	0	0	0	0	14	0	9	5	0	0	0	14	41
8:30 AM	0	0	0	0	0	0	0	1	4	0	0	0	0	5	3	9	0	0	0	0	12	0	7	1	0	0	0	8	25
8:45 AM	1	4	0	0	0	0	5	2	4	0	0	0	0	6	1	18	1	0	0	2	22	0	5	3	0	0	0	8	41
Total	1	13	1	0	0	0	15	6	16	0	0	0	0	22	8	48	2	0	0	3	61	0	23	11	0	0	0	34	132
Grand Total	2	31	5	0	1	0	39	8	19	1	0	1	2	31	13	73	2	0	0	4	92	0	38	12	0	2	0	52	214
Approach %	5.1	79.5	12.8	0.0	2.6	0.0		25.8	61.3	3.2	0.0	3.2	6.5		14.1	79.3	2.2	0.0	0.0	4.3		0.0	73.1	23.1	0.0	3.8	0.0		
Total %	0.9	14.5	2.3	0.0	0.5	0.0	18.2	3.7	8.9	0.5	0.0	0.5	0.9	14.5	6.1	34.1	0.9	0.0	0.0	1.9	43.0	0.0	17.8	5.6	0.0	0.9	0.0	24.3	
Exiting Leg Total							94							59							36							25	214

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

8:00 AM	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
8:00 AM	0	3	1	0	0	0	4	0	4	0	0	0	0	4	1	10	1	0	0	1	13	0	2	2	0	0	0	4	25
8:15 AM	0	6	0	0	0	0	6	3	4	0	0	0	0	7	3	11	0	0	0	0	14	0	9	5	0	0	0	14	41
8:30 AM	0	0	0	0	0	0	0	1	4	0	0	0	0	5	3	9	0	0	0	0	12	0	7	1	0	0	0	8	25
8:45 AM	1	4	0	0	0	0	5	2	4	0	0	0	0	6	1	18	1	0	0	2	22	0	5	3	0	0	0	8	41
Total Volume	1	13	1	0	0	0	15	6	16	0	0	0	0	22	8	48	2	0	0	3	61	0	23	11	0	0	0	34	132
% Approach Total	6.7	86.7	6.7	0.0	0.0	0.0		27.3	72.7	0.0	0.0	0.0	0.0		13.1	78.7	3.3	0.0	0.0	4.9		0.0	67.6	32.4	0.0	0.0	0.0		
PHF	0.250	0.542	0.250	0.000	0.000	0.000	0.625	0.500	1.000	0.000	0.000	0.000	0.000	0.786	0.667	0.667	0.500	0.000	0.000	0.375	0.693	0.000	0.639	0.550	0.000	0.000	0.000	0.607	0.805
Entering Leg	1	13	1	0	0	0	15	6	16	0	0	0	0	22	8	48	2	0	0	3	61	0	23	11	0	0	0	34	132
Exiting Leg							65							32							16							19	132
Total							80							54							77							53	264

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	7	9	0	0	0	0	0	0	0	0	0	0	0	4	3	7	16
7:15 AM	0	0	0	0	1	1	2	0	0	0	0	2	6	8	0	0	0	0	0	2	2	0	0	0	0	7	7	14	26
7:30 AM	0	0	0	0	7	1	8	0	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	12	12	24	41
7:45 AM	0	0	0	0	0	2	2	0	0	0	0	3	13	16	0	0	0	0	1	6	7	0	0	0	0	4	13	17	42
Total	0	0	0	0	8	4	12	0	0	0	0	7	35	42	0	0	0	0	1	8	9	0	0	0	0	27	35	62	125
8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	24	24	0	0	0	0	1	8	9	0	0	0	0	12	2	14	48
8:15 AM	0	0	0	0	10	3	13	0	0	0	0	0	14	14	0	0	0	0	3	9	12	0	0	0	0	10	7	17	56
8:30 AM	0	0	0	0	14	5	19	0	0	0	0	1	11	12	0	0	0	0	3	3	6	0	0	0	0	20	2	22	59
8:45 AM	0	0	0	0	7	2	9	0	0	0	0	3	11	14	0	0	0	0	3	4	7	0	0	0	0	9	7	16	46
Total	0	0	0	0	32	10	42	0	0	0	0	4	60	64	0	0	0	0	10	24	34	0	0	0	0	51	18	69	209
Grand Total	0	0	0	0	40	14	54	0	0	0	0	11	95	106	0	0	0	0	11	32	43	0	0	0	0	78	53	131	334
Approach %	0.0	0.0	0.0	0.0	74.1	25.9		0.0	0.0	0.0	0.0	10.4	89.6		0.0	0.0	0.0	0.0	25.6	74.4		0.0	0.0	0.0	0.0	59.5	40.5		
Total %	0.0	0.0	0.0	0.0	12.0	4.2	16.2	0.0	0.0	0.0	0.0	3.3	28.4	31.7	0.0	0.0	0.0	0.0	3.3	9.6	12.9	0.0	0.0	0.0	0.0	23.4	15.9	39.2	
Exiting Leg Total							54							106							43							131	334

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

8:00 AM	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	24	24	0	0	0	0	1	8	9	0	0	0	0	12	2	14	48
8:15 AM	0	0	0	0	10	3	13	0	0	0	0	0	14	14	0	0	0	0	3	9	12	0	0	0	0	10	7	17	56
8:30 AM	0	0	0	0	14	5	19	0	0	0	0	1	11	12	0	0	0	0	3	3	6	0	0	0	0	20	2	22	59
8:45 AM	0	0	0	0	7	2	9	0	0	0	0	3	11	14	0	0	0	0	3	4	7	0	0	0	0	9	7	16	46
Total Volume	0	0	0	0	32	10	42	0	0	0	0	4	60	64	0	0	0	0	10	24	34	0	0	0	0	51	18	69	209
% Approach Total	0.0	0.0	0.0	0.0	76.2	23.8		0.0	0.0	0.0	0.0	6.3	93.8		0.0	0.0	0.0	0.0	29.4	70.6		0.0	0.0	0.0	0.0	73.9	26.1		
PHF	0.000	0.000	0.000	0.000	0.571	0.500	0.553	0.000	0.000	0.000	0.000	0.333	0.625	0.667	0.000	0.000	0.000	0.000	0.833	0.667	0.708	0.000	0.000	0.000	0.000	0.638	0.643	0.784	0.886
Entering Leg	0	0	0	0	32	10	42	0	0	0	0	4	60	64	0	0	0	0	10	24	34	0	0	0	0	51	18	69	209
Exiting Leg							42							64							34							69	209
Total							84							128							68							138	418

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	33	45	1	0	79	12	78	26	0	116	6	29	26	0	61	0	48	31	0	79	335
4:15 PM	32	58	4	0	94	20	95	20	0	135	5	55	27	0	87	2	32	28	0	62	378
4:30 PM	40	37	5	0	82	12	84	21	0	117	9	42	39	0	90	2	29	34	0	65	354
4:45 PM	45	41	5	0	91	19	139	24	0	182	5	56	36	0	97	1	37	16	0	54	424
Total	150	181	15	0	346	63	396	91	0	550	25	182	128	0	335	5	146	109	0	260	1491
5:00 PM	39	61	3	0	103	22	115	36	0	173	7	35	35	0	77	0	47	26	0	73	426
5:15 PM	51	61	8	0	120	19	113	23	0	155	10	54	26	0	90	1	40	25	0	66	431
5:30 PM	66	58	7	0	131	10	94	28	0	132	6	51	40	0	97	3	37	25	0	65	425
5:45 PM	33	71	3	0	107	21	105	33	0	159	4	43	35	0	82	4	35	27	0	66	414
Total	189	251	21	0	461	72	427	120	0	619	27	183	136	0	346	8	159	103	0	270	1696
Grand Total	339	432	36	0	807	135	823	211	0	1169	52	365	264	0	681	13	305	212	0	530	3187
Approach %	42.0	53.5	4.5	0.0		11.5	70.4	18.0	0.0		7.6	53.6	38.8	0.0		2.5	57.5	40.0	0.0		
Total %	10.6	13.6	1.1	0.0	25.3	4.2	25.8	6.6	0.0	36.7	1.6	11.5	8.3	0.0	21.4	0.4	9.6	6.7	0.0	16.6	
Exiting Leg Total					712					393					656					1426	3187
Cars	328	412	32	0	772	126	805	209	0	1140	50	341	251	0	642	13	289	199	0	501	3055
% Cars	96.8	95.4	88.9	0.0	95.7	93.3	97.8	99.1	0.0	97.5	96.2	93.4	95.1	0.0	94.3	100.0	94.8	93.9	0.0	94.5	95.9
Exiting Leg Total					666					371					634					1384	3055
Heavy Vehicles	3	8	2	0	13	1	7	2	0	10	1	8	8	0	17	0	7	4	0	11	51
% Heavy Vehicles	0.9	1.9	5.6	0.0	1.6	0.7	0.9	0.9	0.0	0.9	1.9	2.2	3.0	0.0	2.5	0.0	2.3	1.9	0.0	2.1	1.6
Exiting Leg Total					13					10					10					18	51
Buses	8	12	2	0	22	8	11	0	0	19	1	16	5	0	22	0	9	9	0	18	81
% Buses	2.4	2.8	5.6	0.0	2.7	5.9	1.3	0.0	0.0	1.6	1.9	4.4	1.9	0.0	3.2	0.0	3.0	4.2	0.0	3.4	2.5
Exiting Leg Total					33					12					12					24	81

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

4:45 PM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	45	41	5	0	91	19	139	24	0	182	5	56	36	0	97	1	37	16	0	54	424
5:00 PM	39	61	3	0	103	22	115	36	0	173	7	35	35	0	77	0	47	26	0	73	426
5:15 PM	51	61	8	0	120	19	113	23	0	155	10	54	26	0	90	1	40	25	0	66	431
5:30 PM	66	58	7	0	131	10	94	28	0	132	6	51	40	0	97	3	37	25	0	65	425
Total Volume	201	221	23	0	445	70	461	111	0	642	28	196	137	0	361	5	161	92	0	258	1706
% Approach Total	45.2	49.7	5.2	0.0		10.9	71.8	17.3	0.0		7.8	54.3	38.0	0.0		1.9	62.4	35.7	0.0		
PHF	0.761	0.906	0.719	0.000	0.849	0.795	0.829	0.771	0.000	0.882	0.700	0.875	0.856	0.000	0.930	0.417	0.856	0.885	0.000	0.884	0.990
Cars	193	211	20	0	424	66	449	110	0	625	27	185	130	0	342	5	153	85	0	243	1634
Cars %	96.0	95.5	87.0	0.0	95.3	94.3	97.4	99.1	0.0	97.4	96.4	94.4	94.9	0.0	94.7	100.0	95.0	92.4	0.0	94.2	95.8
Heavy Vehicles	2	3	2	0	7	1	6	1	0	8	1	2	6	0	9	0	3	3	0	6	30
Heavy Vehicles %	1.0	1.4	8.7	0.0	1.6	1.4	1.3	0.9	0.0	1.2	3.6	1.0	4.4	0.0	2.5	0.0	1.9	3.3	0.0	2.3	1.8
Buses	6	7	1	0	14	3	6	0	0	9	0	9	1	0	10	0	5	4	0	9	42
Buses %	3.0	3.2	4.3	0.0	3.1	4.3	1.3	0.0	0.0	1.4	0.0	4.6	0.7	0.0	2.8	0.0	3.1	4.3	0.0	3.5	2.5
Cars Enter Leg	193	211	20	0	424	66	449	110	0	625	27	185	130	0	342	5	153	85	0	243	1634
Heavy Enter Leg	2	3	2	0	7	1	6	1	0	8	1	2	6	0	9	0	3	3	0	6	30
Bus Enter Leg	6	7	1	0	14	3	6	0	0	9	0	9	1	0	10	0	5	4	0	9	42
Total Entering Leg	201	221	23	0	445	70	461	111	0	642	28	196	137	0	361	5	161	92	0	258	1706
Cars Exiting Leg					336					200					326					772	1634
Heavy Exiting Leg					6					6					4					14	30
Buses Exiting Leg					16					6					7					13	42
Total Exiting Leg					358					212					337					799	1706

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	33	42	0	0	75	11	77	26	0	114	5	29	25	0	59	0	44	29	0	73	321
4:15 PM	31	57	4	0	92	17	93	19	0	129	5	49	24	0	78	2	31	27	0	60	359
4:30 PM	40	34	5	0	79	12	83	21	0	116	9	37	38	0	84	2	27	32	0	61	340
4:45 PM	42	38	4	0	84	17	132	24	0	173	5	53	34	0	92	1	34	15	0	50	399
Total	146	171	13	0	330	57	385	90	0	532	24	168	121	0	313	5	136	103	0	244	1419
5:00 PM	37	59	2	0	98	21	114	35	0	170	6	33	35	0	74	0	46	23	0	69	411
5:15 PM	49	58	8	0	115	18	112	23	0	153	10	51	25	0	86	1	36	24	0	61	415
5:30 PM	65	56	6	0	127	10	91	28	0	129	6	48	36	0	90	3	37	23	0	63	409
5:45 PM	31	68	3	0	102	20	103	33	0	156	4	41	34	0	79	4	34	26	0	64	401
Total	182	241	19	0	442	69	420	119	0	608	26	173	130	0	329	8	153	96	0	257	1636
Grand Total	328	412	32	0	772	126	805	209	0	1140	50	341	251	0	642	13	289	199	0	501	3055
Approach %	42.5	53.4	4.1	0.0		11.1	70.6	18.3	0.0		7.8	53.1	39.1	0.0		2.6	57.7	39.7	0.0		
Total %	10.7	13.5	1.0	0.0	25.3	4.1	26.4	6.8	0.0	37.3	1.6	11.2	8.2	0.0	21.0	0.4	9.5	6.5	0.0	16.4	
Exiting Leg Total					666					371					634					1384	3055

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

5:00 PM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	37	59	2	0	98	21	114	35	0	170	6	33	35	0	74	0	46	23	0	69	411
5:15 PM	49	58	8	0	115	18	112	23	0	153	10	51	25	0	86	1	36	24	0	61	415
5:30 PM	65	56	6	0	127	10	91	28	0	129	6	48	36	0	90	3	37	23	0	63	409
5:45 PM	31	68	3	0	102	20	103	33	0	156	4	41	34	0	79	4	34	26	0	64	401
Total Volume	182	241	19	0	442	69	420	119	0	608	26	173	130	0	329	8	153	96	0	257	1636
% Approach Total	41.2	54.5	4.3	0.0		11.3	69.1	19.6	0.0		7.9	52.6	39.5	0.0		3.1	59.5	37.4	0.0		
PHF	0.700	0.886	0.594	0.000	0.870	0.821	0.921	0.850	0.000	0.894	0.650	0.848	0.903	0.000	0.914	0.500	0.832	0.923	0.000	0.931	0.986
Entering Leg	182	241	19	0	442	69	420	119	0	608	26	173	130	0	329	8	153	96	0	257	1636
Exiting Leg					338					198					368					732	1636
Total					780					806					697					989	3272

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	1	0	1	0	2	1	0	3	5
4:15 PM	0	1	0	0	1	0	1	1	0	2	0	2	1	0	3	0	1	0	0	1	7
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	7
4:45 PM	1	1	0	0	2	1	5	0	0	6	0	0	2	0	2	0	1	0	0	1	11
Total	1	5	0	0	6	1	6	1	0	8	0	6	4	0	10	0	5	1	0	6	30
5:00 PM	0	1	1	0	2	0	0	1	0	1	1	0	0	0	1	0	1	1	0	2	6
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	3
5:30 PM	0	1	1	0	2	0	1	0	0	1	0	2	3	0	5	0	0	2	0	2	10
5:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	3	2	0	7	0	1	1	0	2	1	2	4	0	7	0	2	3	0	5	21
Grand Total	3	8	2	0	13	1	7	2	0	10	1	8	8	0	17	0	7	4	0	11	51
Approach %	23.1	61.5	15.4	0.0		10.0	70.0	20.0	0.0		5.9	47.1	47.1	0.0		0.0	63.6	36.4	0.0		
Total %	5.9	15.7	3.9	0.0	25.5	2.0	13.7	3.9	0.0	19.6	2.0	15.7	15.7	0.0	33.3	0.0	13.7	7.8	0.0	21.6	
Exiting Leg Total					13					10					10					18	51

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

4:15 PM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	1	0	0	1	0	1	1	0	2	0	2	1	0	3	0	1	0	0	1	7
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	7
4:45 PM	1	1	0	0	2	1	5	0	0	6	0	0	2	0	2	0	1	0	0	1	11
5:00 PM	0	1	1	0	2	0	0	1	0	1	1	0	0	0	1	0	1	1	0	2	6
Total Volume	1	5	1	0	7	1	6	2	0	9	1	6	3	0	10	0	4	1	0	5	31
% Approach Total	14.3	71.4	14.3	0.0		11.1	66.7	22.2	0.0		10.0	60.0	30.0	0.0		0.0	80.0	20.0	0.0		
PHF	0.250	0.625	0.250	0.000	0.875	0.250	0.300	0.500	0.000	0.375	0.250	0.375	0.375	0.000	0.625	0.000	1.000	0.250	0.000	0.625	0.705
Entering Leg	1	5	1	0	7	1	6	2	0	9	1	6	3	0	10	0	4	1	0	5	31
Exiting Leg					8					6					7					10	31
Total					15					15					17					15	62

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	2	1	0	3	1	1	0	0	2	1	0	0	0	1	0	2	1	0	3	9
4:15 PM	1	0	0	0	1	3	1	0	0	4	0	4	2	0	6	0	0	1	0	1	12
4:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	1	0	2	0	1	2	0	3	7
4:45 PM	2	2	1	0	5	1	2	0	0	3	0	3	0	0	3	0	2	1	0	3	14
Total	3	5	2	0	10	5	5	0	0	10	1	8	3	0	12	0	5	5	0	10	42
5:00 PM	2	1	0	0	3	1	1	0	0	2	0	2	0	0	2	0	0	2	0	2	9
5:15 PM	1	3	0	0	4	1	1	0	0	2	0	3	0	0	3	0	3	1	0	4	13
5:30 PM	1	1	0	0	2	0	2	0	0	2	0	1	1	0	2	0	0	0	0	0	6
5:45 PM	1	2	0	0	3	1	2	0	0	3	0	2	1	0	3	0	1	1	0	2	11
Total	5	7	0	0	12	3	6	0	0	9	0	8	2	0	10	0	4	4	0	8	39
Grand Total	8	12	2	0	22	8	11	0	0	19	1	16	5	0	22	0	9	9	0	18	81
Approach %	36.4	54.5	9.1	0.0		42.1	57.9	0.0	0.0		4.5	72.7	22.7	0.0		0.0	50.0	50.0	0.0		
Total %	9.9	14.8	2.5	0.0	27.2	9.9	13.6	0.0	0.0	23.5	1.2	19.8	6.2	0.0	27.2	0.0	11.1	11.1	0.0	22.2	
Exiting Leg Total					33					12					12					24	81

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

4:30 PM	North Harvard Street					Western Avenue					North Harvard Street					Western Avenue					
	North					East					South					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	1	0	0	1	0	1	0	0	1	0	1	1	0	2	0	1	2	0	3	7
4:45 PM	2	2	1	0	5	1	2	0	0	3	0	3	0	0	3	0	2	1	0	3	14
5:00 PM	2	1	0	0	3	1	1	0	0	2	0	2	0	0	2	0	0	2	0	2	9
5:15 PM	1	3	0	0	4	1	1	0	0	2	0	3	0	0	3	0	3	1	0	4	13
Total Volume	5	7	1	0	13	3	5	0	0	8	0	9	1	0	10	0	6	6	0	12	43
% Approach Total	38.5	53.8	7.7	0.0		37.5	62.5	0.0	0.0		0.0	90.0	10.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.625	0.583	0.250	0.000	0.650	0.750	0.625	0.000	0.000	0.667	0.000	0.750	0.250	0.000	0.833	0.000	0.500	0.750	0.000	0.750	0.768
Entering Leg	5	7	1	0	13	3	5	0	0	8	0	9	1	0	10	0	6	6	0	12	43
Exiting Leg					18					7					7					11	43
Total					31					15					17					23	86

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
4:00 PM	3	7	0	0	0	0	10	0	3	2	0	0	0	5	0	1	0	0	0	0	1	0	2	0	0	0	0	2	18
4:15 PM	2	10	0	0	0	0	12	0	2	2	0	0	0	4	0	4	0	0	0	0	4	0	1	0	0	0	0	1	21
4:30 PM	1	1	0	0	0	0	2	0	2	1	0	1	0	4	0	3	0	0	0	0	3	0	1	0	0	0	0	1	10
4:45 PM	1	6	0	0	0	0	7	0	6	1	0	0	0	7	0	1	0	0	0	0	1	0	0	0	0	0	0	0	15
Total	7	24	0	0	0	0	31	0	13	6	0	1	0	20	0	9	0	0	0	0	9	0	4	0	0	0	0	4	64
5:00 PM	6	10	0	0	0	0	16	0	5	1	0	0	0	6	0	2	0	0	0	0	2	0	3	1	0	0	0	4	28
5:15 PM	1	5	0	0	0	0	6	0	7	4	0	0	0	11	1	3	0	0	0	0	4	0	3	3	0	1	0	7	28
5:30 PM	0	14	0	0	0	0	14	0	5	4	0	0	1	10	1	7	0	0	0	0	8	0	0	2	0	0	0	2	34
5:45 PM	0	3	0	0	0	0	3	0	6	1	0	0	0	7	0	4	0	0	0	0	4	0	3	2	0	1	0	6	20
Total	7	32	0	0	0	0	39	0	23	10	0	0	1	34	2	16	0	0	0	0	18	0	9	8	0	2	0	19	110
Grand Total	14	56	0	0	0	0	70	0	36	16	0	1	1	54	2	25	0	0	0	0	27	0	13	8	0	2	0	23	174
Approach %	20.0	80.0	0.0	0.0	0.0	0.0		0.0	66.7	29.6	0.0	1.9	1.9		7.4	92.6	0.0	0.0	0.0	0.0		0.0	56.5	34.8	0.0	8.7	0.0		
Total %	8.0	32.2	0.0	0.0	0.0	0.0	40.2	0.0	20.7	9.2	0.0	0.6	0.6	31.0	1.1	14.4	0.0	0.0	0.0	0.0	15.5	0.0	7.5	4.6	0.0	1.1	0.0	13.2	
Exiting Leg Total							33							17							72							52	174

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

5:00 PM	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
5:00 PM	6	10	0	0	0	0	16	0	5	1	0	0	0	6	0	2	0	0	0	0	2	0	3	1	0	0	0	4	28
5:15 PM	1	5	0	0	0	0	6	0	7	4	0	0	0	11	1	3	0	0	0	0	4	0	3	3	0	1	0	7	28
5:30 PM	0	14	0	0	0	0	14	0	5	4	0	0	1	10	1	7	0	0	0	0	8	0	0	2	0	0	0	2	34
5:45 PM	0	3	0	0	0	0	3	0	6	1	0	0	0	7	0	4	0	0	0	0	4	0	3	2	0	1	0	6	20
Total Volume	7	32	0	0	0	0	39	0	23	10	0	0	1	34	2	16	0	0	0	0	18	0	9	8	0	2	0	19	110
% Approach Total	17.9	82.1	0.0	0.0	0.0	0.0		0.0	67.6	29.4	0.0	0.0	2.9		11.1	88.9	0.0	0.0	0.0	0.0		0.0	47.4	42.1	0.0	10.5	0.0		
PHF	0.292	0.571	0.000	0.000	0.000	0.000	0.609	0.000	0.821	0.625	0.000	0.000	0.250	0.773	0.500	0.571	0.000	0.000	0.000	0.000	0.563	0.000	0.750	0.667	0.000	0.500	0.000	0.679	0.809
Entering Leg	7	32	0	0	0	0	39	0	23	10	0	0	1	34	2	16	0	0	0	0	18	0	9	8	0	2	0	19	110
Exiting Leg							24							12							42							32	110
Total							63							46							60							51	220

PDI File #: **175597 B**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Western Avenue W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
4:00 PM	0	0	0	0	4	6	10	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	2	3	5	19
4:15 PM	0	0	0	0	2	1	3	0	0	0	0	3	5	8	0	0	0	0	2	1	3	0	0	0	0	1	7	8	22
4:30 PM	0	0	0	0	1	34	35	0	0	0	0	4	1	5	0	0	0	0	0	1	1	0	0	0	0	6	11	17	58
4:45 PM	0	0	0	0	3	3	6	0	0	0	0	5	0	5	0	0	0	0	3	0	3	0	0	0	0	3	10	13	27
Total	0	0	0	0	10	44	54	0	0	0	0	14	8	22	0	0	0	0	5	2	7	0	0	0	0	12	31	43	126
5:00 PM	0	0	0	0	10	5	15	0	0	0	0	4	11	15	0	0	0	0	1	6	7	0	0	0	0	8	12	20	57
5:15 PM	0	0	0	0	2	2	4	0	0	0	0	6	9	15	0	0	0	0	3	5	8	0	0	0	0	14	18	32	59
5:30 PM	0	0	0	0	6	5	11	0	0	0	0	7	3	10	0	0	0	0	17	1	18	0	0	0	0	13	22	35	74
5:45 PM	0	0	0	0	3	4	7	0	0	0	0	5	40	45	0	0	0	0	14	34	48	0	0	0	0	11	15	26	126
Total	0	0	0	0	21	16	37	0	0	0	0	22	63	85	0	0	0	0	35	46	81	0	0	0	0	46	67	113	316
Grand Total	0	0	0	0	31	60	91	0	0	0	0	36	71	107	0	0	0	0	40	48	88	0	0	0	0	58	98	156	442
Approach %	0.0	0.0	0.0	0.0	34.1	65.9		0.0	0.0	0.0	0.0	33.6	66.4		0.0	0.0	0.0	0.0	45.5	54.5		0.0	0.0	0.0	0.0	37.2	62.8		
Total %	0.0	0.0	0.0	0.0	7.0	13.6	20.6	0.0	0.0	0.0	0.0	8.1	16.1	24.2	0.0	0.0	0.0	0.0	9.0	10.9	19.9	0.0	0.0	0.0	0.0	13.1	22.2	35.3	
Exiting Leg Total							91							107							88							156	442

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

5:00 PM	North Harvard Street							Western Avenue							North Harvard Street							Western Avenue							
	North							East							South							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	Total
5:00 PM	0	0	0	0	10	5	15	0	0	0	0	4	11	15	0	0	0	0	1	6	7	0	0	0	0	8	12	20	57
5:15 PM	0	0	0	0	2	2	4	0	0	0	0	6	9	15	0	0	0	0	3	5	8	0	0	0	0	14	18	32	59
5:30 PM	0	0	0	0	6	5	11	0	0	0	0	7	3	10	0	0	0	0	17	1	18	0	0	0	0	13	22	35	74
5:45 PM	0	0	0	0	3	4	7	0	0	0	0	5	40	45	0	0	0	0	14	34	48	0	0	0	0	11	15	26	126
Total Volume	0	0	0	0	21	16	37	0	0	0	0	22	63	85	0	0	0	0	35	46	81	0	0	0	0	46	67	113	316
% Approach Total	0.0	0.0	0.0	0.0	56.8	43.2		0.0	0.0	0.0	0.0	25.9	74.1		0.0	0.0	0.0	0.0	43.2	56.8		0.0	0.0	0.0	0.0	40.7	59.3		
PHF	0.000	0.000	0.000	0.000	0.525	0.800	0.617	0.000	0.000	0.000	0.000	0.786	0.394	0.472	0.000	0.000	0.000	0.000	0.515	0.338	0.422	0.000	0.000	0.000	0.000	0.821	0.761	0.807	0.627
Entering Leg	0	0	0	0	21	16	37	0	0	0	0	22	63	85	0	0	0	0	35	46	81	0	0	0	0	46	67	113	316
Exiting Leg							37							85							81							113	316
Total							74							170							162							226	632

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	40	0	59	0	99	59	200	0	0	259	0	0	0	0	0	0	285	25	0	310	668
7:15 AM	30	0	68	0	98	66	192	0	0	258	0	0	0	0	0	0	301	30	0	331	687
7:30 AM	28	0	88	0	116	68	210	0	0	278	0	0	0	0	0	0	385	31	0	416	810
7:45 AM	47	0	76	0	123	89	217	0	0	306	0	0	0	0	0	0	376	31	1	408	837
Total	145	0	291	0	436	282	819	0	0	1101	0	0	0	0	0	0	1347	117	1	1465	3002
8:00 AM	35	0	89	0	124	75	224	0	4	303	0	0	0	0	0	0	377	30	0	407	834
8:15 AM	31	0	79	0	110	74	215	0	0	289	0	0	0	0	0	0	348	36	0	384	783
8:30 AM	37	0	76	0	113	101	233	0	0	334	0	1	0	0	1	0	401	24	0	425	873
8:45 AM	45	0	91	0	136	79	218	0	0	297	0	0	0	0	0	0	383	48	0	431	864
Total	148	0	335	0	483	329	890	0	4	1223	0	1	0	0	1	0	1509	138	0	1647	3354
Grand Total	293	0	626	0	919	611	1709	0	4	2324	0	1	0	0	1	0	2856	255	1	3112	6356
Approach %	31.9	0.0	68.1	0.0		26.3	73.5	0.0	0.2		0.0	100.0	0.0	0.0		0.0	91.8	8.2	0.0		
Total %	4.6	0.0	9.8	0.0	14.5	9.6	26.9	0.0	0.1	36.6	0.0	0.0	0.0	0.0	0.0	0.0	44.9	4.0	0.0	49.0	
Exiting Leg Total					867					3486					0					2003	6356
Cars	256	0	569	0	825	538	1565	0	4	2107	0	1	0	0	1	0	2728	220	1	2949	5882
% Cars	87.4	0.0	90.9	0.0	89.8	88.1	91.6	0.0	100.0	90.7	0.0	100.0	0.0	0.0	100.0	0.0	95.5	86.3	100.0	94.8	92.5
Exiting Leg Total					759					3301					0					1822	5882
Heavy Vehicles	18	0	45	0	63	51	78	0	0	129	0	0	0	0	0	0	82	19	0	101	293
% Heavy Vehicles	6.1	0.0	7.2	0.0	6.9	8.3	4.6	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.5	0.0	3.2	4.6
Exiting Leg Total					70					127					0					96	293
Buses	19	0	12	0	31	22	66	0	0	88	0	0	0	0	0	0	46	16	0	62	181
% Buses	6.5	0.0	1.9	0.0	3.4	3.6	3.9	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	6.3	0.0	2.0	2.8
Exiting Leg Total					38					58					0					85	181

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

8:00 AM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	35	0	89	0	124	75	224	0	4	303	0	0	0	0	0	0	377	30	0	407	834
8:15 AM	31	0	79	0	110	74	215	0	0	289	0	0	0	0	0	0	348	36	0	384	783
8:30 AM	37	0	76	0	113	101	233	0	0	334	0	1	0	0	1	0	401	24	0	425	873
8:45 AM	45	0	91	0	136	79	218	0	0	297	0	0	0	0	0	0	383	48	0	431	864
Total Volume	148	0	335	0	483	329	890	0	4	1223	0	1	0	0	1	0	1509	138	0	1647	3354
% Approach Total	30.6	0.0	69.4	0.0		26.9	72.8	0.0	0.3		0.0	100.0	0.0	0.0		0.0	91.6	8.4	0.0		
PHF	0.822	0.000	0.920	0.000	0.888	0.814	0.955	0.000	0.250	0.915	0.000	0.250	0.000	0.000	0.250	0.000	0.941	0.719	0.000	0.955	0.960
Cars	129	0	309	0	438	291	823	0	4	1118	0	1	0	0	1	0	1441	118	0	1559	3116
Cars %	87.2	0.0	92.2	0.0	90.7	88.4	92.5	0.0	100.0	91.4	0.0	100.0	0.0	0.0	100.0	0.0	95.5	85.5	0.0	94.7	92.9
Heavy Vehicles	7	0	18	0	25	27	39	0	0	66	0	0	0	0	0	0	50	9	0	59	150
Heavy Vehicles %	4.7	0.0	5.4	0.0	5.2	8.2	4.4	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.5	0.0	3.6	4.5
Buses	12	0	8	0	20	11	28	0	0	39	0	0	0	0	0	0	18	11	0	29	88
Buses %	8.1	0.0	2.4	0.0	4.1	3.3	3.1	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	8.0	0.0	1.8	2.6
Cars Enter Leg	129	0	309	0	438	291	823	0	4	1118	0	1	0	0	1	0	1441	118	0	1559	3116
Heavy Enter Leg	7	0	18	0	25	27	39	0	0	66	0	0	0	0	0	0	50	9	0	59	150
Bus Enter Leg	12	0	8	0	20	11	28	0	0	39	0	0	0	0	0	0	18	11	0	29	88
Total Entering Leg	148	0	335	0	483	329	890	0	4	1223	0	1	0	0	1	0	1509	138	0	1647	3354
Cars Exiting Leg					410					1754					0					952	3116
Heavy Exiting Leg					36					68					0					46	150
Buses Exiting Leg					22					26					0					40	88
Total Exiting Leg					468					1848					0					1038	3354

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	36	0	50	0	86	48	175	0	0	223	0	0	0	0	0	0	274	24	0	298	607
7:15 AM	25	0	64	0	89	54	170	0	0	224	0	0	0	0	0	0	283	25	0	308	621
7:30 AM	26	0	76	0	102	62	196	0	0	258	0	0	0	0	0	0	369	25	0	394	754
7:45 AM	40	0	70	0	110	83	201	0	0	284	0	0	0	0	0	0	361	28	1	390	784
Total	127	0	260	0	387	247	742	0	0	989	0	0	0	0	0	0	1287	102	1	1390	2766
8:00 AM	27	0	85	0	112	66	205	0	4	275	0	0	0	0	0	0	364	25	0	389	776
8:15 AM	30	0	76	0	106	67	198	0	0	265	0	0	0	0	0	0	333	33	0	366	737
8:30 AM	31	0	70	0	101	85	220	0	0	305	0	1	0	0	1	0	382	21	0	403	810
8:45 AM	41	0	78	0	119	73	200	0	0	273	0	0	0	0	0	0	362	39	0	401	793
Total	129	0	309	0	438	291	823	0	4	1118	0	1	0	0	1	0	1441	118	0	1559	3116
Grand Total	256	0	569	0	825	538	1565	0	4	2107	0	1	0	0	1	0	2728	220	1	2949	5882
Approach %	31.0	0.0	69.0	0.0		25.5	74.3	0.0	0.2		0.0	100.0	0.0	0.0		0.0	92.5	7.5	0.0		
Total %	4.4	0.0	9.7	0.0	14.0	9.1	26.6	0.0	0.1	35.8	0.0	0.0	0.0	0.0	0.0	0.0	46.4	3.7	0.0	50.1	
Exiting Leg Total					759					3301					0					1822	5882

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

8:00 AM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	27	0	85	0	112	66	205	0	4	275	0	0	0	0	0	0	364	25	0	389	776
8:15 AM	30	0	76	0	106	67	198	0	0	265	0	0	0	0	0	0	333	33	0	366	737
8:30 AM	31	0	70	0	101	85	220	0	0	305	0	1	0	0	1	0	382	21	0	403	810
8:45 AM	41	0	78	0	119	73	200	0	0	273	0	0	0	0	0	0	362	39	0	401	793
Total Volume	129	0	309	0	438	291	823	0	4	1118	0	1	0	0	1	0	1441	118	0	1559	3116
% Approach Total	29.5	0.0	70.5	0.0		26.0	73.6	0.0	0.4		0.0	100.0	0.0	0.0		0.0	92.4	7.6	0.0		
PHF	0.787	0.000	0.909	0.000	0.920	0.856	0.935	0.000	0.250	0.916	0.000	0.250	0.000	0.000	0.250	0.000	0.943	0.756	0.000	0.967	0.962
Entering Leg	129	0	309	0	438	291	823	0	4	1118	0	1	0	0	1	0	1441	118	0	1559	3116
Exiting Leg					410					1754					0					952	3116
Total					848					2872					1					2511	6232

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	2	0	8	0	10	5	10	0	0	15	0	0	0	0	0	0	7	0	0	7	32
7:15 AM	3	0	4	0	7	10	15	0	0	25	0	0	0	0	0	0	7	4	0	11	43
7:30 AM	0	0	9	0	9	6	7	0	0	13	0	0	0	0	0	0	9	3	0	12	34
7:45 AM	6	0	6	0	12	3	7	0	0	10	0	0	0	0	0	0	9	3	0	12	34
Total	11	0	27	0	38	24	39	0	0	63	0	0	0	0	0	0	32	10	0	42	143
8:00 AM	1	0	3	0	4	5	11	0	0	16	0	0	0	0	0	0	9	4	0	13	33
8:15 AM	1	0	1	0	2	6	10	0	0	16	0	0	0	0	0	0	13	1	0	14	32
8:30 AM	3	0	5	0	8	12	5	0	0	17	0	0	0	0	0	0	13	0	0	13	38
8:45 AM	2	0	9	0	11	4	13	0	0	17	0	0	0	0	0	0	15	4	0	19	47
Total	7	0	18	0	25	27	39	0	0	66	0	0	0	0	0	0	50	9	0	59	150
Grand Total	18	0	45	0	63	51	78	0	0	129	0	0	0	0	0	0	82	19	0	101	293
Approach %	28.6	0.0	71.4	0.0		39.5	60.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	81.2	18.8	0.0		
Total %	6.1	0.0	15.4	0.0	21.5	17.4	26.6	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	28.0	6.5	0.0	34.5	
Exiting Leg Total					70					127					0					96	293

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

8:00 AM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	1	0	3	0	4	5	11	0	0	16	0	0	0	0	0	0	9	4	0	13	33
8:15 AM	1	0	1	0	2	6	10	0	0	16	0	0	0	0	0	0	13	1	0	14	32
8:30 AM	3	0	5	0	8	12	5	0	0	17	0	0	0	0	0	0	13	0	0	13	38
8:45 AM	2	0	9	0	11	4	13	0	0	17	0	0	0	0	0	0	15	4	0	19	47
Total Volume	7	0	18	0	25	27	39	0	0	66	0	0	0	0	0	0	50	9	0	59	150
% Approach Total	28.0	0.0	72.0	0.0		40.9	59.1	0.0	0.0		0.0	0.0	0.0	0.0		0.0	84.7	15.3	0.0		
PHF	0.583	0.000	0.500	0.000	0.568	0.563	0.750	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.563	0.000	0.776	0.798
Entering Leg	7	0	18	0	25	27	39	0	0	66	0	0	0	0	0	0	50	9	0	59	150
Exiting Leg					36					68					0					46	150
Total					61					134					0					105	300

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	2	0	1	0	3	6	15	0	0	21	0	0	0	0	0	0	4	1	0	5	29
7:15 AM	2	0	0	0	2	2	7	0	0	9	0	0	0	0	0	0	11	1	0	12	23
7:30 AM	2	0	3	0	5	0	7	0	0	7	0	0	0	0	0	0	7	3	0	10	22
7:45 AM	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	0	6	0	0	6	19
Total	7	0	4	0	11	11	38	0	0	49	0	0	0	0	0	0	28	5	0	33	93
8:00 AM	7	0	1	0	8	4	8	0	0	12	0	0	0	0	0	0	4	1	0	5	25
8:15 AM	0	0	2	0	2	1	7	0	0	8	0	0	0	0	0	0	2	2	0	4	14
8:30 AM	3	0	1	0	4	4	8	0	0	12	0	0	0	0	0	0	6	3	0	9	25
8:45 AM	2	0	4	0	6	2	5	0	0	7	0	0	0	0	0	0	6	5	0	11	24
Total	12	0	8	0	20	11	28	0	0	39	0	0	0	0	0	0	18	11	0	29	88
Grand Total	19	0	12	0	31	22	66	0	0	88	0	0	0	0	0	0	46	16	0	62	181
Approach %	61.3	0.0	38.7	0.0		25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	74.2	25.8	0.0		
Total %	10.5	0.0	6.6	0.0	17.1	12.2	36.5	0.0	0.0	48.6	0.0	0.0	0.0	0.0	0.0	0.0	25.4	8.8	0.0	34.3	
Exiting Leg Total					38					58					0					85	181

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

7:00 AM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	2	0	1	0	3	6	15	0	0	21	0	0	0	0	0	0	4	1	0	5	29
7:15 AM	2	0	0	0	2	2	7	0	0	9	0	0	0	0	0	0	11	1	0	12	23
7:30 AM	2	0	3	0	5	0	7	0	0	7	0	0	0	0	0	0	7	3	0	10	22
7:45 AM	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	0	6	0	0	6	19
Total Volume	7	0	4	0	11	11	38	0	0	49	0	0	0	0	0	0	28	5	0	33	93
% Approach Total	63.6	0.0	36.4	0.0		22.4	77.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	84.8	15.2	0.0		
PHF	0.875	0.000	0.333	0.000	0.550	0.458	0.633	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.636	0.417	0.000	0.688	0.802
Entering Leg	7	0	4	0	11	11	38	0	0	49	0	0	0	0	0	0	28	5	0	33	93
Exiting Leg					16					32					0					45	93
Total					27					81					0					78	186

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	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	1	0	0	0	1	1
7:15 AM	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	2	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	3	6
7:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	9
Total	3	0	2	0	0	0	5	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	9	3	0	0	0	12	18
8:00 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	4
8:15 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	8
8:30 AM	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	4
8:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	1	3	5
Total	3	0	2	0	0	0	5	0	2	0	0	0	1	3	0	0	0	0	0	0	0	0	7	5	0	0	1	13	21
Grand Total	6	0	4	0	0	0	10	0	3	0	0	0	1	4	0	0	0	0	0	0	0	0	16	8	0	0	1	25	39
Approach %	60.0	0.0	40.0	0.0	0.0	0.0		0.0	75.0	0.0	0.0	0.0	25.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	64.0	32.0	0.0	0.0	4.0		
Total %	15.4	0.0	10.3	0.0	0.0	0.0	25.6	0.0	7.7	0.0	0.0	0.0	2.6	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	20.5	0.0	0.0	2.6	64.1	
Exiting Leg Total							8							21							0							10	39

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

7:30 AM	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
7:30 AM	2	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	3	6
7:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	9
8:00 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	4
8:15 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	8
Total Volume	4	0	3	0	0	0	7	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	15	4	0	0	0	19	27
% Approach Total	57.1	0.0	42.9	0.0	0.0	0.0		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	78.9	21.1	0.0	0.0	0.0		
PHF	0.500	0.000	0.375	0.000	0.000	0.000	0.875	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	0.469	0.500	0.000	0.000	0.000	0.594	0.750
Entering Leg	4	0	3	0	0	0	7	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	15	4	0	0	0	19	27
Exiting Leg							4							18							0							5	27
Total							11							19							0							24	54

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
7:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5
7:30 AM	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
7:45 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	1	1	2
Total	0	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	4	15
8:00 AM	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	5
8:15 AM	0	0	0	0	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	4	5	12
8:30 AM	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3	4	8
8:45 AM	0	0	0	0	3	2	5	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	2	9
Total	0	0	0	0	8	9	17	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	3	8	11	34
Grand Total	0	0	0	0	11	15	26	0	0	0	0	0	1	1	0	0	0	0	0	7	7	0	0	0	0	5	10	15	49
Approach %	0.0	0.0	0.0	0.0	42.3	57.7		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	33.3	66.7		
Total %	0.0	0.0	0.0	0.0	22.4	30.6	53.1	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	14.3	14.3	0.0	0.0	0.0	0.0	10.2	20.4	30.6	
Exiting Leg Total							26							1							7							15	49

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

8:00 AM	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
8:00 AM	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	5
8:15 AM	0	0	0	0	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	4	5	12
8:30 AM	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3	4	8
8:45 AM	0	0	0	0	3	2	5	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	2	9
Total Volume	0	0	0	0	8	9	17	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	3	8	11	34
% Approach Total	0.0	0.0	0.0	0.0	47.1	52.9		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	27.3	72.7		
PHF	0.000	0.000	0.000	0.000	0.667	0.563	0.708	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.625	0.625	0.000	0.000	0.000	0.000	0.750	0.500	0.550	0.708
Entering Leg	0	0	0	0	8	9	17	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	3	8	11	34
Exiting Leg							17							1							5							11	34
Total							34							2							10							22	68

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	50	0	61	0	111	38	229	0	0	267	0	0	0	0	0	0	285	46	0	331	709
4:15 PM	57	0	80	0	137	65	264	0	0	329	0	0	0	0	0	0	245	43	1	289	755
4:30 PM	49	0	70	0	119	59	264	0	0	323	0	0	0	0	0	0	278	28	1	307	749
4:45 PM	48	0	55	0	103	83	250	0	0	333	0	0	0	0	0	0	280	42	2	324	760
Total	204	0	266	0	470	245	1007	0	0	1252	0	0	0	0	0	0	1088	159	4	1251	2973
5:00 PM	64	0	80	0	144	62	266	0	0	328	0	0	0	0	0	0	315	46	0	361	833
5:15 PM	60	0	64	0	124	60	291	0	0	351	0	0	0	0	0	0	256	51	1	308	783
5:30 PM	52	0	58	0	110	87	317	0	1	405	0	0	0	0	0	0	283	44	0	327	842
5:45 PM	59	0	88	0	147	57	310	0	1	368	0	0	0	1	1	0	244	47	1	292	808
Total	235	0	290	0	525	266	1184	0	2	1452	0	0	0	1	1	0	1098	188	2	1288	3266
Grand Total	439	0	556	0	995	511	2191	0	2	2704	0	0	0	1	1	0	2186	347	6	2539	6239
Approach %	44.1	0.0	55.9	0.0		18.9	81.0	0.0	0.1		0.0	0.0	0.0	100.0		0.0	86.1	13.7	0.2		
Total %	7.0	0.0	8.9	0.0	15.9	8.2	35.1	0.0	0.0	43.3	0.0	0.0	0.0	0.0	0.0	0.0	35.0	5.6	0.1	40.7	
Exiting Leg Total					858					2744					1					2636	6239
Cars	426	0	531	0	957	480	2145	0	2	2627	0	0	0	1	1	0	2106	331	6	2443	6028
% Cars	97.0	0.0	95.5	0.0	96.2	93.9	97.9	0.0	100.0	97.2	0.0	0.0	0.0	100.0	100.0	0.0	96.3	95.4	100.0	96.2	96.6
Exiting Leg Total					811					2639					1					2577	6028
Heavy Vehicles	3	0	17	0	20	15	24	0	0	39	0	0	0	0	0	0	39	6	0	45	104
% Heavy Vehicles	0.7	0.0	3.1	0.0	2.0	2.9	1.1	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.7	0.0	1.8	1.7
Exiting Leg Total					21					56					0					27	104
Buses	10	0	8	0	18	16	22	0	0	38	0	0	0	0	0	0	41	10	0	51	107
% Buses	2.3	0.0	1.4	0.0	1.8	3.1	1.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.9	0.0	2.0	1.7
Exiting Leg Total					26					49					0					32	107

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

5:00 PM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	64	0	80	0	144	62	266	0	0	328	0	0	0	0	0	0	315	46	0	361	833
5:15 PM	60	0	64	0	124	60	291	0	0	351	0	0	0	0	0	0	256	51	1	308	783
5:30 PM	52	0	58	0	110	87	317	0	1	405	0	0	0	0	0	0	283	44	0	327	842
5:45 PM	59	0	88	0	147	57	310	0	1	368	0	0	0	1	1	0	244	47	1	292	808
Total Volume	235	0	290	0	525	266	1184	0	2	1452	0	0	0	1	1	0	1098	188	2	1288	3266
% Approach Total	44.8	0.0	55.2	0.0		18.3	81.5	0.0	0.1		0.0	0.0	0.0	100.0		0.0	85.2	14.6	0.2		
PHF	0.918	0.000	0.824	0.000	0.893	0.764	0.934	0.000	0.500	0.896	0.000	0.000	0.000	0.250	0.250	0.000	0.871	0.922	0.500	0.892	0.970
Cars	227	0	282	0	509	252	1160	0	2	1414	0	0	0	1	1	0	1060	183	2	1245	3169
Cars %	96.6	0.0	97.2	0.0	97.0	94.7	98.0	0.0	100.0	97.4	0.0	0.0	0.0	100.0	100.0	0.0	96.5	97.3	100.0	96.7	97.0
Heavy Vehicles	2	0	6	0	8	7	15	0	0	22	0	0	0	0	0	0	15	1	0	16	46
Heavy Vehicles %	0.9	0.0	2.1	0.0	1.5	2.6	1.3	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.5	0.0	1.2	1.4
Buses	6	0	2	0	8	7	9	0	0	16	0	0	0	0	0	0	23	4	0	27	51
Buses %	2.6	0.0	0.7	0.0	1.5	2.6	0.8	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0	2.1	1.6
Cars Enter Leg	227	0	282	0	509	252	1160	0	2	1414	0	0	0	1	1	0	1060	183	2	1245	3169
Heavy Enter Leg	2	0	6	0	8	7	15	0	0	22	0	0	0	0	0	0	15	1	0	16	46
Bus Enter Leg	6	0	2	0	8	7	9	0	0	16	0	0	0	0	0	0	23	4	0	27	51
Total Entering Leg	235	0	290	0	525	266	1184	0	2	1452	0	0	0	1	1	0	1098	188	2	1288	3266
Cars Exiting Leg					435					1344					1					1389	3169
Heavy Exiting Leg					8					21					0					17	46
Buses Exiting Leg					11					25					0					15	51
Total Exiting Leg					454					1390					1					1421	3266

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	49	0	57	0	106	36	225	0	0	261	0	0	0	0	0	0	275	44	0	319	686
4:15 PM	56	0	77	0	133	57	254	0	0	311	0	0	0	0	0	0	235	38	1	274	718
4:30 PM	48	0	63	0	111	56	262	0	0	318	0	0	0	0	0	0	266	27	1	294	723
4:45 PM	46	0	52	0	98	79	244	0	0	323	0	0	0	0	0	0	270	39	2	311	732
Total	199	0	249	0	448	228	985	0	0	1213	0	0	0	0	0	0	1046	148	4	1198	2859
5:00 PM	61	0	76	0	137	61	256	0	0	317	0	0	0	0	0	0	305	43	0	348	802
5:15 PM	60	0	64	0	124	56	286	0	0	342	0	0	0	0	0	0	250	51	1	302	768
5:30 PM	49	0	56	0	105	81	313	0	1	395	0	0	0	0	0	0	271	43	0	314	814
5:45 PM	57	0	86	0	143	54	305	0	1	360	0	0	0	1	1	0	234	46	1	281	785
Total	227	0	282	0	509	252	1160	0	2	1414	0	0	0	1	1	0	1060	183	2	1245	3169
Grand Total	426	0	531	0	957	480	2145	0	2	2627	0	0	0	1	1	0	2106	331	6	2443	6028
Approach %	44.5	0.0	55.5	0.0		18.3	81.7	0.0	0.1		0.0	0.0	0.0	100.0		0.0	86.2	13.5	0.2		
Total %	7.1	0.0	8.8	0.0	15.9	8.0	35.6	0.0	0.0	43.6	0.0	0.0	0.0	0.0	0.0	0.0	34.9	5.5	0.1	40.5	
Exiting Leg Total					811					2639					1					2577	6028

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

5:00 PM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	61	0	76	0	137	61	256	0	0	317	0	0	0	0	0	0	305	43	0	348	802
5:15 PM	60	0	64	0	124	56	286	0	0	342	0	0	0	0	0	0	250	51	1	302	768
5:30 PM	49	0	56	0	105	81	313	0	1	395	0	0	0	0	0	0	271	43	0	314	814
5:45 PM	57	0	86	0	143	54	305	0	1	360	0	0	0	1	1	0	234	46	1	281	785
Total Volume	227	0	282	0	509	252	1160	0	2	1414	0	0	0	1	1	0	1060	183	2	1245	3169
% Approach Total	44.6	0.0	55.4	0.0		17.8	82.0	0.0	0.1		0.0	0.0	0.0	100.0		0.0	85.1	14.7	0.2		
PHF	0.930	0.000	0.820	0.000	0.890	0.778	0.927	0.000	0.500	0.895	0.000	0.000	0.000	0.250	0.250	0.000	0.869	0.897	0.500	0.894	0.973
Entering Leg	227	0	282	0	509	252	1160	0	2	1414	0	0	0	1	1	0	1060	183	2	1245	3169
Exiting Leg					435					1344					1					1389	3169
Total					944					2758					2					2634	6338

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	3	0	3	1	2	0	0	3	0	0	0	0	0	0	6	1	0	7	13
4:15 PM	0	0	2	0	2	3	5	0	0	8	0	0	0	0	0	0	6	2	0	8	18
4:30 PM	1	0	4	0	5	1	0	0	0	1	0	0	0	0	0	0	7	1	0	8	14
4:45 PM	0	0	2	0	2	3	2	0	0	5	0	0	0	0	0	0	5	1	0	6	13
Total	1	0	11	0	12	8	9	0	0	17	0	0	0	0	0	0	24	5	0	29	58
5:00 PM	2	0	3	0	5	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	17
5:15 PM	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	2	0	0	2	7
5:30 PM	0	0	2	0	2	4	4	0	0	8	0	0	0	0	0	0	5	1	0	6	16
5:45 PM	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	6
Total	2	0	6	0	8	7	15	0	0	22	0	0	0	0	0	0	15	1	0	16	46
Grand Total	3	0	17	0	20	15	24	0	0	39	0	0	0	0	0	0	39	6	0	45	104
Approach %	15.0	0.0	85.0	0.0		38.5	61.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	86.7	13.3	0.0		
Total %	2.9	0.0	16.3	0.0	19.2	14.4	23.1	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	37.5	5.8	0.0	43.3	
Exiting Leg Total					21					56					0					27	104

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

4:15 PM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	2	0	2	3	5	0	0	8	0	0	0	0	0	0	6	2	0	8	18
4:30 PM	1	0	4	0	5	1	0	0	0	1	0	0	0	0	0	0	7	1	0	8	14
4:45 PM	0	0	2	0	2	3	2	0	0	5	0	0	0	0	0	0	5	1	0	6	13
5:00 PM	2	0	3	0	5	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	17
Total Volume	3	0	11	0	14	7	13	0	0	20	0	0	0	0	0	0	24	4	0	28	62
% Approach Total	21.4	0.0	78.6	0.0		35.0	65.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	85.7	14.3	0.0		
PHF	0.375	0.000	0.688	0.000	0.700	0.583	0.542	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.857	0.500	0.000	0.875	0.861
Entering Leg	3	0	11	0	14	7	13	0	0	20	0	0	0	0	0	0	24	4	0	28	62
Exiting Leg					11					35					0					16	62
Total					25					55					0					44	124

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	1	0	1	0	2	1	2	0	0	3	0	0	0	0	0	0	4	1	0	5	10
4:15 PM	1	0	1	0	2	5	5	0	0	10	0	0	0	0	0	0	4	3	0	7	19
4:30 PM	0	0	3	0	3	2	2	0	0	4	0	0	0	0	0	0	5	0	0	5	12
4:45 PM	2	0	1	0	3	1	4	0	0	5	0	0	0	0	0	0	5	2	0	7	15
Total	4	0	6	0	10	9	13	0	0	22	0	0	0	0	0	0	18	6	0	24	56
5:00 PM	1	0	1	0	2	1	4	0	0	5	0	0	0	0	0	0	4	3	0	7	14
5:15 PM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	4	0	0	4	8
5:30 PM	3	0	0	0	3	2	0	0	0	2	0	0	0	0	0	0	7	0	0	7	12
5:45 PM	2	0	1	0	3	2	3	0	0	5	0	0	0	0	0	0	8	1	0	9	17
Total	6	0	2	0	8	7	9	0	0	16	0	0	0	0	0	0	23	4	0	27	51
Grand Total	10	0	8	0	18	16	22	0	0	38	0	0	0	0	0	0	41	10	0	51	107
Approach %	55.6	0.0	44.4	0.0		42.1	57.9	0.0	0.0		0.0	0.0	0.0	0.0		0.0	80.4	19.6	0.0		
Total %	9.3	0.0	7.5	0.0	16.8	15.0	20.6	0.0	0.0	35.5	0.0	0.0	0.0	0.0	0.0	0.0	38.3	9.3	0.0	47.7	
Exiting Leg Total					26					49					0					32	107

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

4:15 PM	North Harvard Street					Cambridge Street					Conrail Driveway					Cambridge Street					
	North					East					South					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	1	0	1	0	2	5	5	0	0	10	0	0	0	0	0	0	4	3	0	7	19
4:30 PM	0	0	3	0	3	2	2	0	0	4	0	0	0	0	0	0	5	0	0	5	12
4:45 PM	2	0	1	0	3	1	4	0	0	5	0	0	0	0	0	0	5	2	0	7	15
5:00 PM	1	0	1	0	2	1	4	0	0	5	0	0	0	0	0	0	4	3	0	7	14
Total Volume	4	0	6	0	10	9	15	0	0	24	0	0	0	0	0	0	18	8	0	26	60
% Approach Total	40.0	0.0	60.0	0.0		37.5	62.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	69.2	30.8	0.0		
PHF	0.500	0.000	0.500	0.000	0.833	0.450	0.750	0.000	0.000	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.900	0.667	0.000	0.929	0.789
Entering Leg	4	0	6	0	10	9	15	0	0	24	0	0	0	0	0	0	18	8	0	26	60
Exiting Leg					17					24					0					19	60
Total					27					48					0					45	120

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
4:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	0	1	3
Total	2	0	0	0	0	0	2	0	3	0	0	0	0	3	0	0	0	0	0	1	1	0	1	0	0	0	0	1	7
5:00 PM	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	1	4
5:15 PM	2	0	0	0	0	0	2	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6
5:30 PM	6	0	0	0	0	0	6	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:45 PM	2	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
Total	11	0	0	0	0	0	11	0	6	0	0	0	1	7	0	1	0	0	0	0	1	0	0	4	0	0	0	4	23
Grand Total	13	0	0	0	0	0	13	0	9	0	0	0	1	10	0	1	0	0	0	1	2	0	1	4	0	0	0	5	30
Approach %	100.0	0.0	0.0	0.0	0.0	0.0		0.0	90.0	0.0	0.0	0.0	10.0		0.0	50.0	0.0	0.0	0.0	50.0		0.0	20.0	80.0	0.0	0.0	0.0		
Total %	43.3	0.0	0.0	0.0	0.0	0.0	43.3	0.0	30.0	0.0	0.0	0.0	3.3	33.3	0.0	3.3	0.0	0.0	0.0	3.3	6.7	0.0	3.3	13.3	0.0	0.0	0.0	16.7	
Exiting Leg Total							5							2							1							22	30

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

5:00 PM	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
5:00 PM	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	1	4
5:15 PM	2	0	0	0	0	0	2	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6
5:30 PM	6	0	0	0	0	0	6	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:45 PM	2	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
Total Volume	11	0	0	0	0	0	11	0	6	0	0	0	1	7	0	1	0	0	0	0	1	0	0	4	0	0	0	4	23
% Approach Total	100.0	0.0	0.0	0.0	0.0	0.0		0.0	85.7	0.0	0.0	0.0	14.3		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		
PHF	0.458	0.000	0.000	0.000	0.000	0.000	0.458	0.000	0.500	0.000	0.000	0.000	0.250	0.583	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.639
Entering Leg	11	0	0	0	0	0	11	0	6	0	0	0	1	7	0	1	0	0	0	0	1	0	0	4	0	0	0	4	23
Exiting Leg							5							1							0							17	23
Total							16							8							1							21	46

PDI File #: **175597 D**
Location: **N: North Harvard Street S: Conrail Driveway**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
4:00 PM	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
4:15 PM	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	1	1	2
4:30 PM	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
4:45 PM	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	7
Total	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	11
5:00 PM	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9
5:15 PM	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	2	2	4	13
5:45 PM	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
Total	0	0	0	0	7	14	21	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	6	3	9	34
Grand Total	0	0	0	0	10	19	29	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	7	5	12	45
Approach %	0.0	0.0	0.0	0.0	34.5	65.5		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	58.3	41.7		
Total %	0.0	0.0	0.0	0.0	22.2	42.2	64.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	2.2	8.9	0.0	0.0	0.0	0.0	15.6	11.1	26.7	
Exiting Leg Total							29							0							4							12	45

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

4:45 PM	North Harvard Street							Cambridge Street							Conrail Driveway							Cambridge Street							
	North							East							South							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	Total
4:45 PM	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	7
5:00 PM	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9
5:15 PM	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	2	2	4	13
Total Volume	0	0	0	0	9	14	23	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4	4	8	35
% Approach Total	0.0	0.0	0.0	0.0	39.1	60.9		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	50.0	50.0		
PHF	0.000	0.000	0.000	0.000	0.750	0.700	0.821	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	0.250	0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.673
Entering Leg	0	0	0	0	9	14	23	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	4	4	8	35
Exiting Leg							23							0							4							8	35
Total							46							0							8							16	70

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	9	106	0	0	115	38	80	111	0	229	0	37	19	1	57	108	0	0	0	108	509
7:15 AM	11	155	0	0	166	42	66	212	0	320	0	41	26	0	67	99	0	0	0	99	652
7:30 AM	9	158	0	0	167	43	91	228	0	362	0	40	24	0	64	84	0	0	0	84	677
7:45 AM	8	184	0	0	192	55	71	239	0	365	0	31	24	0	55	92	0	0	0	92	704
Total	37	603	0	0	640	178	308	790	0	1276	0	149	93	1	243	383	0	0	0	383	2542
8:00 AM	13	177	0	0	190	59	82	225	0	366	0	26	25	0	51	104	0	0	0	104	711
8:15 AM	13	187	0	0	200	52	98	200	0	350	0	27	18	0	45	105	0	0	0	105	700
8:30 AM	6	186	0	0	192	71	84	216	0	371	0	31	25	0	56	86	0	0	0	86	705
8:45 AM	11	186	0	0	197	41	85	187	0	313	0	21	20	0	41	96	0	0	0	96	647
Total	43	736	0	0	779	223	349	828	0	1400	0	105	88	0	193	391	0	0	0	391	2763
Grand Total	80	1339	0	0	1419	401	657	1618	0	2676	0	254	181	1	436	774	0	0	0	774	5305
Approach %	5.6	94.4	0.0	0.0		15.0	24.6	60.5	0.0		0.0	58.3	41.5	0.2		100.0	0.0	0.0	0.0		
Total %	1.5	25.2	0.0	0.0	26.7	7.6	12.4	30.5	0.0	50.4	0.0	4.8	3.4	0.0	8.2	14.6	0.0	0.0	0.0	14.6	
Exiting Leg Total					655					0					3732					918	5305
Cars	80	1336	0	0	1416	399	611	1582	0	2592	0	253	167	1	421	710	0	0	0	710	5139
% Cars	100.0	99.8	0.0	0.0	99.8	99.5	93.0	97.8	0.0	96.9	0.0	99.6	92.3	100.0	96.6	91.7	0.0	0.0	0.0	91.7	96.9
Exiting Leg Total					652					0					3629					858	5139
Heavy Vehicles	0	1	0	0	1	2	26	21	0	49	0	0	14	0	14	44	0	0	0	44	108
% Heavy Vehicles	0.0	0.1	0.0	0.0	0.1	0.5	4.0	1.3	0.0	1.8	0.0	0.0	7.7	0.0	3.2	5.7	0.0	0.0	0.0	5.7	2.0
Exiting Leg Total					2					0					66					40	108
Buses	0	2	0	0	2	0	20	15	0	35	0	1	0	0	1	20	0	0	0	20	58
% Buses	0.0	0.1	0.0	0.0	0.1	0.0	3.0	0.9	0.0	1.3	0.0	0.4	0.0	0.0	0.2	2.6	0.0	0.0	0.0	2.6	1.1
Exiting Leg Total					1					0					37					20	58

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

7:45 AM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	8	184	0	0	192	55	71	239	0	365	0	31	24	0	55	92	0	0	0	92	704
8:00 AM	13	177	0	0	190	59	82	225	0	366	0	26	25	0	51	104	0	0	0	104	711
8:15 AM	13	187	0	0	200	52	98	200	0	350	0	27	18	0	45	105	0	0	0	105	700
8:30 AM	6	186	0	0	192	71	84	216	0	371	0	31	25	0	56	86	0	0	0	86	705
Total Volume	40	734	0	0	774	237	335	880	0	1452	0	115	92	0	207	387	0	0	0	387	2820
% Approach Total	5.2	94.8	0.0	0.0		16.3	23.1	60.6	0.0		0.0	55.6	44.4	0.0		100.0	0.0	0.0	0.0		
PHF	0.769	0.981	0.000	0.000	0.968	0.835	0.855	0.921	0.000	0.978	0.000	0.927	0.920	0.000	0.924	0.921	0.000	0.000	0.000	0.921	0.992
Cars	40	734	0	0	774	235	312	859	0	1406	0	114	84	0	198	351	0	0	0	351	2729
Cars %	100.0	100.0	0.0	0.0	100.0	99.2	93.1	97.6	0.0	96.8	0.0	99.1	91.3	0.0	95.7	90.7	0.0	0.0	0.0	90.7	96.8
Heavy Vehicles	0	0	0	0	0	2	14	10	0	26	0	0	8	0	8	26	0	0	0	26	60
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.8	4.2	1.1	0.0	1.8	0.0	0.0	8.7	0.0	3.9	6.7	0.0	0.0	0.0	6.7	2.1
Buses	0	0	0	0	0	0	9	11	0	20	0	1	0	0	1	10	0	0	0	10	31
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.3	0.0	1.4	0.0	0.9	0.0	0.0	0.5	2.6	0.0	0.0	0.0	2.6	1.1
Cars Enter Leg	40	734	0	0	774	235	312	859	0	1406	0	114	84	0	198	351	0	0	0	351	2729
Heavy Enter Leg	0	0	0	0	0	2	14	10	0	26	0	0	8	0	8	26	0	0	0	26	60
Bus Enter Leg	0	0	0	0	0	0	9	11	0	20	0	1	0	0	1	10	0	0	0	10	31
Total Entering Leg	40	734	0	0	774	237	335	880	0	1452	0	115	92	0	207	387	0	0	0	387	2820
Cars Exiting Leg					349					0					1944					436	2729
Heavy Exiting Leg					2					0					36					22	60
Buses Exiting Leg					1					0					21					9	31
Total Exiting Leg					352					0					2001					467	2820

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	9	105	0	0	114	38	72	110	0	220	0	37	18	1	56	98	0	0	0	98	488
7:15 AM	11	155	0	0	166	42	63	206	0	311	0	41	26	0	67	91	0	0	0	91	635
7:30 AM	9	157	0	0	166	43	83	226	0	352	0	40	21	0	61	78	0	0	0	78	657
7:45 AM	8	184	0	0	192	55	67	237	0	359	0	31	22	0	53	76	0	0	0	76	680
Total	37	601	0	0	638	178	285	779	0	1242	0	149	87	1	237	343	0	0	0	343	2460
8:00 AM	13	177	0	0	190	59	77	218	0	354	0	26	25	0	51	99	0	0	0	99	694
8:15 AM	13	187	0	0	200	50	89	195	0	334	0	27	14	0	41	98	0	0	0	98	673
8:30 AM	6	186	0	0	192	71	79	209	0	359	0	30	23	0	53	78	0	0	0	78	682
8:45 AM	11	185	0	0	196	41	81	181	0	303	0	21	18	0	39	92	0	0	0	92	630
Total	43	735	0	0	778	221	326	803	0	1350	0	104	80	0	184	367	0	0	0	367	2679
Grand Total	80	1336	0	0	1416	399	611	1582	0	2592	0	253	167	1	421	710	0	0	0	710	5139
Approach %	5.6	94.4	0.0	0.0		15.4	23.6	61.0	0.0		0.0	60.1	39.7	0.2		100.0	0.0	0.0	0.0		
Total %	1.6	26.0	0.0	0.0	27.6	7.8	11.9	30.8	0.0	50.4	0.0	4.9	3.2	0.0	8.2	13.8	0.0	0.0	0.0	13.8	
Exiting Leg Total					652					0					3629					858	5139

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

7:45 AM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	8	184	0	0	192	55	67	237	0	359	0	31	22	0	53	76	0	0	0	76	680
8:00 AM	13	177	0	0	190	59	77	218	0	354	0	26	25	0	51	99	0	0	0	99	694
8:15 AM	13	187	0	0	200	50	89	195	0	334	0	27	14	0	41	98	0	0	0	98	673
8:30 AM	6	186	0	0	192	71	79	209	0	359	0	30	23	0	53	78	0	0	0	78	682
Total Volume	40	734	0	0	774	235	312	859	0	1406	0	114	84	0	198	351	0	0	0	351	2729
% Approach Total	5.2	94.8	0.0	0.0		16.7	22.2	61.1	0.0		0.0	57.6	42.4	0.0		100.0	0.0	0.0	0.0		
PHF	0.769	0.981	0.000	0.000	0.968	0.827	0.876	0.906	0.000	0.979	0.000	0.919	0.840	0.000	0.934	0.886	0.000	0.000	0.000	0.886	0.983
Entering Leg	40	734	0	0	774	235	312	859	0	1406	0	114	84	0	198	351	0	0	0	351	2729
Exiting Leg					349					0					1944					436	2729
Total					1123					1406					2142					787	5458

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	1	0	0	1	0	4	1	0	5	0	0	1	0	1	8	0	0	0	8	15
7:15 AM	0	0	0	0	0	0	1	4	0	5	0	0	0	0	0	4	0	0	0	4	9
7:30 AM	0	0	0	0	0	0	5	1	0	6	0	0	3	0	3	4	0	0	0	4	13
7:45 AM	0	0	0	0	0	0	3	1	0	4	0	0	2	0	2	12	0	0	0	12	18
Total	0	1	0	0	1	0	13	7	0	20	0	0	6	0	6	28	0	0	0	28	55
8:00 AM	0	0	0	0	0	0	2	4	0	6	0	0	0	0	0	4	0	0	0	4	10
8:15 AM	0	0	0	0	0	2	6	2	0	10	0	0	4	0	4	5	0	0	0	5	19
8:30 AM	0	0	0	0	0	0	3	3	0	6	0	0	2	0	2	5	0	0	0	5	13
8:45 AM	0	0	0	0	0	0	2	5	0	7	0	0	2	0	2	2	0	0	0	2	11
Total	0	0	0	0	0	2	13	14	0	29	0	0	8	0	8	16	0	0	0	16	53
Grand Total	0	1	0	0	1	2	26	21	0	49	0	0	14	0	14	44	0	0	0	44	108
Approach %	0.0	100.0	0.0	0.0		4.1	53.1	42.9	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	0.9	0.0	0.0	0.9	1.9	24.1	19.4	0.0	45.4	0.0	0.0	13.0	0.0	13.0	40.7	0.0	0.0	0.0	40.7	
Exiting Leg Total					2					0					66					40	108

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

7:30 AM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	5	1	0	6	0	0	3	0	3	4	0	0	0	4	13
7:45 AM	0	0	0	0	0	0	3	1	0	4	0	0	2	0	2	12	0	0	0	12	18
8:00 AM	0	0	0	0	0	0	2	4	0	6	0	0	0	0	0	4	0	0	0	4	10
8:15 AM	0	0	0	0	0	2	6	2	0	10	0	0	4	0	4	5	0	0	0	5	19
Total Volume	0	0	0	0	0	2	16	8	0	26	0	0	9	0	9	25	0	0	0	25	60
% Approach Total	0.0	0.0	0.0	0.0		7.7	61.5	30.8	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.667	0.500	0.000	0.650	0.000	0.000	0.563	0.000	0.563	0.521	0.000	0.000	0.000	0.521	0.789
Entering Leg	0	0	0	0	0	2	16	8	0	26	0	0	9	0	9	25	0	0	0	25	60
Exiting Leg					2					0					33					25	60
Total					2					26					42					50	120

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	4	0	0	4	0	0	0	0	0	2	0	0	0	2	6
7:15 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	4	0	0	0	4	8
7:30 AM	0	1	0	0	1	0	3	1	0	4	0	0	0	0	0	2	0	0	0	2	7
7:45 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4	0	0	0	4	6
Total	0	1	0	0	1	0	10	4	0	14	0	0	0	0	0	12	0	0	0	12	27
8:00 AM	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	1	0	0	0	1	7
8:15 AM	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	2	0	0	0	2	8
8:30 AM	0	0	0	0	0	0	2	4	0	6	0	1	0	0	1	3	0	0	0	3	10
8:45 AM	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	2	0	0	0	2	6
Total	0	1	0	0	1	0	10	11	0	21	0	1	0	0	1	8	0	0	0	8	31
Grand Total	0	2	0	0	2	0	20	15	0	35	0	1	0	0	1	20	0	0	0	20	58
Approach %	0.0	100.0	0.0	0.0		0.0	57.1	42.9	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	3.4	0.0	0.0	3.4	0.0	34.5	25.9	0.0	60.3	0.0	1.7	0.0	0.0	1.7	34.5	0.0	0.0	0.0	34.5	
Exiting Leg Total					1					0					37					20	58

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

7:45 AM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4	0	0	0	4	6
8:00 AM	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	1	0	0	0	1	7
8:15 AM	0	0	0	0	0	0	3	3	0	6	0	0	0	0	0	2	0	0	0	2	8
8:30 AM	0	0	0	0	0	0	2	4	0	6	0	1	0	0	1	3	0	0	0	3	10
Total Volume	0	0	0	0	0	0	9	11	0	20	0	1	0	0	1	10	0	0	0	10	31
% Approach Total	0.0	0.0	0.0	0.0		0.0	45.0	55.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.688	0.000	0.833	0.000	0.250	0.000	0.000	0.250	0.625	0.000	0.000	0.000	0.625	0.775
Entering Leg	0	0	0	0	0	0	9	11	0	20	0	1	0	0	1	10	0	0	0	10	31
Exiting Leg					1					0					21					9	31
Total					1					20					22					19	62

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
7:00 AM	0	0	0	0	1	0	1	0	0	0	0	7	2	9	0	0	0	0	0	2	2	0	0	0	0	0	0	0	12
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	12	3	15	0	0	0	0	2	2	4	0	0	0	0	0	0	0	19
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	22	1	23	0	4	0	0	0	11	15	0	0	0	0	0	0	0	38
7:45 AM	0	0	0	0	0	1	1	1	1	0	0	13	7	22	0	10	0	0	1	6	17	0	0	0	0	1	0	1	41
Total	0	0	0	0	1	1	2	1	1	0	0	54	13	69	0	14	0	0	3	21	38	0	0	0	0	1	0	1	110
8:00 AM	0	0	0	0	0	1	1	0	8	0	0	13	5	26	0	0	1	0	1	6	8	1	0	0	0	0	1	2	37
8:15 AM	0	0	0	0	1	1	2	0	12	0	0	29	3	44	0	0	0	0	0	8	8	0	0	0	0	0	0	0	54
8:30 AM	1	0	0	0	0	0	1	1	6	0	0	22	3	32	0	1	0	0	0	12	13	0	0	0	0	0	1	1	47
8:45 AM	0	0	0	0	0	0	0	1	5	0	0	18	4	28	0	0	0	0	4	9	13	0	0	0	0	0	0	0	41
Total	1	0	0	0	1	2	4	2	31	0	0	82	15	130	0	1	1	0	5	35	42	1	0	0	0	0	2	3	179
Grand Total	1	0	0	0	2	3	6	3	32	0	0	136	28	199	0	15	1	0	8	56	80	1	0	0	0	1	2	4	289
Approach %	16.7	0.0	0.0	0.0	33.3	50.0		1.5	16.1	0.0	0.0	68.3	14.1		0.0	18.8	1.3	0.0	10.0	70.0		25.0	0.0	0.0	0.0	25.0	50.0		
Total %	0.3	0.0	0.0	0.0	0.7	1.0	2.1	1.0	11.1	0.0	0.0	47.1	9.7	68.9	0.0	5.2	0.3	0.0	2.8	19.4	27.7	0.3	0.0	0.0	0.0	0.3	0.7	1.4	
Exiting Leg Total							23							164							65							37	289

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

7:45 AM	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
7:45 AM	0	0	0	0	0	1	1	1	1	0	0	13	7	22	0	10	0	0	1	6	17	0	0	0	0	1	0	1	41
8:00 AM	0	0	0	0	0	1	1	0	8	0	0	13	5	26	0	0	1	0	1	6	8	1	0	0	0	0	1	2	37
8:15 AM	0	0	0	0	1	1	2	0	12	0	0	29	3	44	0	0	0	0	0	8	8	0	0	0	0	0	0	0	54
8:30 AM	1	0	0	0	0	0	1	1	6	0	0	22	3	32	0	1	0	0	0	12	13	0	0	0	0	0	1	1	47
Total Volume	1	0	0	0	1	3	5	2	27	0	0	77	18	124	0	11	1	0	2	32	46	1	0	0	0	1	2	4	179
% Approach Total	20.0	0.0	0.0	0.0	20.0	60.0		1.6	21.8	0.0	0.0	62.1	14.5		0.0	23.9	2.2	0.0	4.3	69.6		25.0	0.0	0.0	0.0	25.0	50.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.750	0.625	0.500	0.563	0.000	0.000	0.664	0.643	0.705	0.000	0.275	0.250	0.000	0.500	0.667	0.676	0.250	0.000	0.000	0.000	0.250	0.500	0.500	0.829
Entering Leg	1	0	0	0	1	3	5	2	27	0	0	77	18	124	0	11	1	0	2	32	46	1	0	0	0	1	2	4	179
Exiting Leg							17							95							35							32	179
Total							22							219							81							36	358

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
7:00 AM	0	0	0	0	4	2	6	0	0	0	0	10	9	19	0	0	0	0	1	0	1	0	0	0	0	1	0	1	27
7:15 AM	0	0	0	0	3	5	8	0	0	0	0	15	5	20	0	0	0	0	0	2	2	0	0	0	0	0	0	0	30
7:30 AM	0	0	0	0	6	3	9	0	0	0	0	3	8	11	0	0	0	0	1	2	3	0	0	0	0	0	0	0	23
7:45 AM	0	0	0	0	2	12	14	0	0	0	0	8	4	12	0	0	0	0	1	7	8	0	0	0	0	0	1	1	35
Total	0	0	0	0	15	22	37	0	0	0	0	36	26	62	0	0	0	0	3	11	14	0	0	0	0	1	1	2	115
8:00 AM	0	0	0	0	5	24	29	0	0	0	0	9	7	16	0	0	0	0	1	4	5	0	0	0	0	1	1	2	52
8:15 AM	0	0	0	0	9	55	64	0	0	0	0	4	4	8	0	0	0	0	4	2	6	0	0	0	0	1	0	1	79
8:30 AM	0	0	0	0	9	25	34	0	0	0	0	10	4	14	0	0	0	0	3	3	6	0	0	0	0	0	0	0	54
8:45 AM	0	0	0	0	4	39	43	0	0	0	0	6	5	11	0	0	0	0	0	0	0	0	0	0	0	0	1	1	55
Total	0	0	0	0	27	143	170	0	0	0	0	29	20	49	0	0	0	0	8	9	17	0	0	0	0	2	2	4	240
Grand Total	0	0	0	0	42	165	207	0	0	0	0	65	46	111	0	0	0	0	11	20	31	0	0	0	0	3	3	6	355
Approach %	0.0	0.0	0.0	0.0	20.3	79.7		0.0	0.0	0.0	0.0	58.6	41.4		0.0	0.0	0.0	0.0	35.5	64.5		0.0	0.0	0.0	0.0	50.0	50.0		
Total %	0.0	0.0	0.0	0.0	11.8	46.5	58.3	0.0	0.0	0.0	0.0	18.3	13.0	31.3	0.0	0.0	0.0	0.0	3.1	5.6	8.7	0.0	0.0	0.0	0.0	0.8	0.8	1.7	
Exiting Leg Total							207							111							31							6	355

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

8:00 AM	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
8:00 AM	0	0	0	0	5	24	29	0	0	0	0	9	7	16	0	0	0	0	1	4	5	0	0	0	0	1	1	2	52
8:15 AM	0	0	0	0	9	55	64	0	0	0	0	4	4	8	0	0	0	0	4	2	6	0	0	0	0	1	0	1	79
8:30 AM	0	0	0	0	9	25	34	0	0	0	0	10	4	14	0	0	0	0	3	3	6	0	0	0	0	0	0	0	54
8:45 AM	0	0	0	0	4	39	43	0	0	0	0	6	5	11	0	0	0	0	0	0	0	0	0	0	0	0	1	1	55
Total Volume	0	0	0	0	27	143	170	0	0	0	0	29	20	49	0	0	0	0	8	9	17	0	0	0	0	2	2	4	240
% Approach Total	0.0	0.0	0.0	0.0	15.9	84.1		0.0	0.0	0.0	0.0	59.2	40.8		0.0	0.0	0.0	0.0	47.1	52.9		0.0	0.0	0.0	0.0	50.0	50.0		
PHF	0.000	0.000	0.000	0.000	0.750	0.650	0.664	0.000	0.000	0.000	0.000	0.725	0.714	0.766	0.000	0.000	0.000	0.000	0.500	0.563	0.708	0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.759
Entering Leg	0	0	0	0	27	143	170	0	0	0	0	29	20	49	0	0	0	0	8	9	17	0	0	0	0	2	2	4	240
Exiting Leg							170							49							17							4	240
Total							340							98							34							8	480

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	6	134	0	0	140	87	115	268	0	470	0	76	11	2	89	103	0	0	0	103	802
4:15 PM	9	146	0	0	155	116	98	249	0	463	0	74	9	0	83	92	0	0	0	92	793
4:30 PM	4	146	0	0	150	111	107	243	0	461	0	72	9	0	81	130	0	0	0	130	822
4:45 PM	2	153	0	0	155	100	122	256	0	478	0	57	19	0	76	108	0	0	0	108	817
Total	21	579	0	0	600	414	442	1016	0	1872	0	279	48	2	329	433	0	0	0	433	3234
5:00 PM	10	145	0	0	155	117	106	233	0	456	0	63	14	1	78	125	0	0	0	125	814
5:15 PM	7	161	0	0	168	119	96	239	0	454	0	83	18	0	101	112	0	0	0	112	835
5:30 PM	9	153	0	0	162	96	119	238	0	453	0	69	22	2	93	126	0	0	0	126	834
5:45 PM	7	154	0	0	161	95	129	227	0	451	0	63	18	1	82	97	0	0	0	97	791
Total	33	613	0	0	646	427	450	937	0	1814	0	278	72	4	354	460	0	0	0	460	3274
Grand Total	54	1192	0	0	1246	841	892	1953	0	3686	0	557	120	6	683	893	0	0	0	893	6508
Approach %	4.3	95.7	0.0	0.0		22.8	24.2	53.0	0.0		0.0	81.6	17.6	0.9		100.0	0.0	0.0	0.0		
Total %	0.8	18.3	0.0	0.0	19.1	12.9	13.7	30.0	0.0	56.6	0.0	8.6	1.8	0.1	10.5	13.7	0.0	0.0	0.0	13.7	
Exiting Leg Total					1398					0					4044					1066	6508
Cars	53	1191	0	0	1244	839	865	1919	0	3623	0	557	117	6	680	876	0	0	0	876	6423
% Cars	98.1	99.9	0.0	0.0	99.8	99.8	97.0	98.3	0.0	98.3	0.0	100.0	97.5	100.0	99.6	98.1	0.0	0.0	0.0	98.1	98.7
Exiting Leg Total					1396					0					3992					1035	6423
Heavy Vehicles	1	1	0	0	2	1	7	21	0	29	0	0	2	0	2	6	0	0	0	6	39
% Heavy Vehicles	1.9	0.1	0.0	0.0	0.2	0.1	0.8	1.1	0.0	0.8	0.0	0.0	1.7	0.0	0.3	0.7	0.0	0.0	0.0	0.7	0.6
Exiting Leg Total					1					0					28					10	39
Buses	0	0	0	0	0	1	20	13	0	34	0	0	1	0	1	11	0	0	0	11	46
% Buses	0.0	0.0	0.0	0.0	0.0	0.1	2.2	0.7	0.0	0.9	0.0	0.0	0.8	0.0	0.1	1.2	0.0	0.0	0.0	1.2	0.7
Exiting Leg Total					1					0					24					21	46

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

4:45 PM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	2	153	0	0	155	100	122	256	0	478	0	57	19	0	76	108	0	0	0	108	817
5:00 PM	10	145	0	0	155	117	106	233	0	456	0	63	14	1	78	125	0	0	0	125	814
5:15 PM	7	161	0	0	168	119	96	239	0	454	0	83	18	0	101	112	0	0	0	112	835
5:30 PM	9	153	0	0	162	96	119	238	0	453	0	69	22	2	93	126	0	0	0	126	834
Total Volume	28	612	0	0	640	432	443	966	0	1841	0	272	73	3	348	471	0	0	0	471	3300
% Approach Total	4.4	95.6	0.0	0.0		23.5	24.1	52.5	0.0		0.0	78.2	21.0	0.9		100.0	0.0	0.0	0.0		
PHF	0.700	0.950	0.000	0.000	0.952	0.908	0.908	0.943	0.000	0.963	0.000	0.819	0.830	0.375	0.861	0.935	0.000	0.000	0.000	0.935	0.988
Cars	27	612	0	0	639	431	428	947	0	1806	0	272	71	3	346	463	0	0	0	463	3254
Cars %	96.4	100.0	0.0	0.0	99.8	99.8	96.6	98.0	0.0	98.1	0.0	100.0	97.3	100.0	99.4	98.3	0.0	0.0	0.0	98.3	98.6
Heavy Vehicles	1	0	0	0	1	0	4	11	0	15	0	0	2	0	2	2	0	0	0	2	20
Heavy Vehicles %	3.6	0.0	0.0	0.0	0.2	0.0	0.9	1.1	0.0	0.8	0.0	0.0	2.7	0.0	0.6	0.4	0.0	0.0	0.0	0.4	0.6
Buses	0	0	0	0	0	1	11	8	0	20	0	0	0	0	0	6	0	0	0	6	26
Buses %	0.0	0.0	0.0	0.0	0.0	0.2	2.5	0.8	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.8
Cars Enter Leg	27	612	0	0	639	431	428	947	0	1806	0	272	71	3	346	463	0	0	0	463	3254
Heavy Enter Leg	1	0	0	0	1	0	4	11	0	15	0	0	2	0	2	2	0	0	0	2	20
Bus Enter Leg	0	0	0	0	0	1	11	8	0	20	0	0	0	0	0	6	0	0	0	6	26
Total Entering Leg	28	612	0	0	640	432	443	966	0	1841	0	272	73	3	348	471	0	0	0	471	3300
Cars Exiting Leg					703					0					2025					526	3254
Heavy Exiting Leg					0					0					13					7	20
Buses Exiting Leg					1					0					14					11	26
Total Exiting Leg					704					0					2052					544	3300

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	6	133	0	0	139	86	112	264	0	462	0	76	10	2	88	99	0	0	0	99	788
4:15 PM	9	146	0	0	155	116	94	245	0	455	0	74	9	0	83	89	0	0	0	89	782
4:30 PM	4	146	0	0	150	111	102	237	0	450	0	72	9	0	81	129	0	0	0	129	810
4:45 PM	2	153	0	0	155	100	115	250	0	465	0	57	17	0	74	106	0	0	0	106	800
Total	21	578	0	0	599	413	423	996	0	1832	0	279	45	2	326	423	0	0	0	423	3180
5:00 PM	9	145	0	0	154	117	103	230	0	450	0	63	14	1	78	124	0	0	0	124	806
5:15 PM	7	161	0	0	168	118	95	235	0	448	0	83	18	0	101	108	0	0	0	108	825
5:30 PM	9	153	0	0	162	96	115	232	0	443	0	69	22	2	93	125	0	0	0	125	823
5:45 PM	7	154	0	0	161	95	129	226	0	450	0	63	18	1	82	96	0	0	0	96	789
Total	32	613	0	0	645	426	442	923	0	1791	0	278	72	4	354	453	0	0	0	453	3243
Grand Total	53	1191	0	0	1244	839	865	1919	0	3623	0	557	117	6	680	876	0	0	0	876	6423
Approach %	4.3	95.7	0.0	0.0		23.2	23.9	53.0	0.0		0.0	81.9	17.2	0.9		100.0	0.0	0.0	0.0		
Total %	0.8	18.5	0.0	0.0	19.4	13.1	13.5	29.9	0.0	56.4	0.0	8.7	1.8	0.1	10.6	13.6	0.0	0.0	0.0	13.6	
Exiting Leg Total					1396					0					3992					1035	6423

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

4:45 PM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	2	153	0	0	155	100	115	250	0	465	0	57	17	0	74	106	0	0	0	106	800
5:00 PM	9	145	0	0	154	117	103	230	0	450	0	63	14	1	78	124	0	0	0	124	806
5:15 PM	7	161	0	0	168	118	95	235	0	448	0	83	18	0	101	108	0	0	0	108	825
5:30 PM	9	153	0	0	162	96	115	232	0	443	0	69	22	2	93	125	0	0	0	125	823
Total Volume	27	612	0	0	639	431	428	947	0	1806	0	272	71	3	346	463	0	0	0	463	3254
% Approach Total	4.2	95.8	0.0	0.0		23.9	23.7	52.4	0.0		0.0	78.6	20.5	0.9		100.0	0.0	0.0	0.0		
PHF	0.750	0.950	0.000	0.000	0.951	0.913	0.930	0.947	0.000	0.971	0.000	0.819	0.807	0.375	0.856	0.926	0.000	0.000	0.000	0.926	0.986
Entering Leg	27	612	0	0	639	431	428	947	0	1806	0	272	71	3	346	463	0	0	0	463	3254
Exiting Leg					703					0					2025					526	3254
Total					1342					1806					2371					989	6508

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	1	0	4	0	5	0	0	0	0	0	3	0	0	0	3	9
4:15 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	1	0	0	0	1	5
4:30 PM	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	4	2	0	6	0	0	2	0	2	0	0	0	0	0	8
Total	0	1	0	0	1	1	7	11	0	19	0	0	2	0	2	4	0	0	0	4	26
5:00 PM	1	0	0	0	1	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	0	0	1	4
5:30 PM	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	10	0	10	0	0	0	0	0	2	0	0	0	2	13
Grand Total	1	1	0	0	2	1	7	21	0	29	0	0	2	0	2	6	0	0	0	6	39
Approach %	50.0	50.0	0.0	0.0		3.4	24.1	72.4	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
Total %	2.6	2.6	0.0	0.0	5.1	2.6	17.9	53.8	0.0	74.4	0.0	0.0	5.1	0.0	5.1	15.4	0.0	0.0	0.0	15.4	
Exiting Leg Total					1					0					28					10	39

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

4:00 PM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	1	0	4	0	5	0	0	0	0	0	3	0	0	0	3	9
4:15 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	1	0	0	0	1	5
4:30 PM	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	4	2	0	6	0	0	2	0	2	0	0	0	0	0	8
Total Volume	0	1	0	0	1	1	7	11	0	19	0	0	2	0	2	4	0	0	0	4	26
% Approach Total	0.0	100.0	0.0	0.0		5.3	36.8	57.9	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.438	0.688	0.000	0.792	0.000	0.000	0.250	0.000	0.250	0.333	0.000	0.000	0.000	0.333	0.722
Entering Leg	0	1	0	0	1	1	7	11	0	19	0	0	2	0	2	4	0	0	0	4	26
Exiting Leg					1					0					16					9	26
Total					2					19					18					13	52

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	3	0	0	3	0	0	1	0	1	1	0	0	0	1	5
4:15 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	2	0	0	0	2	6
4:30 PM	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	1	0	0	0	1	8
4:45 PM	0	0	0	0	0	0	3	4	0	7	0	0	0	0	0	2	0	0	0	2	9
Total	0	0	0	0	0	0	12	9	0	21	0	0	1	0	1	6	0	0	0	6	28
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	4
5:15 PM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	3	0	0	0	3	6
5:30 PM	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	1	8	4	0	13	0	0	0	0	0	5	0	0	0	5	18
Grand Total	0	0	0	0	0	1	20	13	0	34	0	0	1	0	1	11	0	0	0	11	46
Approach %	0.0	0.0	0.0	0.0		2.9	58.8	38.2	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	2.2	43.5	28.3	0.0	73.9	0.0	0.0	2.2	0.0	2.2	23.9	0.0	0.0	0.0	23.9	
Exiting Leg Total					1					0					24					21	46

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

4:00 PM	Soldiers Field Road Ramps					Western Avenue Bridge					Soldiers Field Road Ramps					Western Avenue					
	North					East					South					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	3	0	0	3	0	0	1	0	1	1	0	0	0	1	5
4:15 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	2	0	0	0	2	6
4:30 PM	0	0	0	0	0	0	4	3	0	7	0	0	0	0	0	1	0	0	0	1	8
4:45 PM	0	0	0	0	0	0	3	4	0	7	0	0	0	0	0	2	0	0	0	2	9
Total Volume	0	0	0	0	0	0	12	9	0	21	0	0	1	0	1	6	0	0	0	6	28
% Approach Total	0.0	0.0	0.0	0.0		0.0	57.1	42.9	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.563	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.750	0.000	0.000	0.000	0.750	0.778
Entering Leg	0	0	0	0	0	0	12	9	0	21	0	0	1	0	1	6	0	0	0	6	28
Exiting Leg					0					0					15					13	28
Total					0					21					16					19	56

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

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

	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
4:00 PM	0	0	0	0	3	1	4	0	4	1	0	0	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
4:15 PM	0	0	0	0	2	0	2	0	4	0	0	1	2	7	0	0	0	0	0	0	0	1	0	0	0	0	0	1	10
4:30 PM	0	0	0	0	1	0	1	0	4	0	0	0	4	8	0	0	0	0	0	2	2	0	0	0	0	0	0	0	11
4:45 PM	0	0	0	0	0	0	0	0	9	0	0	4	7	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Total	0	0	0	0	6	1	7	0	21	1	0	5	17	44	0	0	0	0	0	2	2	1	0	0	0	0	0	1	54
5:00 PM	0	0	0	0	1	0	1	1	6	0	0	3	7	17	0	1	0	0	1	3	5	0	0	0	0	1	0	1	24
5:15 PM	0	0	0	0	0	1	1	0	11	0	0	6	14	31	0	0	0	0	2	5	7	0	0	0	0	0	0	0	39
5:30 PM	0	0	0	0	2	1	3	1	6	0	0	2	20	29	0	2	0	0	3	4	9	0	0	0	0	0	0	0	41
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	2	23	30	0	1	0	0	0	4	5	0	0	0	0	0	0	0	35
Total	0	0	0	0	3	2	5	2	28	0	0	13	64	107	0	4	0	0	6	16	26	0	0	0	0	1	0	1	139
Grand Total	0	0	0	0	9	3	12	2	49	1	0	18	81	151	0	4	0	0	6	18	28	1	0	0	0	1	0	2	193
Approach %	0.0	0.0	0.0	0.0	75.0	25.0		1.3	32.5	0.7	0.0	11.9	53.6		0.0	14.3	0.0	0.0	21.4	64.3		50.0	0.0	0.0	0.0	50.0	0.0		
Total %	0.0	0.0	0.0	0.0	4.7	1.6	6.2	1.0	25.4	0.5	0.0	9.3	42.0	78.2	0.0	2.1	0.0	0.0	3.1	9.3	14.5	0.5	0.0	0.0	0.0	0.5	0.0	1.0	
Exiting Leg Total							18							99							26							50	193

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

5:00 PM	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
5:00 PM	0	0	0	0	1	0	1	1	6	0	0	3	7	17	0	1	0	0	1	3	5	0	0	0	0	1	0	1	24
5:15 PM	0	0	0	0	0	1	1	0	11	0	0	6	14	31	0	0	0	0	2	5	7	0	0	0	0	0	0	0	39
5:30 PM	0	0	0	0	2	1	3	1	6	0	0	2	20	29	0	2	0	0	3	4	9	0	0	0	0	0	0	0	41
5:45 PM	0	0	0	0	0	0	0	0	5	0	0	2	23	30	0	1	0	0	0	4	5	0	0	0	0	0	0	0	35
Total Volume	0	0	0	0	3	2	5	2	28	0	0	13	64	107	0	4	0	0	6	16	26	0	0	0	0	1	0	1	139
% Approach Total	0.0	0.0	0.0	0.0	60.0	40.0		1.9	26.2	0.0	0.0	12.1	59.8		0.0	15.4	0.0	0.0	23.1	61.5		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.375	0.500	0.417	0.500	0.636	0.000	0.000	0.542	0.696	0.863	0.000	0.500	0.000	0.000	0.500	0.800	0.722	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.848
Entering Leg	0	0	0	0	3	2	5	2	28	0	0	13	64	107	0	4	0	0	6	16	26	0	0	0	0	1	0	1	139
Exiting Leg							11							77							22							29	139
Total							16							184							48							30	278

PDI File #: **175597 E**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: Western Avenue Bridge W: Western Avenue**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
4:00 PM	0	0	0	0	11	5	16	0	0	0	0	10	2	12	0	0	0	0	1	1	2	0	0	0	0	0	0	0	30
4:15 PM	0	0	0	0	6	5	11	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	1	1	20
4:30 PM	0	0	0	0	14	1	15	0	0	0	0	1	1	2	0	0	0	0	3	1	4	0	0	0	0	3	1	4	25
4:45 PM	0	0	0	0	10	4	14	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	0	0	0	0	41	15	56	0	0	0	0	19	7	26	0	0	0	0	4	2	6	0	0	0	0	3	2	5	93
5:00 PM	0	0	0	0	10	4	14	0	0	0	0	3	4	7	0	0	0	0	1	4	5	0	0	0	0	0	0	0	26
5:15 PM	0	0	0	0	22	8	30	0	0	0	0	5	2	7	0	0	0	0	0	6	6	0	0	0	0	0	2	2	45
5:30 PM	0	0	0	0	14	5	19	0	0	0	0	8	5	13	0	0	0	0	1	5	6	0	0	0	0	0	0	0	38
5:45 PM	0	0	0	0	12	8	20	0	0	0	0	3	8	11	0	0	0	0	3	1	4	0	0	0	0	4	1	5	40
Total	0	0	0	0	58	25	83	0	0	0	0	19	19	38	0	0	0	0	5	16	21	0	0	0	0	4	3	7	149
Grand Total	0	0	0	0	99	40	139	0	0	0	0	38	26	64	0	0	0	0	9	18	27	0	0	0	0	7	5	12	242
Approach %	0.0	0.0	0.0	0.0	71.2	28.8		0.0	0.0	0.0	0.0	59.4	40.6		0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	58.3	41.7		
Total %	0.0	0.0	0.0	0.0	40.9	16.5	57.4	0.0	0.0	0.0	0.0	15.7	10.7	26.4	0.0	0.0	0.0	0.0	3.7	7.4	11.2	0.0	0.0	0.0	0.0	2.9	2.1	5.0	
Exiting Leg Total							139							64							27							12	242

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

5:00 PM	Soldiers Field Road Ramps							Western Avenue Bridge							Soldiers Field Road Ramps							Western Avenue							
	North							East							South							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	Total
5:00 PM	0	0	0	0	10	4	14	0	0	0	0	3	4	7	0	0	0	0	1	4	5	0	0	0	0	0	0	0	26
5:15 PM	0	0	0	0	22	8	30	0	0	0	0	5	2	7	0	0	0	0	0	6	6	0	0	0	0	0	2	2	45
5:30 PM	0	0	0	0	14	5	19	0	0	0	0	8	5	13	0	0	0	0	1	5	6	0	0	0	0	0	0	0	38
5:45 PM	0	0	0	0	12	8	20	0	0	0	0	3	8	11	0	0	0	0	3	1	4	0	0	0	0	4	1	5	40
Total Volume	0	0	0	0	58	25	83	0	0	0	0	19	19	38	0	0	0	0	5	16	21	0	0	0	0	4	3	7	149
% Approach Total	0.0	0.0	0.0	0.0	69.9	30.1		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	23.8	76.2		0.0	0.0	0.0	0.0	57.1	42.9		
PHF	0.000	0.000	0.000	0.000	0.659	0.781	0.692	0.000	0.000	0.000	0.000	0.594	0.594	0.731	0.000	0.000	0.000	0.000	0.417	0.667	0.875	0.000	0.000	0.000	0.000	0.250	0.375	0.350	0.828
Entering Leg	0	0	0	0	58	25	83	0	0	0	0	19	19	38	0	0	0	0	5	16	21	0	0	0	0	4	3	7	149
Exiting Leg							83							38							21							7	149
Total							166							76							42							14	298

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	3	43	0	46	99	279	0	378	95	1	1	97	521
7:15 AM	8	53	0	61	95	241	1	337	100	3	0	103	501
7:30 AM	3	52	0	55	101	328	0	429	128	2	0	130	614
7:45 AM	2	52	0	54	101	323	1	425	135	6	0	141	620
Total	16	200	0	216	396	1171	2	1569	458	12	1	471	2256
8:00 AM	7	65	0	72	118	310	0	428	130	3	1	134	634
8:15 AM	4	62	0	66	147	348	0	495	148	2	0	150	711
8:30 AM	3	57	0	60	132	351	0	483	145	5	0	150	693
8:45 AM	9	74	0	83	146	347	3	496	157	7	0	164	743
Total	23	258	0	281	543	1356	3	1902	580	17	1	598	2781
Grand Total	39	458	0	497	939	2527	5	3471	1038	29	2	1069	5037
Approach %	7.8	92.2	0.0		27.1	72.8	0.1		97.1	2.7	0.2		
Total %	0.8	9.1	0.0	9.9	18.6	50.2	0.1	68.9	20.6	0.6	0.0	21.2	
Exiting Leg Total				968				1501				2568	5037
Cars	37	454	0	491	933	2310	5	3248	1005	26	2	1033	4772
% Cars	94.9	99.1	0.0	98.8	99.4	91.4	100.0	93.6	96.8	89.7	100.0	96.6	94.7
Exiting Leg Total				959				1464				2349	4772
Heavy Vehicles	2	4	0	6	5	129	0	134	21	3	0	24	164
% Heavy Vehicles	5.1	0.9	0.0	1.2	0.5	5.1	0.0	3.9	2.0	10.3	0.0	2.2	3.3
Exiting Leg Total				8				25				131	164
Buses	0	0	0	0	1	88	0	89	12	0	0	12	101
% Buses	0.0	0.0	0.0	0.0	0.1	3.5	0.0	2.6	1.2	0.0	0.0	1.1	2.0
Exiting Leg Total				1				12				88	101

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

8:00 AM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
8:00 AM	7	65	0	72	118	310	0	428	130	3	1	134	634
8:15 AM	4	62	0	66	147	348	0	495	148	2	0	150	711
8:30 AM	3	57	0	60	132	351	0	483	145	5	0	150	693
8:45 AM	9	74	0	83	146	347	3	496	157	7	0	164	743
Total Volume	23	258	0	281	543	1356	3	1902	580	17	1	598	2781
% Approach Total	8.2	91.8	0.0		28.5	71.3	0.2		97.0	2.8	0.2		
PHF	0.639	0.872	0.000	0.846	0.923	0.966	0.250	0.959	0.924	0.607	0.250	0.912	0.936
Cars	21	256	0	277	542	1247	3	1792	559	14	1	574	2643
Cars %	91.3	99.2	0.0	98.6	99.8	92.0	100.0	94.2	96.4	82.4	100.0	96.0	95.0
Heavy Vehicles	2	2	0	4	1	65	0	66	14	3	0	17	87
Heavy Vehicles %	8.7	0.8	0.0	1.4	0.2	4.8	0.0	3.5	2.4	17.6	0.0	2.8	3.1
Buses	0	0	0	0	0	44	0	44	7	0	0	7	51
Buses %	0.0	0.0	0.0	0.0	0.0	3.2	0.0	2.3	1.2	0.0	0.0	1.2	1.8
Cars Enter Leg	21	256	0	277	542	1247	3	1792	559	14	1	574	2643
Heavy Enter Leg	2	2	0	4	1	65	0	66	14	3	0	17	87
Bus Enter Leg	0	0	0	0	0	44	0	44	7	0	0	7	51
Total Entering Leg	23	258	0	281	543	1356	3	1902	580	17	1	598	2781
Cars Exiting Leg				556				818				1269	2643
Heavy Exiting Leg				4				16				67	87
Buses Exiting Leg				0				7				44	51
Total Exiting Leg				560				841				1380	2781

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	3	43	0	46	96	240	0	336	93	1	1	95	477
7:15 AM	8	53	0	61	94	215	1	310	97	3	0	100	471
7:30 AM	3	50	0	53	100	303	0	403	124	2	0	126	582
7:45 AM	2	52	0	54	101	305	1	407	132	6	0	138	599
Total	16	198	0	214	391	1063	2	1456	446	12	1	459	2129
8:00 AM	7	65	0	72	118	281	0	399	127	3	1	131	602
8:15 AM	4	62	0	66	147	320	0	467	142	1	0	143	676
8:30 AM	3	57	0	60	131	329	0	460	141	4	0	145	665
8:45 AM	7	72	0	79	146	317	3	466	149	6	0	155	700
Total	21	256	0	277	542	1247	3	1792	559	14	1	574	2643
Grand Total	37	454	0	491	933	2310	5	3248	1005	26	2	1033	4772
Approach %	7.5	92.5	0.0		28.7	71.1	0.2		97.3	2.5	0.2		
Total %	0.8	9.5	0.0	10.3	19.6	48.4	0.1	68.1	21.1	0.5	0.0	21.6	
Exiting Leg Total				959				1464				2349	4772

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

8:00 AM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
8:00 AM	7	65	0	72	118	281	0	399	127	3	1	131	602
8:15 AM	4	62	0	66	147	320	0	467	142	1	0	143	676
8:30 AM	3	57	0	60	131	329	0	460	141	4	0	145	665
8:45 AM	7	72	0	79	146	317	3	466	149	6	0	155	700
Total Volume	21	256	0	277	542	1247	3	1792	559	14	1	574	2643
% Approach Total	7.6	92.4	0.0		30.2	69.6	0.2		97.4	2.4	0.2		
PHF	0.750	0.889	0.000	0.877	0.922	0.948	0.250	0.959	0.938	0.583	0.250	0.926	0.944
Entering Leg	21	256	0	277	542	1247	3	1792	559	14	1	574	2643
Exiting Leg				556				818				1269	2643
Total				833				2610				1843	5286

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	3	19	0	22	1	0	0	1	23
7:15 AM	0	0	0	0	1	21	0	22	2	0	0	2	24
7:30 AM	0	2	0	2	0	16	0	16	3	0	0	3	21
7:45 AM	0	0	0	0	0	8	0	8	1	0	0	1	9
Total	0	2	0	2	4	64	0	68	7	0	0	7	77
8:00 AM	0	0	0	0	0	14	0	14	1	0	0	1	15
8:15 AM	0	0	0	0	0	15	0	15	6	1	0	7	22
8:30 AM	0	0	0	0	1	13	0	14	1	1	0	2	16
8:45 AM	2	2	0	4	0	23	0	23	6	1	0	7	34
Total	2	2	0	4	1	65	0	66	14	3	0	17	87
Grand Total	2	4	0	6	5	129	0	134	21	3	0	24	164
Approach %	33.3	66.7	0.0		3.7	96.3	0.0		87.5	12.5	0.0		
Total %	1.2	2.4	0.0	3.7	3.0	78.7	0.0	81.7	12.8	1.8	0.0	14.6	
Exiting Leg Total				8				25				131	164

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

8:00 AM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	14	0	14	1	0	0	1	15
8:15 AM	0	0	0	0	0	15	0	15	6	1	0	7	22
8:30 AM	0	0	0	0	1	13	0	14	1	1	0	2	16
8:45 AM	2	2	0	4	0	23	0	23	6	1	0	7	34
Total Volume	2	2	0	4	1	65	0	66	14	3	0	17	87
% Approach Total	50.0	50.0	0.0		1.5	98.5	0.0		82.4	17.6	0.0		
PHF	0.250	0.250	0.000	0.250	0.250	0.707	0.000	0.717	0.583	0.750	0.000	0.607	0.640
Entering Leg	2	2	0	4	1	65	0	66	14	3	0	17	87
Exiting Leg				4				16				67	87
Total				8				82				84	174

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	20	0	20	1	0	0	1	21
7:15 AM	0	0	0	0	0	5	0	5	1	0	0	1	6
7:30 AM	0	0	0	0	1	9	0	10	1	0	0	1	11
7:45 AM	0	0	0	0	0	10	0	10	2	0	0	2	12
Total	0	0	0	0	1	44	0	45	5	0	0	5	50
8:00 AM	0	0	0	0	0	15	0	15	2	0	0	2	17
8:15 AM	0	0	0	0	0	13	0	13	0	0	0	0	13
8:30 AM	0	0	0	0	0	9	0	9	3	0	0	3	12
8:45 AM	0	0	0	0	0	7	0	7	2	0	0	2	9
Total	0	0	0	0	0	44	0	44	7	0	0	7	51
Grand Total	0	0	0	0	1	88	0	89	12	0	0	12	101
Approach %	0.0	0.0	0.0		1.1	98.9	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	1.0	87.1	0.0	88.1	11.9	0.0	0.0	11.9	
Exiting Leg Total				1				12				88	101

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

7:45 AM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
7:45 AM	0	0	0	0	0	10	0	10	2	0	0	2	12
8:00 AM	0	0	0	0	0	15	0	15	2	0	0	2	17
8:15 AM	0	0	0	0	0	13	0	13	0	0	0	0	13
8:30 AM	0	0	0	0	0	9	0	9	3	0	0	3	12
Total Volume	0	0	0	0	0	47	0	47	7	0	0	7	54
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.783	0.000	0.783	0.583	0.000	0.000	0.583	0.794
Entering Leg	0	0	0	0	0	47	0	47	7	0	0	7	54
Exiting Leg				0				7				47	54
Total				0				54				54	108

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	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	1	0	0	0	0	1	1
7:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	4	5
Total	0	1	0	0	0	1	0	1	0	0	0	1	6	0	0	0	0	6	8
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	6	0	0	0	0	6	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	2
Total	0	1	0	0	0	1	0	1	0	0	0	1	14	0	0	0	0	14	16
Grand Total	0	2	0	0	0	2	0	2	0	0	0	2	20	0	0	0	0	20	24
Approach %	0.0	100.0	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		
Total %	0.0	8.3	0.0	0.0	0.0	8.3	0.0	8.3	0.0	0.0	0.0	8.3	83.3	0.0	0.0	0.0	0.0	83.3	
Exiting Leg Total						0						22						2	24

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

7:45 AM	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	4	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	6	0	0	0	0	6	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3
Total Volume	0	1	0	0	0	1	0	1	0	0	0	1	17	0	0	0	0	17	19
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.708	0.000	0.000	0.000	0.000	0.708	0.679
Entering Leg	0	1	0	0	0	1	0	1	0	0	0	1	17	0	0	0	0	17	19
Exiting Leg						0						18						1	19
Total						1						19						18	38

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	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
7:30 AM	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
Total	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	2	1	3	0	0	0	0	0	0	0	0	0	1	4	5	8
8:15 AM	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	1	0	1	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:45 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
Total	0	0	0	7	2	9	0	0	0	0	0	0	0	0	0	2	6	8	17
Grand Total	0	0	0	7	2	9	0	0	0	0	0	0	0	0	0	2	6	8	17
Approach %	0.0	0.0	0.0	77.8	22.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	25.0	75.0		
Total %	0.0	0.0	0.0	41.2	11.8	52.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	35.3	47.1	
Exiting Leg Total						9						0						8	17

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

8:00 AM	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	1	4	5	8
8:15 AM	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	1	0	1	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:45 AM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
Total Volume	0	0	0	7	2	9	0	0	0	0	0	0	0	0	0	2	6	8	17
% Approach Total	0.0	0.0	0.0	77.8	22.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	25.0	75.0		
PHF	0.000	0.000	0.000	0.438	0.500	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.400	0.531
Entering Leg	0	0	0	7	2	9	0	0	0	0	0	0	0	0	0	2	6	8	17
Exiting Leg						9						0						8	17
Total						18						0						16	34

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	10	4	0	14	28	282	0	310	124	7	1	132	456
4:15 PM	9	12	0	21	35	291	0	326	92	1	0	93	440
4:30 PM	2	20	0	22	74	357	0	431	142	2	0	144	597
4:45 PM	9	38	0	47	129	380	5	514	137	2	0	139	700
Total	30	74	0	104	266	1310	5	1581	495	12	1	508	2193
5:00 PM	16	27	0	43	81	328	1	410	170	3	0	173	626
5:15 PM	7	15	0	22	74	352	1	427	143	4	1	148	597
5:30 PM	18	27	0	45	103	374	3	480	160	6	0	166	691
5:45 PM	25	26	0	51	94	342	7	443	130	3	0	133	627
Total	66	95	0	161	352	1396	12	1760	603	16	1	620	2541
Grand Total	96	169	0	265	618	2706	17	3341	1098	28	2	1128	4734
Approach %	36.2	63.8	0.0		18.5	81.0	0.5		97.3	2.5	0.2		
Total %	2.0	3.6	0.0	5.6	13.1	57.2	0.4	70.6	23.2	0.6	0.0	23.8	
Exiting Leg Total				646				1284				2804	4734
Cars	94	167	0	261	614	2634	17	3265	1083	28	2	1113	4639
% Cars	97.9	98.8	0.0	98.5	99.4	97.3	100.0	97.7	98.6	100.0	100.0	98.7	98.0
Exiting Leg Total				642				1267				2730	4639
Heavy Vehicles	2	0	0	2	2	31	0	33	6	0	0	6	41
% Heavy Vehicles	2.1	0.0	0.0	0.8	0.3	1.1	0.0	1.0	0.5	0.0	0.0	0.5	0.9
Exiting Leg Total				2				6				33	41
Buses	0	2	0	2	2	41	0	43	9	0	0	9	54
% Buses	0.0	1.2	0.0	0.8	0.3	1.5	0.0	1.3	0.8	0.0	0.0	0.8	1.1
Exiting Leg Total				2				11				41	54

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

4:45 PM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:45 PM	9	38	0	47	129	380	5	514	137	2	0	139	700
5:00 PM	16	27	0	43	81	328	1	410	170	3	0	173	626
5:15 PM	7	15	0	22	74	352	1	427	143	4	1	148	597
5:30 PM	18	27	0	45	103	374	3	480	160	6	0	166	691
Total Volume	50	107	0	157	387	1434	10	1831	610	15	1	626	2614
% Approach Total	31.8	68.2	0.0		21.1	78.3	0.5		97.4	2.4	0.2		
PHF	0.694	0.704	0.000	0.835	0.750	0.943	0.500	0.891	0.897	0.625	0.250	0.905	0.934
Cars	50	105	0	155	383	1398	10	1791	604	15	1	620	2566
Cars %	100.0	98.1	0.0	98.7	99.0	97.5	100.0	97.8	99.0	100.0	100.0	99.0	98.2
Heavy Vehicles	0	0	0	0	2	18	0	20	4	0	0	4	24
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.5	1.3	0.0	1.1	0.7	0.0	0.0	0.6	0.9
Buses	0	2	0	2	2	18	0	20	2	0	0	2	24
Buses %	0.0	1.9	0.0	1.3	0.5	1.3	0.0	1.1	0.3	0.0	0.0	0.3	0.9
Cars Enter Leg	50	105	0	155	383	1398	10	1791	604	15	1	620	2566
Heavy Enter Leg	0	0	0	0	2	18	0	20	4	0	0	4	24
Bus Enter Leg	0	2	0	2	2	18	0	20	2	0	0	2	24
Total Entering Leg	50	107	0	157	387	1434	10	1831	610	15	1	626	2614
Cars Exiting Leg				398				719				1449	2566
Heavy Exiting Leg				2				4				18	24
Buses Exiting Leg				2				4				18	24
Total Exiting Leg				402				727				1485	2614

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	10	4	0	14	28	274	0	302	122	7	1	130	446
4:15 PM	8	12	0	20	35	276	0	311	91	1	0	92	423
4:30 PM	1	20	0	21	74	351	0	425	139	2	0	141	587
4:45 PM	9	37	0	46	128	368	5	501	136	2	0	138	685
Total	28	73	0	101	265	1269	5	1539	488	12	1	501	2141
5:00 PM	16	26	0	42	80	322	1	403	168	3	0	171	616
5:15 PM	7	15	0	22	74	343	1	418	143	4	1	148	588
5:30 PM	18	27	0	45	101	365	3	469	157	6	0	163	677
5:45 PM	25	26	0	51	94	335	7	436	127	3	0	130	617
Total	66	94	0	160	349	1365	12	1726	595	16	1	612	2498
Grand Total	94	167	0	261	614	2634	17	3265	1083	28	2	1113	4639
Approach %	36.0	64.0	0.0		18.8	80.7	0.5		97.3	2.5	0.2		
Total %	2.0	3.6	0.0	5.6	13.2	56.8	0.4	70.4	23.3	0.6	0.0	24.0	
Exiting Leg Total				642				1267				2730	4639

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

4:45 PM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:45 PM	9	37	0	46	128	368	5	501	136	2	0	138	685
5:00 PM	16	26	0	42	80	322	1	403	168	3	0	171	616
5:15 PM	7	15	0	22	74	343	1	418	143	4	1	148	588
5:30 PM	18	27	0	45	101	365	3	469	157	6	0	163	677
Total Volume	50	105	0	155	383	1398	10	1791	604	15	1	620	2566
% Approach Total	32.3	67.7	0.0		21.4	78.1	0.6		97.4	2.4	0.2		
PHF	0.694	0.709	0.000	0.842	0.748	0.950	0.500	0.894	0.899	0.625	0.250	0.906	0.936
Entering Leg	50	105	0	155	383	1398	10	1791	604	15	1	620	2566
Exiting Leg				398				719				1449	2566
Total				553				2510				2069	5132

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	6	0	6	0	0	0	0	6
4:15 PM	1	0	0	1	0	4	0	4	1	0	0	1	6
4:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	3
4:45 PM	0	0	0	0	1	7	0	8	1	0	0	1	9
Total	2	0	0	2	1	18	0	19	3	0	0	3	24
5:00 PM	0	0	0	0	0	1	0	1	2	0	0	2	3
5:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	4
5:30 PM	0	0	0	0	1	6	0	7	1	0	0	1	8
5:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	0	0	1	13	0	14	3	0	0	3	17
Grand Total	2	0	0	2	2	31	0	33	6	0	0	6	41
Approach %	100.0	0.0	0.0		6.1	93.9	0.0		100.0	0.0	0.0		
Total %	4.9	0.0	0.0	4.9	4.9	75.6	0.0	80.5	14.6	0.0	0.0	14.6	
Exiting Leg Total				2				6				33	41

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

4:00 PM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	6	0	6	0	0	0	0	6
4:15 PM	1	0	0	1	0	4	0	4	1	0	0	1	6
4:30 PM	1	0	0	1	0	1	0	1	1	0	0	1	3
4:45 PM	0	0	0	0	1	7	0	8	1	0	0	1	9
Total Volume	2	0	0	2	1	18	0	19	3	0	0	3	24
% Approach Total	100.0	0.0	0.0		5.3	94.7	0.0		100.0	0.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.643	0.000	0.594	0.750	0.000	0.000	0.750	0.667
Entering Leg	2	0	0	2	1	18	0	19	3	0	0	3	24
Exiting Leg				1				3				20	24
Total				3				22				23	48

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	2	0	2	2	0	0	2	4
4:15 PM	0	0	0	0	0	11	0	11	0	0	0	0	11
4:30 PM	0	0	0	0	0	5	0	5	2	0	0	2	7
4:45 PM	0	1	0	1	0	5	0	5	0	0	0	0	6
Total	0	1	0	1	0	23	0	23	4	0	0	4	28
5:00 PM	0	1	0	1	1	5	0	6	0	0	0	0	7
5:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	5
5:30 PM	0	0	0	0	1	3	0	4	2	0	0	2	6
5:45 PM	0	0	0	0	0	5	0	5	3	0	0	3	8
Total	0	1	0	1	2	18	0	20	5	0	0	5	26
Grand Total	0	2	0	2	2	41	0	43	9	0	0	9	54
Approach %	0.0	100.0	0.0		4.7	95.3	0.0		100.0	0.0	0.0		
Total %	0.0	3.7	0.0	3.7	3.7	75.9	0.0	79.6	16.7	0.0	0.0	16.7	
Exiting Leg Total				2				11				41	54

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

4:15 PM	Windom Street				Cambridge Street				Cambridge Street				
	North				East				West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	11	0	11	0	0	0	0	11
4:30 PM	0	0	0	0	0	5	0	5	2	0	0	2	7
4:45 PM	0	1	0	1	0	5	0	5	0	0	0	0	6
5:00 PM	0	1	0	1	1	5	0	6	0	0	0	0	7
Total Volume	0	2	0	2	1	26	0	27	2	0	0	2	31
% Approach Total	0.0	100.0	0.0		3.7	96.3	0.0		100.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.500	0.250	0.591	0.000	0.614	0.250	0.000	0.000	0.250	0.705
Entering Leg	0	2	0	2	1	26	0	27	2	0	0	2	31
Exiting Leg				1				4				26	31
Total				3				31				28	62

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	1	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	2	3
Total	2	1	0	0	0	3	2	1	0	0	0	3	2	0	0	0	0	2	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
5:30 PM	1	1	0	0	0	2	0	4	0	0	0	4	0	0	0	0	0	0	6
5:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	1	0	0	0	4	0	4	0	0	0	4	1	0	0	0	1	2	10
Grand Total	5	2	0	0	0	7	2	5	0	0	0	7	3	0	0	0	1	4	18
Approach %	71.4	28.6	0.0	0.0	0.0		28.6	71.4	0.0	0.0	0.0		75.0	0.0	0.0	0.0	25.0		
Total %	27.8	11.1	0.0	0.0	0.0	38.9	11.1	27.8	0.0	0.0	0.0	38.9	16.7	0.0	0.0	0.0	5.6	22.2	
Exiting Leg Total						2						5						11	18

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

4:00 PM	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	1	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	2	3
Total Volume	2	1	0	0	0	3	2	1	0	0	0	3	2	0	0	0	0	2	8
% Approach Total	66.7	33.3	0.0	0.0	0.0		66.7	33.3	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		
PHF	0.500	0.250	0.000	0.000	0.000	0.750	0.500	0.250	0.000	0.000	0.000	0.375	0.250	0.000	0.000	0.000	0.000	0.250	0.667
Entering Leg	2	1	0	0	0	3	2	1	0	0	0	3	2	0	0	0	0	2	8
Exiting Leg						2						3						3	8
Total						5						6						5	16

PDI File #: **175597 F**
Location: **N: Windom Street**
Location: **E: Cambridge Street W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2	4
5:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
5:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	4
5:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	1	2	3	10
Grand Total	0	0	0	5	4	9	0	0	0	0	0	0	0	0	0	2	3	5	14
Approach %	0.0	0.0	0.0	55.6	44.4		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	40.0	60.0		
Total %	0.0	0.0	0.0	35.7	28.6	64.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	21.4	35.7	
Exiting Leg Total						9						0						5	14

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

5:00 PM	Windom Street						Cambridge Street						Cambridge Street						
	North						East						West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
5:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	4
5:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	1	2	3	10
% Approach Total	0.0	0.0	0.0	57.1	42.9		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	33.3	66.7		
PHF	0.000	0.000	0.000	0.500	0.250	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.750	0.625
Entering Leg	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	1	2	3	10
Exiting Leg						7						0						3	10
Total						14						0						6	20

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	355	0	0	0	0	355	26	45	0	0	0	71	8	1	0	0	0	9	0	218	0	0	0	218	0	0	145	2	0	147	800
7:15 AM	311	0	0	0	0	311	64	43	0	0	0	107	9	1	0	0	0	10	0	249	1	0	0	250	0	0	142	3	0	145	823
7:30 AM	381	0	0	0	0	381	47	46	0	0	1	94	9	3	0	0	0	12	0	240	0	0	0	240	0	0	183	4	0	187	914
7:45 AM	379	0	0	0	0	379	56	53	0	0	0	109	9	2	1	0	0	12	0	231	0	0	0	231	0	1	163	4	0	168	899
Total	1426	0	0	0	0	1426	193	187	0	0	1	381	35	7	1	0	0	43	0	938	1	0	0	939	0	1	633	13	0	647	3436
8:00 AM	393	0	0	0	0	393	52	46	0	0	0	98	10	2	2	0	0	14	0	184	1	0	0	185	0	0	185	2	0	187	877
8:15 AM	432	0	0	0	0	432	40	44	0	0	1	85	32	2	0	0	0	34	0	180	2	2	0	184	0	0	177	3	0	180	915
8:30 AM	440	0	0	0	0	440	35	38	0	0	1	74	18	5	0	0	0	23	0	141	0	0	0	141	0	0	177	2	0	179	857
8:45 AM	445	0	0	0	0	445	17	33	0	0	0	50	23	4	2	0	0	29	0	151	0	0	0	151	0	0	194	1	0	195	870
Total	1710	0	0	0	0	1710	144	161	0	0	2	307	83	13	4	0	0	100	0	656	3	2	0	661	0	0	733	8	0	741	3519
Grand Total	3136	0	0	0	0	3136	337	348	0	0	3	688	118	20	5	0	0	143	0	1594	4	2	0	1600	0	1	1366	21	0	1388	6955
Approach %	100.0	0.0	0.0	0.0	0.0		49.0	50.6	0.0	0.0	0.4		82.5	14.0	3.5	0.0	0.0		0.0	99.6	0.3	0.1	0.0		0.0	0.1	98.4	1.5	0.0		
Total %	45.1	0.0	0.0	0.0	0.0	45.1	4.8	5.0	0.0	0.0	0.0	9.9	1.7	0.3	0.1	0.0	0.0	2.1	0.0	22.9	0.1	0.0	0.0	23.0	0.0	0.0	19.6	0.3	0.0	20.0	
Exiting Leg Total						382						3081						1						0						3491	6955
Cars	2927	0	0	0	0	2927	336	338	0	0	3	677	116	19	5	0	0	140	0	1537	1	2	0	1540	0	1	1332	17	0	1350	6634
% Cars	93.3	0.0	0.0	0.0	0.0	93.3	99.7	97.1	0.0	0.0	100.0	98.4	98.3	95.0	100.0	0.0	0.0	97.9	0.0	96.4	25.0	100.0	0.0	96.3	0.0	100.0	97.5	81.0	0.0	97.3	95.4
Exiting Leg Total						373						2988						1						0						3272	6634
Heavy Vehicles	123	0	0	0	0	123	1	2	0	0	0	3	1	1	0	0	0	2	0	52	3	0	0	55	0	0	25	4	0	29	212
% Heavy Vehicles	3.9	0.0	0.0	0.0	0.0	3.9	0.3	0.6	0.0	0.0	0.0	0.4	0.8	5.0	0.0	0.0	0.0	1.4	0.0	3.3	75.0	0.0	0.0	3.4	0.0	0.0	1.8	19.0	0.0	2.1	3.0
Exiting Leg Total						9						78						0						0						125	212
Buses	86	0	0	0	0	86	0	8	0	0	0	8	1	0	0	0	0	1	0	5	0	0	0	5	0	0	9	0	0	9	109
% Buses	2.7	0.0	0.0	0.0	0.0	2.7	0.0	2.3	0.0	0.0	0.0	1.2	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0	0.6	1.6
Exiting Leg Total						0						15						0						0						94	109

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

7:30 AM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	381	0	0	0	0	381	47	46	0	0	1	94	9	3	0	0	0	12	0	240	0	0	0	240	0	0	183	4	0	187	914
7:45 AM	379	0	0	0	0	379	56	53	0	0	0	109	9	2	1	0	0	12	0	231	0	0	0	231	0	1	163	4	0	168	899
8:00 AM	393	0	0	0	0	393	52	46	0	0	0	98	10	2	2	0	0	14	0	184	1	0	0	185	0	0	185	2	0	187	877
8:15 AM	432	0	0	0	0	432	40	44	0	0	1	85	32	2	0	0	0	34	0	180	2	2	0	184	0	0	177	3	0	180	915
Total Volume	1585	0	0	0	0	1585	195	189	0	0	2	386	60	9	3	0	0	72	0	835	3	2	0	840	0	1	708	13	0	722	3605
% Approach Total	100.0	0.0	0.0	0.0	0.0		50.5	49.0	0.0	0.0	0.5		83.3	12.5	4.2	0.0	0.0		0.0	99.4	0.4	0.2	0.0		0.0	0.1	98.1	1.8	0.0		
PHF	0.917	0.000	0.000	0.000	0.000	0.917	0.871	0.892	0.000	0.000	0.500	0.885	0.469	0.750	0.375	0.000	0.000	0.529	0.000	0.870	0.375	0.250	0.000	0.875	0.000	0.250	0.957	0.813	0.000	0.965	0.985
Cars	1485	0	0	0	0	1485	195	184	0	0	2	381	60	9	3	0	0	72	0	809	0	2	0	811	0	1	690	9	0	700	3449
Cars %	93.7	0.0	0.0	0.0	0.0	93.7	100.0	97.4	0.0	0.0	100.0	98.7	100.0	100.0	100.0	0.0	0.0	100.0	0.0	96.9	0.0	100.0	0.0	96.5	0.0	100.0	97.5	69.2	0.0	97.0	95.7
Heavy Vehicles	51	0	0	0	0	51	0	1	0	0	0	1	0	0	0	0	0	0	0	21	3	0	0	24	0	0	14	4	0	18	94
Heavy Vehicles %	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	100.0	0.0	0.0	2.9	0.0	0.0	2.0	30.8	0.0	2.5	2.6
Buses	49	0	0	0	0	49	0	4	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	5	0	0	4	0	0	4	62
Buses %	3.1	0.0	0.0	0.0	0.0	3.1	0.0	2.1	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.6	1.7
Cars Enter Leg	1485	0	0	0	0	1485	195	184	0	0	2	381	60	9	3	0	0	72	0	809	0	2	0	811	0	1	690	9	0	700	3449

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
Heavy Enter Leg	51	0	0	0	0	51	0	1	0	0	0	1	0	0	0	0	0	0	0	21	3	0	0	24	0	0	14	4	0	18	94
Bus Enter Leg	49	0	0	0	0	49	0	4	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	5	0	0	4	0	0	4	62
Total Entering Leg	1585	0	0	0	0	1585	195	189	0	0	2	386	60	9	3	0	0	72	0	835	3	2	0	840	0	1	708	13	0	722	3605
Cars Exiting Leg						213						1561						1						0						1674	3449
Heavy Exiting Leg						7						35						0						0						52	94
Buses Exiting Leg						0						9						0						0						53	62
Total Exiting Leg						220						1605						1						0						1779	3605

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	312	0	0	0	0	312	26	45	0	0	0	71	7	1	0	0	0	8	0	215	0	0	0	215	0	0	142	2	0	144	750
7:15 AM	286	0	0	0	0	286	63	42	0	0	0	105	9	1	0	0	0	10	0	242	1	0	0	243	0	0	139	3	0	142	786
7:30 AM	358	0	0	0	0	358	47	45	0	0	1	93	9	3	0	0	0	12	0	232	0	0	0	232	0	0	175	3	0	178	873
7:45 AM	361	0	0	0	0	361	56	52	0	0	0	108	9	2	1	0	0	12	0	223	0	0	0	223	0	1	161	4	0	166	870
Total	1317	0	0	0	0	1317	192	184	0	0	1	377	34	7	1	0	0	42	0	912	1	0	0	913	0	1	617	12	0	630	3279
8:00 AM	361	0	0	0	0	361	52	43	0	0	0	95	10	2	2	0	0	14	0	180	0	0	0	180	0	0	183	1	0	184	834
8:15 AM	405	0	0	0	0	405	40	44	0	0	1	85	32	2	0	0	0	34	0	174	0	2	0	176	0	0	171	1	0	172	872
8:30 AM	419	0	0	0	0	419	35	36	0	0	1	72	17	4	0	0	0	21	0	135	0	0	0	135	0	0	174	2	0	176	823
8:45 AM	425	0	0	0	0	425	17	31	0	0	0	48	23	4	2	0	0	29	0	136	0	0	0	136	0	0	187	1	0	188	826
Total	1610	0	0	0	0	1610	144	154	0	0	2	300	82	12	4	0	0	98	0	625	0	2	0	627	0	0	715	5	0	720	3355
Grand Total	2927	0	0	0	0	2927	336	338	0	0	3	677	116	19	5	0	0	140	0	1537	1	2	0	1540	0	1	1332	17	0	1350	6634
Approach %	100.0	0.0	0.0	0.0	0.0		49.6	49.9	0.0	0.0	0.4		82.9	13.6	3.6	0.0	0.0		0.0	99.8	0.1	0.1	0.0		0.0	0.1	98.7	1.3	0.0		
Total %	44.1	0.0	0.0	0.0	0.0	44.1	5.1	5.1	0.0	0.0	0.0	10.2	1.7	0.3	0.1	0.0	0.0	2.1	0.0	23.2	0.0	0.0	0.0	23.2	0.0	0.0	20.1	0.3	0.0	20.3	
Exiting Leg Total						373						2988						1						0						3272	6634

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

7:30 AM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	358	0	0	0	0	358	47	45	0	0	1	93	9	3	0	0	0	12	0	232	0	0	0	232	0	0	175	3	0	178	873
7:45 AM	361	0	0	0	0	361	56	52	0	0	0	108	9	2	1	0	0	12	0	223	0	0	0	223	0	1	161	4	0	166	870
8:00 AM	361	0	0	0	0	361	52	43	0	0	0	95	10	2	2	0	0	14	0	180	0	0	0	180	0	0	183	1	0	184	834
8:15 AM	405	0	0	0	0	405	40	44	0	0	1	85	32	2	0	0	0	34	0	174	0	2	0	176	0	0	171	1	0	172	872
Total Volume	1485	0	0	0	0	1485	195	184	0	0	2	381	60	9	3	0	0	72	0	809	0	2	0	811	0	1	690	9	0	700	3449
% Approach Total	100.0	0.0	0.0	0.0	0.0		51.2	48.3	0.0	0.0	0.5		83.3	12.5	4.2	0.0	0.0		0.0	99.8	0.0	0.2	0.0		0.0	0.1	98.6	1.3	0.0		
PHF	0.917	0.000	0.000	0.000	0.000	0.917	0.871	0.885	0.000	0.000	0.500	0.882	0.469	0.750	0.375	0.000	0.000	0.529	0.000	0.872	0.000	0.250	0.000	0.874	0.000	0.250	0.943	0.563	0.000	0.951	0.988
Entering Leg	1485	0	0	0	0	1485	195	184	0	0	2	381	60	9	3	0	0	72	0	809	0	2	0	811	0	1	690	9	0	700	3449
Exiting Leg						213						1561						1						0						1674	3449
Total						1698						1942						73						811						2374	6898

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	23	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	2	0	0	2	28
7:15 AM	21	0	0	0	0	21	1	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	7	0	0	2	0	0	2	31
7:30 AM	15	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	7	1	0	8	30
7:45 AM	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	1	0	0	1	15
Total	67	0	0	0	0	67	1	0	0	0	0	1	0	0	0	0	0	0	0	23	0	0	0	23	0	0	12	1	0	13	104
8:00 AM	13	0	0	0	0	13	0	1	0	0	0	1	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	1	0	1	20
8:15 AM	15	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	6	0	0	6	2	0	8	29
8:30 AM	14	0	0	0	0	14	0	1	0	0	0	1	1	1	0	0	0	2	0	6	0	0	0	6	0	0	2	0	0	2	25
8:45 AM	14	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	0	0	5	0	0	5	34
Total	56	0	0	0	0	56	0	2	0	0	0	2	1	1	0	0	0	2	0	29	3	0	0	32	0	0	13	3	0	16	108
Grand Total	123	0	0	0	0	123	1	2	0	0	0	3	1	1	0	0	0	2	0	52	3	0	0	55	0	0	25	4	0	29	212
Approach %	100.0	0.0	0.0	0.0	0.0		33.3	66.7	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0		0.0	94.5	5.5	0.0	0.0		0.0	0.0	86.2	13.8	0.0		
Total %	58.0	0.0	0.0	0.0	0.0	58.0	0.5	0.9	0.0	0.0	0.0	1.4	0.5	0.5	0.0	0.0	0.0	0.9	0.0	24.5	1.4	0.0	0.0	25.9	0.0	0.0	11.8	1.9	0.0	13.7	
Exiting Leg Total						9						78						0						0						125	212

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

8:00 AM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	13	0	0	0	0	13	0	1	0	0	0	1	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	1	0	1	20
8:15 AM	15	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	6	0	0	6	2	0	8	29
8:30 AM	14	0	0	0	0	14	0	1	0	0	0	1	1	1	0	0	0	2	0	6	0	0	0	6	0	0	2	0	0	2	25
8:45 AM	14	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	0	0	5	0	0	5	34
Total Volume	56	0	0	0	0	56	0	2	0	0	0	2	1	1	0	0	0	2	0	29	3	0	0	32	0	0	13	3	0	16	108
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0		0.0	90.6	9.4	0.0	0.0		0.0	0.0	81.3	18.8	0.0		
PHF	0.933	0.000	0.000	0.000	0.000	0.933	0.000	0.500	0.000	0.000	0.000	0.500	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.483	0.375	0.000	0.000	0.533	0.000	0.000	0.542	0.375	0.000	0.500	0.794
Entering Leg	56	0	0	0	0	56	0	2	0	0	0	2	1	1	0	0	0	2	0	29	3	0	0	32	0	0	13	3	0	16	108
Exiting Leg						7						43						0						0						58	108
Total						63						45						2						32						74	216

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	20	0	0	0	0	20	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	22
7:15 AM	4	0	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
7:30 AM	8	0	0	0	0	8	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	11
7:45 AM	10	0	0	0	0	10	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	14
Total	42	0	0	0	0	42	0	3	0	0	0	3	1	0	0	0	0	1	0	3	0	0	0	3	0	0	4	0	0	4	53
8:00 AM	19	0	0	0	0	19	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	23
8:15 AM	12	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	14
8:30 AM	7	0	0	0	0	7	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	9
8:45 AM	6	0	0	0	0	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	10
Total	44	0	0	0	0	44	0	5	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	2	0	0	5	0	0	5	56
Grand Total	86	0	0	0	0	86	0	8	0	0	0	8	1	0	0	0	0	1	0	5	0	0	0	5	0	0	9	0	0	9	109
Approach %	100.0	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	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		
Total %	78.9	0.0	0.0	0.0	0.0	78.9	0.0	7.3	0.0	0.0	0.0	7.3	0.9	0.0	0.0	0.0	0.0	0.9	0.0	4.6	0.0	0.0	0.0	4.6	0.0	0.0	8.3	0.0	0.0	8.3	
Exiting Leg Total						0						15						0						0						94	109

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

7:30 AM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	8	0	0	0	0	8	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	11
7:45 AM	10	0	0	0	0	10	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	14
8:00 AM	19	0	0	0	0	19	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	23
8:15 AM	12	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	14
Total Volume	49	0	0	0	0	49	0	4	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	5	0	0	4	0	0	4	62
% Approach Total	100.0	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	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		
PHF	0.645	0.000	0.000	0.000	0.000	0.645	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.625	0.000	0.000	0.500	0.000	0.000	0.500	0.674
Entering Leg	49	0	0	0	0	49	0	4	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	5	0	0	4	0	0	4	62
Exiting Leg						0						9						0						0						53	62
Total						49						13						0						5						57	124

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	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	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	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	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	0	0	0	0	0	4	0	0	0	0	4	4
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	4	0	0	0	0	4	4
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	0	0	0	0	0	5	0	0	0	0	5	5
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	0	0	0	0	0	3	0	0	0	0	3	3
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	3	0	0	0	0	0	3	0	0	2	0	0	0	0	2	5
8:45 AM	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	0	0	0	0	0	0	1	0	0	0	0	1	2
Total	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	3	0	0	0	0	0	3	0	0	11	0	0	0	0	11	15
Grand Total	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	3	0	0	0	0	0	3	0	0	15	0	0	0	0	15	19
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	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	100.0	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	5.3	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	78.9	0.0	0.0	0.0	0.0	78.9	
Exiting Leg Total								0								18								0								0								1	19

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

7:45 AM	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
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	0	0	0	0	0	4	0	0	0	0	4	4
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	0	0	0	0	0	5	0	0	0	0	5	5
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	0	0	0	0	0	3	0	0	0	0	3	3
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	3	0	0	0	0	0	3	0	0	2	0	0	0	0	2	5
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	3	0	0	0	0	0	3	0	0	14	0	0	0	0	14	17
% 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	100.0	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	0.000	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	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.700	0.000	0.000	0.000	0.000	0.700	0.850
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	3	0	0	0	0	0	3	0	0	14	0	0	0	0	14	17
Exiting Leg								0								17								0								0								0	17
Total								0								17								0								3								14	34

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	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	2	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	2	2	4	0	0	0	0	0	1	0	1	0	0	0	0	0	1	5	6	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	14
8:00 AM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	1	1	2	9
8:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	7
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	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	2	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	4	5	7
Total	0	0	0	0	0	8	1	9	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5	5	0	0	0	0	0	2	6	8	25
Grand Total	0	0	0	0	0	10	3	13	0	0	0	0	0	3	0	3	0	0	0	0	0	2	5	7	0	0	0	0	0	0	8	8	0	0	0	0	0	2	6	8	39
Approach %	0.0	0.0	0.0	0.0	0.0	76.9	23.1		0.0	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0	28.6	71.4		0.0	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	25.0	75.0		
Total %	0.0	0.0	0.0	0.0	0.0	25.6	7.7	33.3	0.0	0.0	0.0	0.0	0.0	7.7	0.0	7.7	0.0	0.0	0.0	0.0	0.0	5.1	12.8	17.9	0.0	0.0	0.0	0.0	0.0	0.0	20.5	20.5	0.0	0.0	0.0	0.0	0.0	5.1	15.4	20.5	
Exiting Leg Total								13								3								7								8								8	39

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

8:00 AM	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	1	1	2	9
8:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	7
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	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	2	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	4	5	7
Total Volume	0	0	0	0	0	8	1	9	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5	5	0	0	0	0	0	2	6	8	25
% Approach Total	0.0	0.0	0.0	0.0	0.0	88.9	11.1		0.0	0.0	0.0	0.0	0.0	100.0	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	100.0		0.0	0.0	0.0	0.0	0.0	25.0	75.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.563	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.417	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.400	0.694
Entering Leg	0	0	0	0	0	8	1	9	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5	5	0	0	0	0	0	2	6	8	25
Exiting Leg								9								2								1								5								8	25
Total								18								4								2								10								16	50

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	253	0	0	0	0	253	59	54	0	0	0	113	7	4	1	0	0	12	0	276	0	1	0	277	0	0	120	3	1	124	779
4:15 PM	289	0	0	0	2	291	63	46	0	0	0	109	14	1	0	0	0	15	0	268	0	0	0	268	0	0	111	3	0	114	797
4:30 PM	382	0	0	0	0	382	46	64	0	0	0	110	10	0	0	0	0	10	0	236	0	0	0	236	0	0	166	3	0	169	907
4:45 PM	384	0	0	0	0	384	44	70	0	0	0	114	10	1	3	0	0	14	0	257	1	2	0	260	0	0	165	3	0	168	940
Total	1308	0	0	0	2	1310	212	234	0	0	0	446	41	6	4	0	0	51	0	1037	1	3	0	1041	0	0	562	12	1	575	3423
5:00 PM	383	0	0	0	0	383	45	58	0	0	1	104	14	6	2	0	0	22	0	231	0	1	0	232	0	0	172	3	0	175	916
5:15 PM	353	0	0	0	0	353	48	55	0	0	0	103	11	3	1	0	0	15	0	254	0	0	0	254	0	0	175	1	0	176	901
5:30 PM	426	0	0	0	0	426	43	55	0	0	0	98	14	2	2	0	0	18	0	242	0	2	0	244	0	0	166	2	0	168	954
5:45 PM	385	0	0	0	0	385	47	52	0	0	0	99	24	5	1	0	0	30	0	191	2	2	0	195	0	0	235	4	0	239	948
Total	1547	0	0	0	0	1547	183	220	0	0	1	404	63	16	6	0	0	85	0	918	2	5	0	925	0	0	748	10	0	758	3719
Grand Total	2855	0	0	0	2	2857	395	454	0	0	1	850	104	22	10	0	0	136	0	1955	3	8	0	1966	0	0	1310	22	1	1333	7142
Approach %	99.9	0.0	0.0	0.0	0.1		46.5	53.4	0.0	0.0	0.1		76.5	16.2	7.4	0.0	0.0		0.0	99.4	0.2	0.4	0.0		0.0	0.0	98.3	1.7	0.1		
Total %	40.0	0.0	0.0	0.0	0.0	40.0	5.5	6.4	0.0	0.0	0.0	11.9	1.5	0.3	0.1	0.0	0.0	1.9	0.0	27.4	0.0	0.1	0.0	27.5	0.0	0.0	18.3	0.3	0.0	18.7	
Exiting Leg Total						444						3370						0						0						3328	7142
Cars	2784	0	0	0	1	2785	391	448	0	0	1	840	104	22	10	0	0	136	0	1937	3	8	0	1948	0	0	1292	20	1	1313	7022
% Cars	97.5	0.0	0.0	0.0	50.0	97.5	99.0	98.7	0.0	0.0	100.0	98.8	100.0	100.0	100.0	0.0	0.0	100.0	0.0	99.1	100.0	100.0	0.0	99.1	0.0	0.0	98.6	90.9	100.0	98.5	98.3
Exiting Leg Total						437						3334						0						0						3251	7022
Heavy Vehicles	32	0	0	0	1	33	2	1	0	0	0	3	0	0	0	0	0	0	0	14	0	0	0	14	0	0	6	2	0	8	58
% Heavy Vehicles	1.1	0.0	0.0	0.0	50.0	1.2	0.5	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.5	9.1	0.0	0.6	0.8
Exiting Leg Total						5						20						0						0						33	58
Buses	39	0	0	0	0	39	2	5	0	0	0	7	0	0	0	0	0	0	0	4	0	0	0	4	0	0	12	0	0	12	62
% Buses	1.4	0.0	0.0	0.0	0.0	1.4	0.5	1.1	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.9	0.0	0.0	0.9	0.9
Exiting Leg Total						2						16						0						0						44	62

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

5:00 PM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	383	0	0	0	0	383	45	58	0	0	1	104	14	6	2	0	0	22	0	231	0	1	0	232	0	0	172	3	0	175	916
5:15 PM	353	0	0	0	0	353	48	55	0	0	0	103	11	3	1	0	0	15	0	254	0	0	0	254	0	0	175	1	0	176	901
5:30 PM	426	0	0	0	0	426	43	55	0	0	0	98	14	2	2	0	0	18	0	242	0	2	0	244	0	0	166	2	0	168	954
5:45 PM	385	0	0	0	0	385	47	52	0	0	0	99	24	5	1	0	0	30	0	191	2	2	0	195	0	0	235	4	0	239	948
Total Volume	1547	0	0	0	0	1547	183	220	0	0	1	404	63	16	6	0	0	85	0	918	2	5	0	925	0	0	748	10	0	758	3719
% Approach Total	100.0	0.0	0.0	0.0	0.0		45.3	54.5	0.0	0.0	0.2		74.1	18.8	7.1	0.0	0.0		0.0	99.2	0.2	0.5	0.0		0.0	0.0	98.7	1.3	0.0		
PHF	0.908	0.000	0.000	0.000	0.000	0.908	0.953	0.948	0.000	0.000	0.250	0.971	0.656	0.667	0.750	0.000	0.000	0.708	0.000	0.904	0.250	0.625	0.000	0.910	0.000	0.000	0.796	0.625	0.000	0.793	0.975
Cars	1516	0	0	0	0	1516	179	218	0	0	1	398	63	16	6	0	0	85	0	910	2	5	0	917	0	0	738	10	0	748	3664
Cars %	98.0	0.0	0.0	0.0	0.0	98.0	97.8	99.1	0.0	0.0	100.0	98.5	100.0	100.0	100.0	0.0	0.0	100.0	0.0	99.1	100.0	100.0	0.0	99.1	0.0	0.0	98.7	100.0	0.0	98.7	98.5
Heavy Vehicles	14	0	0	0	0	14	2	0	0	0	0	2	0	0	0	0	0	0	0	7	0	0	0	7	0	0	4	0	0	4	27
Heavy Vehicles %	0.9	0.0	0.0	0.0	0.0	0.9	1.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.0	0.5	0.7
Buses	17	0	0	0	0	17	2	2	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	6	0	0	6	28
Buses %	1.1	0.0	0.0	0.0	0.0	1.1	1.1	0.9	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.0	0.8	0.8
Cars Enter Leg	1516	0	0	0	0	1516	179	218	0	0	1	398	63	16	6	0	0	85	0	910	2	5	0	917	0	0	738	10	0	748	3664

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
Heavy Enter Leg	14	0	0	0	0	14	2	0	0	0	0	2	0	0	0	0	0	0	0	7	0	0	0	7	0	0	4	0	0	4	27
Bus Enter Leg	17	0	0	0	0	17	2	2	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	6	0	0	6	28
Total Entering Leg	1547	0	0	0	0	1547	183	220	0	0	1	404	63	16	6	0	0	85	0	918	2	5	0	925	0	0	748	10	0	758	3719
Cars Exiting Leg						207						1712						0						0						1745	3664
Heavy Exiting Leg						2						11						0						0						14	27
Buses Exiting Leg						2						7						0						0						19	28
Total Exiting Leg						211						1730						0						0						1778	3719

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	244	0	0	0	0	244	59	54	0	0	0	113	7	4	1	0	0	12	0	275	0	1	0	276	0	0	119	3	1	123	768
4:15 PM	274	0	0	0	1	275	63	46	0	0	0	109	14	1	0	0	0	15	0	264	0	0	0	264	0	0	109	3	0	112	775
4:30 PM	376	0	0	0	0	376	46	64	0	0	0	110	10	0	0	0	0	10	0	234	0	0	0	234	0	0	162	2	0	164	894
4:45 PM	374	0	0	0	0	374	44	66	0	0	0	110	10	1	3	0	0	14	0	254	1	2	0	257	0	0	164	2	0	166	921
Total	1268	0	0	0	1	1269	212	230	0	0	0	442	41	6	4	0	0	51	0	1027	1	3	0	1031	0	0	554	10	1	565	3358
5:00 PM	378	0	0	0	0	378	45	57	0	0	1	103	14	6	2	0	0	22	0	227	0	1	0	228	0	0	169	3	0	172	903
5:15 PM	345	0	0	0	0	345	45	54	0	0	0	99	11	3	1	0	0	15	0	252	0	0	0	252	0	0	175	1	0	176	887
5:30 PM	413	0	0	0	0	413	43	55	0	0	0	98	14	2	2	0	0	18	0	240	0	2	0	242	0	0	163	2	0	165	936
5:45 PM	380	0	0	0	0	380	46	52	0	0	0	98	24	5	1	0	0	30	0	191	2	2	0	195	0	0	231	4	0	235	938
Total	1516	0	0	0	0	1516	179	218	0	0	1	398	63	16	6	0	0	85	0	910	2	5	0	917	0	0	738	10	0	748	3664
Grand Total	2784	0	0	0	1	2785	391	448	0	0	1	840	104	22	10	0	0	136	0	1937	3	8	0	1948	0	0	1292	20	1	1313	7022
Approach %	100.0	0.0	0.0	0.0	0.0		46.5	53.3	0.0	0.0	0.1		76.5	16.2	7.4	0.0	0.0		0.0	99.4	0.2	0.4	0.0		0.0	0.0	98.4	1.5	0.1		
Total %	39.6	0.0	0.0	0.0	0.0	39.7	5.6	6.4	0.0	0.0	0.0	12.0	1.5	0.3	0.1	0.0	0.0	1.9	0.0	27.6	0.0	0.1	0.0	27.7	0.0	0.0	18.4	0.3	0.0	18.7	
Exiting Leg Total						437						3334						0						0						3251	7022

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

5:00 PM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	378	0	0	0	0	378	45	57	0	0	1	103	14	6	2	0	0	22	0	227	0	1	0	228	0	0	169	3	0	172	903
5:15 PM	345	0	0	0	0	345	45	54	0	0	0	99	11	3	1	0	0	15	0	252	0	0	0	252	0	0	175	1	0	176	887
5:30 PM	413	0	0	0	0	413	43	55	0	0	0	98	14	2	2	0	0	18	0	240	0	2	0	242	0	0	163	2	0	165	936
5:45 PM	380	0	0	0	0	380	46	52	0	0	0	98	24	5	1	0	0	30	0	191	2	2	0	195	0	0	231	4	0	235	938
Total Volume	1516	0	0	0	0	1516	179	218	0	0	1	398	63	16	6	0	0	85	0	910	2	5	0	917	0	0	738	10	0	748	3664
% Approach Total	100.0	0.0	0.0	0.0	0.0		45.0	54.8	0.0	0.0	0.3		74.1	18.8	7.1	0.0	0.0		0.0	99.2	0.2	0.5	0.0		0.0	0.0	98.7	1.3	0.0		
PHF	0.918	0.000	0.000	0.000	0.000	0.918	0.973	0.956	0.000	0.000	0.250	0.966	0.656	0.667	0.750	0.000	0.000	0.708	0.000	0.903	0.250	0.625	0.000	0.910	0.000	0.000	0.799	0.625	0.000	0.796	0.977
Entering Leg	1516	0	0	0	0	1516	179	218	0	0	1	398	63	16	6	0	0	85	0	910	2	5	0	917	0	0	738	10	0	748	3664
Exiting Leg						207						1712						0						0						1745	3664
Total						1723						2110						85						917						2493	7328

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6
4:15 PM	6	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	0	1	11
4:30 PM	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	1	1	0	2	3
4:45 PM	6	0	0	0	0	6	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	1	0	1	11
Total	18	0	0	0	1	19	0	1	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	7	0	0	2	2	0	4	31
5:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	2	0	0	2	7
5:15 PM	4	0	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7
5:30 PM	7	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	9
5:45 PM	2	0	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	14	0	0	0	0	14	2	0	0	0	0	2	0	0	0	0	0	0	0	7	0	0	0	7	0	0	4	0	0	4	27
Grand Total	32	0	0	0	1	33	2	1	0	0	0	3	0	0	0	0	0	0	0	14	0	0	0	14	0	0	6	2	0	8	58
Approach %	97.0	0.0	0.0	0.0	3.0		66.7	33.3	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	75.0	25.0	0.0		
Total %	55.2	0.0	0.0	0.0	1.7	56.9	3.4	1.7	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1	0.0	0.0	0.0	24.1	0.0	0.0	10.3	3.4	0.0	13.8	
Exiting Leg Total						5						20						0						0						33	58

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

4:00 PM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6
4:15 PM	6	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	0	1	11
4:30 PM	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	1	1	0	2	3
4:45 PM	6	0	0	0	0	6	0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	1	0	1	11
Total Volume	18	0	0	0	1	19	0	1	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	7	0	0	2	2	0	4	31
% Approach Total	94.7	0.0	0.0	0.0	5.3		0.0	100.0	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	0.0	50.0	50.0	0.0		
PHF	0.750	0.000	0.000	0.000	0.250	0.679	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.583	0.000	0.000	0.500	0.500	0.000	0.500	0.705
Entering Leg	18	0	0	0	1	19	0	1	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	7	0	0	2	2	0	4	31
Exiting Leg						3						9						0						0						19	31
Total						22						10						0						7						23	62

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
4:15 PM	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	11
4:30 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	10
4:45 PM	4	0	0	0	0	4	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	8
Total	22	0	0	0	0	22	0	3	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6	0	0	6	34
5:00 PM	4	0	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
5:15 PM	4	0	0	0	0	4	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:30 PM	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	9
5:45 PM	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	6
Total	17	0	0	0	0	17	2	2	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	6	0	0	6	28
Grand Total	39	0	0	0	0	39	2	5	0	0	0	7	0	0	0	0	0	0	0	4	0	0	0	4	0	0	12	0	0	12	62
Approach %	100.0	0.0	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	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		
Total %	62.9	0.0	0.0	0.0	0.0	62.9	3.2	8.1	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	6.5	0.0	0.0	19.4	0.0	0.0	19.4	
Exiting Leg Total						2						16						0						0						44	62

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

4:15 PM	I-90 Ramps						Cambridge Street						Double Tree Driveway						I-90 Offramp						Cambridge Street						
	North						East						South						Southwest						West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	11
4:30 PM	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	10
4:45 PM	4	0	0	0	0	4	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	8
5:00 PM	4	0	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
Total Volume	22	0	0	0	0	22	0	4	0	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6	0	0	6	35
% Approach Total	100.0	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	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		
PHF	0.611	0.000	0.000	0.000	0.000	0.611	0.000	0.333	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.500	0.000	0.000	0.500	0.795
Entering Leg	22	0	0	0	0	22	0	4	0	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6	0	0	6	35
Exiting Leg						0						9						0						0						26	35
Total						22						13						0						3						32	70

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	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	0	0	0	0	0	0	1	0	0	0	0	1	2
4:15 PM	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	0	0	0	0	0	0	0	0	0	0	0	0	1
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	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	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	2	3
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	3	6
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	0	0	0	0	0	1	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4
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	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	7
Grand Total	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	5	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	0	6	0	0	0	0	6	13
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0		60.0	40.0	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	100.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	15.4	0.0	0.0	0.0	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	7.7	7.7	0.0	7.7	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	46.2	0.0	0.0	0.0	0.0	46.2	
Exiting Leg Total								3								7								1								0								2	13

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

4:00 PM	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	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	0	0	0	0	0	0	1	0	0	0	0	1	2
4:15 PM	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	0	0	0	0	0	0	0	0	0	0	0	0	1
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	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	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	2	3
Total Volume	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	3	6
% 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	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	100.0	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	0.500	0.000	0.000	0.000	0.000	0.000	0.500	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	0.000	0.000	0.250	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.375	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	3	6
Exiting Leg								0								4								0								0								2	6
Total								0								6								0								1								5	12

PDI File #: **175597 G**
Location: **N: I-90 Ramps S: Double Tree Driveway**
Location: **E: Cambridge Street W: Cambridge Street SW: I-90 Offramp**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION
D A T A
INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	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
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	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	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	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	6
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	9
5:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	4	2	6	0	0	0	0	0	0	2	2	15
Total	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	16	0	0	0	0	0	7	4	11	0	0	0	0	0	0	2	2	32
Grand Total	0	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10	18	0	0	0	0	0	7	5	12	0	0	0	0	0	0	2	2	38
Approach %	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	44.4	55.6		0.0	0.0	0.0	0.0	0.0	58.3	41.7		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	0.0	0.0	0.0	0.0	7.9	7.9	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1	26.3	47.4	0.0	0.0	0.0	0.0	0.0	18.4	13.2	31.6	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	
Exiting Leg Total								6								0								18								12								2	38

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

5:00 PM	I-90 Ramps								Cambridge Street								Double Tree Driveway								I-90 Offramp								Cambridge Street								
	North								East								South								Southwest								West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	9
5:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	4	2	6	0	0	0	0	0	0	2	2	15
Total Volume	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	16	0	0	0	0	0	7	4	11	0	0	0	0	0	0	2	2	32
% Approach Total	0.0	0.0	0.0	0.0	0.0	33.3	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	50.0	50.0		0.0	0.0	0.0	0.0	0.0	63.6	36.4		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.375	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	0.500	0.667	0.571	0.000	0.000	0.000	0.000	0.000	0.438	0.500	0.458	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.533
Entering Leg	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	16	0	0	0	0	0	7	4	11	0	0	0	0	0	0	2	2	32
Exiting Leg								3								0								16								11								2	32
Total								6								0								32								22								4	64

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	7	64	85	2	158	0	0	0	0	0	13	17	60	1	91	93	275	40	0	408	657
7:15 AM	8	44	89	0	141	0	0	0	0	0	26	29	101	7	163	104	219	49	0	372	676
7:30 AM	9	52	79	0	140	0	0	0	0	0	24	13	85	5	127	97	261	60	0	418	685
7:45 AM	20	46	100	1	167	0	0	0	0	0	18	22	86	3	129	100	232	40	0	372	668
Total	44	206	353	3	606	0	0	0	0	0	81	81	332	16	510	394	987	189	0	1570	2686
8:00 AM	9	53	56	2	120	0	0	0	0	0	23	17	92	1	133	85	272	44	0	401	654
8:15 AM	12	56	97	0	165	0	0	0	0	0	35	14	68	1	118	87	264	35	0	386	669
8:30 AM	17	56	64	0	137	0	0	0	0	0	36	29	59	1	125	69	226	32	0	327	589
8:45 AM	14	58	69	1	142	0	0	0	0	0	31	12	34	5	82	61	271	29	0	361	585
Total	52	223	286	3	564	0	0	0	0	0	125	72	253	8	458	302	1033	140	0	1475	2497
Grand Total	96	429	639	6	1170	0	0	0	0	0	206	153	585	24	968	696	2020	329	0	3045	5183
Approach %	8.2	36.7	54.6	0.5		0.0	0.0	0.0	0.0		21.3	15.8	60.4	2.5		22.9	66.3	10.8	0.0		
Total %	1.9	8.3	12.3	0.1	22.6	0.0	0.0	0.0	0.0	0.0	4.0	3.0	11.3	0.5	18.7	13.4	39.0	6.3	0.0	58.7	
Exiting Leg Total					488					2865					1149					681	5183
Cars	89	417	606	6	1118	0	0	0	0	0	206	153	582	24	965	686	1943	311	0	2940	5023
% Cars	92.7	97.2	94.8	100.0	95.6	0.0	0.0	0.0	0.0	0.0	100.0	100.0	99.5	100.0	99.7	98.6	96.2	94.5	0.0	96.6	96.9
Exiting Leg Total					470					2755					1127					671	5023
Heavy Vehicles	0	12	20	0	32	0	0	0	0	0	0	0	3	0	3	10	65	18	0	93	128
% Heavy Vehicles	0.0	2.8	3.1	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	1.4	3.2	5.5	0.0	3.1	2.5
Exiting Leg Total					18					85					22					3	128
Buses	7	0	13	0	20	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	32
% Buses	7.3	0.0	2.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.6
Exiting Leg Total					0					25					0					7	32

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

7:00 AM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	7	64	85	2	158	0	0	0	0	0	13	17	60	1	91	93	275	40	0	408	657
7:15 AM	8	44	89	0	141	0	0	0	0	0	26	29	101	7	163	104	219	49	0	372	676
7:30 AM	9	52	79	0	140	0	0	0	0	0	24	13	85	5	127	97	261	60	0	418	685
7:45 AM	20	46	100	1	167	0	0	0	0	0	18	22	86	3	129	100	232	40	0	372	668
Total Volume	44	206	353	3	606	0	0	0	0	0	81	81	332	16	510	394	987	189	0	1570	2686
% Approach Total	7.3	34.0	58.3	0.5		0.0	0.0	0.0	0.0		15.9	15.9	65.1	3.1		25.1	62.9	12.0	0.0		
PHF	0.550	0.805	0.883	0.375	0.907	0.000	0.000	0.000	0.000	0.000	0.779	0.698	0.822	0.571	0.782	0.947	0.897	0.788	0.000	0.939	0.980
Cars	41	201	334	3	579	0	0	0	0	0	81	81	329	16	507	388	950	183	0	1521	2607
Cars %	93.2	97.6	94.6	100.0	95.5	0.0	0.0	0.0	0.0	0.0	100.0	100.0	99.1	100.0	99.4	98.5	96.3	96.8	0.0	96.9	97.1
Heavy Vehicles	0	5	12	0	17	0	0	0	0	0	0	0	3	0	3	6	31	6	0	43	63
Heavy Vehicles %	0.0	2.4	3.4	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.6	1.5	3.1	3.2	0.0	2.7	2.3
Buses	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
Buses %	6.8	0.0	2.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.6
Cars Enter Leg	41	201	334	3	579	0	0	0	0	0	81	81	329	16	507	388	950	183	0	1521	2607
Heavy Enter Leg	0	5	12	0	17	0	0	0	0	0	0	0	3	0	3	6	31	6	0	43	63
Bus Enter Leg	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
Total Entering Leg	44	206	353	3	606	0	0	0	0	0	81	81	332	16	510	394	987	189	0	1570	2686
Cars Exiting Leg					267					1365					605					370	2607
Heavy Exiting Leg					6					43					11					3	63
Buses Exiting Leg					0					13					0					3	16
Total Exiting Leg					273					1421					616					376	2686

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	7	64	77	2	150	0	0	0	0	0	13	17	60	1	91	91	268	39	0	398	639
7:15 AM	7	41	86	0	134	0	0	0	0	0	26	29	98	7	160	102	209	49	0	360	654
7:30 AM	8	52	77	0	137	0	0	0	0	0	24	13	85	5	127	96	249	56	0	401	665
7:45 AM	19	44	94	1	158	0	0	0	0	0	18	22	86	3	129	99	224	39	0	362	649
Total	41	201	334	3	579	0	0	0	0	0	81	81	329	16	507	388	950	183	0	1521	2607
8:00 AM	8	51	54	2	115	0	0	0	0	0	23	17	92	1	133	83	265	44	0	392	640
8:15 AM	12	55	96	0	163	0	0	0	0	0	35	14	68	1	118	87	257	31	0	375	656
8:30 AM	16	54	57	0	127	0	0	0	0	0	36	29	59	1	125	68	218	28	0	314	566
8:45 AM	12	56	65	1	134	0	0	0	0	0	31	12	34	5	82	60	253	25	0	338	554
Total	48	216	272	3	539	0	0	0	0	0	125	72	253	8	458	298	993	128	0	1419	2416
Grand Total	89	417	606	6	1118	0	0	0	0	0	206	153	582	24	965	686	1943	311	0	2940	5023
Approach %	8.0	37.3	54.2	0.5		0.0	0.0	0.0	0.0		21.3	15.9	60.3	2.5		23.3	66.1	10.6	0.0		
Total %	1.8	8.3	12.1	0.1	22.3	0.0	0.0	0.0	0.0	0.0	4.1	3.0	11.6	0.5	19.2	13.7	38.7	6.2	0.0	58.5	
Exiting Leg Total					470					2755					1127					671	5023

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

7:30 AM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	8	52	77	0	137	0	0	0	0	0	24	13	85	5	127	96	249	56	0	401	665
7:45 AM	19	44	94	1	158	0	0	0	0	0	18	22	86	3	129	99	224	39	0	362	649
8:00 AM	8	51	54	2	115	0	0	0	0	0	23	17	92	1	133	83	265	44	0	392	640
8:15 AM	12	55	96	0	163	0	0	0	0	0	35	14	68	1	118	87	257	31	0	375	656
Total Volume	47	202	321	3	573	0	0	0	0	0	100	66	331	10	507	365	995	170	0	1530	2610
% Approach Total	8.2	35.3	56.0	0.5		0.0	0.0	0.0	0.0		19.7	13.0	65.3	2.0		23.9	65.0	11.1	0.0		
PHF	0.618	0.918	0.836	0.375	0.879	0.000	0.000	0.000	0.000	0.000	0.714	0.750	0.899	0.500	0.953	0.922	0.939	0.759	0.000	0.954	0.981
Entering Leg	47	202	321	3	573	0	0	0	0	0	100	66	331	10	507	365	995	170	0	1530	2610
Exiting Leg					239					1416					577					378	2610
Total					812					1416					1084					1908	5220

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	5	0	5	0	0	0	0	0	0	0	0	0	0	2	5	1	0	8	13
7:15 AM	0	3	3	0	6	0	0	0	0	0	0	0	3	0	3	2	10	0	0	12	21
7:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	11	4	0	16	17
7:45 AM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	1	5	1	0	7	12
Total	0	5	12	0	17	0	0	0	0	0	0	0	3	0	3	6	31	6	0	43	63
8:00 AM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	2	6	0	0	8	11
8:15 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	6	4	0	10	12
8:30 AM	0	2	5	0	7	0	0	0	0	0	0	0	0	0	0	1	6	4	0	11	18
8:45 AM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1	16	4	0	21	24
Total	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	4	34	12	0	50	65
Grand Total	0	12	20	0	32	0	0	0	0	0	0	0	3	0	3	10	65	18	0	93	128
Approach %	0.0	37.5	62.5	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		10.8	69.9	19.4	0.0		
Total %	0.0	9.4	15.6	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	2.3	7.8	50.8	14.1	0.0	72.7	
Exiting Leg Total					18					85					22					3	128

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

8:00 AM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	2	1	0	3	0	0	0	0	0	0	0	0	0	0	2	6	0	0	8	11
8:15 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	6	4	0	10	12
8:30 AM	0	2	5	0	7	0	0	0	0	0	0	0	0	0	0	1	6	4	0	11	18
8:45 AM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1	16	4	0	21	24
Total Volume	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	4	34	12	0	50	65
% Approach Total	0.0	46.7	53.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		8.0	68.0	24.0	0.0		
PHF	0.000	0.875	0.400	0.000	0.536	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.531	0.750	0.000	0.595	0.677
Entering Leg	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	4	34	12	0	50	65
Exiting Leg					12					42					11					0	65
Total					27					42					11					50	130

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
7:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7
Total	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
8:00 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
8:45 AM	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	7
Total	4	0	6	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
Grand Total	7	0	13	0	20	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	32
Approach %	35.0	0.0	65.0	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		
Total %	21.9	0.0	40.6	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5	0.0	0.0	37.5	
Exiting Leg Total					0					25					0					7	32

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

7:00 AM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	3	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
7:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7
Total Volume	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
% Approach Total	30.0	0.0	70.0	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		
PHF	0.750	0.000	0.583	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.571
Entering Leg	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	16
Exiting Leg					0					13					0					3	16
Total					10					13					0					9	32

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:30 AM	0	0	1	0	0	0	1	0	0	0	0	21	1	22	0	0	0	0	0	0	0	0	3	0	0	0	0	3	26
7:45 AM	0	0	0	0	2	1	3	0	0	0	0	14	7	21	0	1	0	0	0	0	1	0	4	0	0	0	0	4	29
Total	0	0	1	0	2	1	4	0	0	0	0	41	12	53	0	1	0	0	0	0	1	0	7	0	0	0	0	7	65
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	5	1	6	0	1	0	0	0	0	1	0	2	0	0	0	0	2	10
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	5	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	5	1	6	1	0	0	0	0	1	2	0	4	0	0	0	0	4	12
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	4	4	8	2	0	0	0	0	0	2	0	0	0	0	0	0	0	10
Total	0	0	1	0	0	0	1	0	0	0	0	16	6	22	3	1	0	0	0	1	5	0	11	0	0	0	0	11	39
Grand Total	0	0	2	0	2	1	5	0	0	0	0	57	18	75	3	2	0	0	0	1	6	0	18	0	0	0	0	18	104
Approach %	0.0	0.0	40.0	0.0	40.0	20.0		0.0	0.0	0.0	0.0	76.0	24.0		50.0	33.3	0.0	0.0	0.0	16.7		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	1.9	0.0	1.9	1.0	4.8	0.0	0.0	0.0	0.0	54.8	17.3	72.1	2.9	1.9	0.0	0.0	0.0	1.0	5.8	0.0	17.3	0.0	0.0	0.0	0.0	17.3	
Exiting Leg Total							5							98							1							0	104

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

7:15 AM	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:30 AM	0	0	1	0	0	0	1	0	0	0	0	21	1	22	0	0	0	0	0	0	0	0	3	0	0	0	0	3	26
7:45 AM	0	0	0	0	2	1	3	0	0	0	0	14	7	21	0	1	0	0	0	0	1	0	4	0	0	0	0	4	29
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	5	1	6	0	1	0	0	0	0	1	0	2	0	0	0	0	2	10
Total Volume	0	0	2	0	2	1	5	0	0	0	0	46	11	57	0	2	0	0	0	0	2	0	9	0	0	0	0	9	73
% Approach Total	0.0	0.0	40.0	0.0	40.0	20.0		0.0	0.0	0.0	0.0	80.7	19.3		0.0	100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.500	0.000	0.250	0.250	0.417	0.000	0.000	0.000	0.000	0.548	0.393	0.648	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.563	0.000	0.000	0.000	0.000	0.563	0.629
Entering Leg	0	0	2	0	2	1	5	0	0	0	0	46	11	57	0	2	0	0	0	0	2	0	9	0	0	0	0	9	73
Exiting Leg							5							68							0							0	73
Total							10							125							2							9	146

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	6	11	0	0	0	0	0	2	2	0	0	0	0	1	0	1	14
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	0	1	1	0	0	0	0	0	2	2	10
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	3	2	5	0	0	0	0	1	0	1	12
7:45 AM	0	0	0	0	2	1	3	0	0	0	0	3	3	6	0	0	0	0	0	7	7	0	0	0	0	0	0	0	16
Total	0	0	0	0	2	1	3	0	0	0	0	19	11	30	0	0	0	0	3	12	15	0	0	0	0	2	2	4	52
8:00 AM	0	0	0	0	4	1	5	0	0	0	0	21	8	29	0	0	0	0	2	4	6	0	0	0	0	2	1	3	43
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	29	2	31	0	0	0	0	3	8	11	0	0	0	0	0	0	0	42
8:30 AM	0	0	0	0	2	1	3	0	0	0	0	17	5	22	0	0	0	0	2	7	9	0	0	0	0	0	2	2	36
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	10	1	11	0	0	0	0	2	3	5	0	0	0	0	1	2	3	19
Total	0	0	0	0	6	2	8	0	0	0	0	77	16	93	0	0	0	0	9	22	31	0	0	0	0	3	5	8	140
Grand Total	0	0	0	0	8	3	11	0	0	0	0	96	27	123	0	0	0	0	12	34	46	0	0	0	0	5	7	12	192
Approach %	0.0	0.0	0.0	0.0	72.7	27.3		0.0	0.0	0.0	0.0	78.0	22.0		0.0	0.0	0.0	0.0	26.1	73.9		0.0	0.0	0.0	0.0	41.7	58.3		
Total %	0.0	0.0	0.0	0.0	4.2	1.6	5.7	0.0	0.0	0.0	0.0	50.0	14.1	64.1	0.0	0.0	0.0	0.0	6.3	17.7	24.0	0.0	0.0	0.0	0.0	2.6	3.6	6.3	
Exiting Leg Total							11							123							46							12	192

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

8:00 AM	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
8:00 AM	0	0	0	0	4	1	5	0	0	0	0	21	8	29	0	0	0	0	2	4	6	0	0	0	0	2	1	3	43
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	29	2	31	0	0	0	0	3	8	11	0	0	0	0	0	0	0	42
8:30 AM	0	0	0	0	2	1	3	0	0	0	0	17	5	22	0	0	0	0	2	7	9	0	0	0	0	0	2	2	36
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	10	1	11	0	0	0	0	2	3	5	0	0	0	0	1	2	3	19
Total Volume	0	0	0	0	6	2	8	0	0	0	0	77	16	93	0	0	0	0	9	22	31	0	0	0	0	3	5	8	140
% Approach Total	0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	82.8	17.2		0.0	0.0	0.0	0.0	29.0	71.0		0.0	0.0	0.0	0.0	37.5	62.5		
PHF	0.000	0.000	0.000	0.000	0.375	0.500	0.400	0.000	0.000	0.000	0.000	0.664	0.500	0.750	0.000	0.000	0.000	0.000	0.750	0.688	0.705	0.000	0.000	0.000	0.000	0.375	0.625	0.667	0.814
Entering Leg	0	0	0	0	6	2	8	0	0	0	0	77	16	93	0	0	0	0	9	22	31	0	0	0	0	3	5	8	140
Exiting Leg							8							93							31							8	140
Total							16							186							62							16	280

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars, Heavy Vehicles, and Buses (Combined)

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	36	59	57	4	156	0	0	0	0	0	29	13	77	2	121	112	233	73	0	418	695
4:15 PM	21	49	79	1	150	0	0	0	0	0	22	8	84	2	116	86	211	83	0	380	646
4:30 PM	36	79	63	2	180	0	0	0	0	0	27	13	72	8	120	99	248	62	1	410	710
4:45 PM	37	75	87	3	202	0	0	0	0	0	20	12	73	3	108	105	253	63	1	422	732
Total	130	262	286	10	688	0	0	0	0	0	98	46	306	15	465	402	945	281	2	1630	2783
5:00 PM	35	45	90	1	171	0	0	1	0	1	28	15	57	2	102	86	247	66	0	399	673
5:15 PM	31	60	87	4	182	0	0	0	0	0	32	15	56	0	103	98	273	82	0	453	738
5:30 PM	33	77	92	3	205	0	0	0	0	0	30	15	54	6	105	97	251	74	0	422	732
5:45 PM	20	53	75	3	151	0	0	0	0	0	22	12	64	0	98	99	248	75	0	422	671
Total	119	235	344	11	709	0	0	1	0	1	112	57	231	8	408	380	1019	297	0	1696	2814
Grand Total	249	497	630	21	1397	0	0	1	0	1	210	103	537	23	873	782	1964	578	2	3326	5597
Approach %	17.8	35.6	45.1	1.5		0.0	0.0	100.0	0.0		24.1	11.8	61.5	2.6		23.5	59.0	17.4	0.1		
Total %	4.4	8.9	11.3	0.4	25.0	0.0	0.0	0.0	0.0	0.0	3.8	1.8	9.6	0.4	15.6	14.0	35.1	10.3	0.0	59.4	
Exiting Leg Total					702					2804					1303					788	5597
Cars	241	496	615	21	1373	0	0	1	0	1	210	102	536	23	871	779	1936	576	2	3293	5538
% Cars	96.8	99.8	97.6	100.0	98.3	0.0	0.0	100.0	0.0	100.0	100.0	99.0	99.8	100.0	99.8	99.6	98.6	99.7	100.0	99.0	98.9
Exiting Leg Total					699					2761					1299					779	5538
Heavy Vehicles	2	0	4	0	6	0	0	0	0	0	0	1	1	0	2	2	14	1	0	17	25
% Heavy Vehicles	0.8	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.2	0.0	0.2	0.3	0.7	0.2	0.0	0.5	0.4
Exiting Leg Total					2					18					2					3	25
Buses	6	1	11	0	18	0	0	0	0	0	0	0	0	0	0	1	14	1	0	16	34
% Buses	2.4	0.2	1.7	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.2	0.0	0.5	0.6
Exiting Leg Total					1					25					2					6	34

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

4:45 PM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	37	75	87	3	202	0	0	0	0	0	20	12	73	3	108	105	253	63	1	422	732
5:00 PM	35	45	90	1	171	0	0	1	0	1	28	15	57	2	102	86	247	66	0	399	673
5:15 PM	31	60	87	4	182	0	0	0	0	0	32	15	56	0	103	98	273	82	0	453	738
5:30 PM	33	77	92	3	205	0	0	0	0	0	30	15	54	6	105	97	251	74	0	422	732
Total Volume	136	257	356	11	760	0	0	1	0	1	110	57	240	11	418	386	1024	285	1	1696	2875
% Approach Total	17.9	33.8	46.8	1.4		0.0	0.0	100.0	0.0		26.3	13.6	57.4	2.6		22.8	60.4	16.8	0.1		
PHF	0.919	0.834	0.967	0.688	0.927	0.000	0.000	0.250	0.000	0.250	0.859	0.950	0.822	0.458	0.968	0.919	0.938	0.869	0.250	0.936	0.974
Cars	130	257	350	11	748	0	0	1	0	1	110	56	239	11	416	384	1012	283	1	1680	2845
Cars %	95.6	100.0	98.3	100.0	98.4	0.0	0.0	100.0	0.0	100.0	100.0	98.2	99.6	100.0	99.5	99.5	98.8	99.3	100.0	99.1	99.0
Heavy Vehicles	1	0	1	0	2	0	0	0	0	0	0	1	1	0	2	1	9	1	0	11	15
Heavy Vehicles %	0.7	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.4	0.0	0.5	0.3	0.9	0.4	0.0	0.6	0.5
Buses	5	0	5	0	10	0	0	0	0	0	0	0	0	0	0	1	3	1	0	5	15
Buses %	3.7	0.0	1.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.4	0.0	0.3	0.5
Cars Enter Leg	130	257	350	11	748	0	0	1	0	1	110	56	239	11	416	384	1012	283	1	1680	2845
Heavy Enter Leg	1	0	1	0	2	0	0	0	0	0	0	1	1	0	2	1	9	1	0	11	15
Bus Enter Leg	5	0	5	0	10	0	0	0	0	0	0	0	0	0	0	1	3	1	0	5	15
Total Entering Leg	136	257	356	11	760	0	0	1	0	1	110	57	240	11	418	386	1024	285	1	1696	2875
Cars Exiting Leg					350					1472					653					370	2845
Heavy Exiting Leg					2					10					1					2	15
Buses Exiting Leg					1					8					1					5	15
Total Exiting Leg					353					1490					655					377	2875

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	35	59	54	4	152	0	0	0	0	0	29	13	77	2	121	112	231	73	0	416	689
4:15 PM	20	49	76	1	146	0	0	0	0	0	22	8	84	2	116	86	206	83	0	375	637
4:30 PM	36	79	62	2	179	0	0	0	0	0	27	13	72	8	120	98	242	62	1	403	702
4:45 PM	34	75	87	3	199	0	0	0	0	0	20	11	73	3	107	104	252	62	1	419	725
Total	125	262	279	10	676	0	0	0	0	0	98	45	306	15	464	400	931	280	2	1613	2753
5:00 PM	34	45	88	1	168	0	0	1	0	1	28	15	57	2	102	85	241	66	0	392	663
5:15 PM	29	60	87	4	180	0	0	0	0	0	32	15	55	0	102	98	270	82	0	450	732
5:30 PM	33	77	88	3	201	0	0	0	0	0	30	15	54	6	105	97	249	73	0	419	725
5:45 PM	20	52	73	3	148	0	0	0	0	0	22	12	64	0	98	99	245	75	0	419	665
Total	116	234	336	11	697	0	0	1	0	1	112	57	230	8	407	379	1005	296	0	1680	2785
Grand Total	241	496	615	21	1373	0	0	1	0	1	210	102	536	23	871	779	1936	576	2	3293	5538
Approach %	17.6	36.1	44.8	1.5		0.0	0.0	100.0	0.0		24.1	11.7	61.5	2.6		23.7	58.8	17.5	0.1		
Total %	4.4	9.0	11.1	0.4	24.8	0.0	0.0	0.0	0.0	0.0	3.8	1.8	9.7	0.4	15.7	14.1	35.0	10.4	0.0	59.5	
Exiting Leg Total					699					2761					1299					779	5538

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

4:45 PM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	34	75	87	3	199	0	0	0	0	0	20	11	73	3	107	104	252	62	1	419	725
5:00 PM	34	45	88	1	168	0	0	1	0	1	28	15	57	2	102	85	241	66	0	392	663
5:15 PM	29	60	87	4	180	0	0	0	0	0	32	15	55	0	102	98	270	82	0	450	732
5:30 PM	33	77	88	3	201	0	0	0	0	0	30	15	54	6	105	97	249	73	0	419	725
Total Volume	130	257	350	11	748	0	0	1	0	1	110	56	239	11	416	384	1012	283	1	1680	2845
% Approach Total	17.4	34.4	46.8	1.5		0.0	0.0	100.0	0.0		26.4	13.5	57.5	2.6		22.9	60.2	16.8	0.1		
PHF	0.956	0.834	0.994	0.688	0.930	0.000	0.000	0.250	0.000	0.250	0.859	0.933	0.818	0.458	0.972	0.923	0.937	0.863	0.250	0.933	0.972
Entering Leg	130	257	350	11	748	0	0	1	0	1	110	56	239	11	416	384	1012	283	1	1680	2845
Exiting Leg					350					1472					653					370	2845
Total					1098					1473					1069					2050	5690

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Heavy Vehicles

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	4
Total	2	0	3	0	5	0	0	0	0	0	0	1	0	0	1	1	6	1	0	8	14
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	5
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	4
5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
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	1	0	1	0	0	0	0	0	0	0	1	0	1	1	8	0	0	9	11
Grand Total	2	0	4	0	6	0	0	0	0	0	0	1	1	0	2	2	14	1	0	17	25
Approach %	33.3	0.0	66.7	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0		11.8	82.4	5.9	0.0		
Total %	8.0	0.0	16.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	8.0	8.0	56.0	4.0	0.0	68.0	
Exiting Leg Total					2					18					2					3	25

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

4:15 PM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	5
Total Volume	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	2	9	1	0	12	15
% Approach Total	50.0	0.0	50.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		16.7	75.0	8.3	0.0		
PHF	0.250	0.000	0.250	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	0.563	0.250	0.000	0.600	0.750
Entering Leg	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	2	9	1	0	12	15
Exiting Leg					2					10					2					1	15
Total					4					10					3					13	30

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
4:15 PM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	6
4:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
Total	3	0	4	0	7	0	0	0	0	0	0	0	0	0	0	1	8	0	0	9	16
5:00 PM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
5:15 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5
5:45 PM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	6
Total	3	1	7	0	11	0	0	0	0	0	0	0	0	0	0	0	6	1	0	7	18
Grand Total	6	1	11	0	18	0	0	0	0	0	0	0	0	0	0	1	14	1	0	16	34
Approach %	33.3	5.6	61.1	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		6.3	87.5	6.3	0.0		
Total %	17.6	2.9	32.4	0.0	52.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	41.2	2.9	0.0	47.1	
Exiting Leg Total					1					25					2					6	34

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

4:15 PM	Soldiers Field Road Ramps					River Street Bridge					Soldiers Field Road Ramps					Cambridge Street					
	North					East					South					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	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	6
4:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
5:00 PM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
Total Volume	4	0	5	0	9	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10	19
% Approach Total	44.4	0.0	55.6	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		10.0	90.0	0.0	0.0		
PHF	0.500	0.000	0.625	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.450	0.000	0.000	0.500	0.792
Entering Leg	4	0	5	0	9	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10	19
Exiting Leg					0					14					1					4	19
Total					9					14					1					14	38

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	1	4
4:15 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
4:30 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
4:45 PM	1	1	0	0	0	0	2	0	0	0	0	1	3	4	1	1	0	0	0	0	2	0	3	0	0	0	0	3	11
Total	1	1	0	0	0	1	3	0	0	0	0	3	4	7	2	1	0	0	0	0	3	0	4	0	0	0	0	4	17
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	1	0	0	0	0	3	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	3	0	0	0	0	6	0	1	0	0	0	0	1	9
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	1	3	0	0	0	0	4	0	2	0	0	0	0	2	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	6	11	17	0	2	0	0	0	0	2	0	1	0	0	0	0	1	20
Total	0	0	0	0	0	0	0	0	0	0	0	8	18	26	6	9	0	0	0	0	15	0	4	0	0	0	0	4	45
Grand Total	1	1	0	0	0	1	3	0	0	0	0	11	22	33	8	10	0	0	0	0	18	0	8	0	0	0	0	8	62
Approach %	33.3	33.3	0.0	0.0	0.0	33.3		0.0	0.0	0.0	0.0	33.3	66.7		44.4	55.6	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
Total %	1.6	1.6	0.0	0.0	0.0	1.6	4.8	0.0	0.0	0.0	0.0	17.7	35.5	53.2	12.9	16.1	0.0	0.0	0.0	0.0	29.0	0.0	12.9	0.0	0.0	0.0	0.0	12.9	
Exiting Leg Total							11							49							1							1	62

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

5:00 PM	Soldiers Field Road Ramps							River Street Bridge							Soldiers Field Road Ramps							Cambridge Street							
	North							East							South							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	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	1	0	0	0	0	3	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	3	0	0	0	0	6	0	1	0	0	0	0	1	9
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	1	3	0	0	0	0	4	0	2	0	0	0	0	2	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	6	11	17	0	2	0	0	0	0	2	0	1	0	0	0	0	1	20
Total Volume	0	0	0	0	0	0	0	0	0	0	0	8	18	26	6	9	0	0	0	0	15	0	4	0	0	0	0	4	45
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	30.8	69.2		40.0	60.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.409	0.382	0.500	0.750	0.000	0.000	0.000	0.000	0.625	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.563
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	8	18	26	6	9	0	0	0	0	15	0	4	0	0	0	0	4	45
Exiting Leg							9							36							0							0	45
Total							9							62							15							4	90

PDI File #: **175597 H**
Location: **N: Soldiers Field Road Ramps S: Soldiers Field Road Ramps**
Location: **E: River Street Bridge W: Cambridge Street**
City, State: **Allston, MA**
Client: **VHB/ M. Baidy**
Site Code: **13581.03**
Count Date: **Wednesday, April 12, 2017**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Soldiers Field Road Ramps (North)							River Street Bridge (East)							Soldiers Field Road Ramps (South)							Cambridge Street (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	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	3	8	11	0	0	0	0	0	1	1	19
4:15 PM	0	0	0	0	1	0	1	0	0	0	0	7	1	8	0	0	0	0	3	1	4	0	0	0	0	0	1	1	14
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	3	3	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	3	0	3	0	0	0	0	2	2	4	0	0	0	0	0	1	1	9
Total	0	0	0	0	2	1	3	0	0	0	0	17	2	19	0	0	0	0	8	14	22	0	0	0	0	0	3	3	47
5:00 PM	0	0	0	0	1	0	1	0	0	0	0	2	1	3	0	0	0	0	3	1	4	0	0	0	0	0	2	2	10
5:15 PM	0	0	0	0	1	0	1	0	0	0	0	3	4	7	0	0	0	0	3	1	4	0	0	0	0	0	1	1	13
5:30 PM	0	0	0	0	1	0	1	0	0	0	0	4	5	9	0	0	0	0	0	2	2	0	0	0	0	1	1	2	14
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	3	3	6	0	0	0	0	1	1	2	13
Total	0	0	0	0	3	0	3	0	0	0	0	11	13	24	0	0	0	0	9	7	16	0	0	0	0	2	5	7	50
Grand Total	0	0	0	0	5	1	6	0	0	0	0	28	15	43	0	0	0	0	17	21	38	0	0	0	0	2	8	10	97
Approach %	0.0	0.0	0.0	0.0	83.3	16.7		0.0	0.0	0.0	0.0	65.1	34.9		0.0	0.0	0.0	0.0	44.7	55.3		0.0	0.0	0.0	0.0	20.0	80.0		
Total %	0.0	0.0	0.0	0.0	5.2	1.0	6.2	0.0	0.0	0.0	0.0	28.9	15.5	44.3	0.0	0.0	0.0	0.0	17.5	21.6	39.2	0.0	0.0	0.0	0.0	2.1	8.2	10.3	
Exiting Leg Total							6							43							38							10	97

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

5:00 PM	Soldiers Field Road Ramps (North)							River Street Bridge (East)							Soldiers Field Road Ramps (South)							Cambridge Street (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	Total
5:00 PM	0	0	0	0	1	0	1	0	0	0	0	2	1	3	0	0	0	0	3	1	4	0	0	0	0	0	2	2	10
5:15 PM	0	0	0	0	1	0	1	0	0	0	0	3	4	7	0	0	0	0	3	1	4	0	0	0	0	0	1	1	13
5:30 PM	0	0	0	0	1	0	1	0	0	0	0	4	5	9	0	0	0	0	0	2	2	0	0	0	0	1	1	2	14
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	3	3	6	0	0	0	0	1	1	2	13
Total Volume	0	0	0	0	3	0	3	0	0	0	0	11	13	24	0	0	0	0	9	7	16	0	0	0	0	2	5	7	50
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	45.8	54.2		0.0	0.0	0.0	0.0	56.3	43.8		0.0	0.0	0.0	0.0	28.6	71.4		
PHF	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.000	0.000	0.000	0.000	0.688	0.650	0.667	0.000	0.000	0.000	0.000	0.750	0.583	0.667	0.000	0.000	0.000	0.000	0.500	0.625	0.875	0.893
Entering Leg	0	0	0	0	3	0	3	0	0	0	0	11	13	24	0	0	0	0	9	7	16	0	0	0	0	2	5	7	50
Exiting Leg							3							24							16							7	50
Total							6							48							32							14	100

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	North Harvard Street from North					Kingsley Street from East					North Harvard Street from South					Franklin Street 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	5	70	0	0	75	0	0	0	0	0	0	55	5	0	60	11	0	10	0	21	156
7:15 AM	6	76	0	0	82	0	0	1	0	1	0	72	3	0	75	8	0	12	0	20	178
7:30 AM	7	78	0	0	85	0	0	2	0	2	0	82	1	0	83	11	0	16	0	27	197
7:45 AM	5	67	0	0	72	0	0	1	0	1	0	79	2	0	81	9	0	19	0	28	182
Total	23	291	0	0	314	0	0	4	0	4	0	288	11	0	299	39	0	57	0	96	713
8:00 AM	9	72	0	0	81	1	2	1	0	4	0	74	9	0	83	11	0	13	0	24	192
8:15 AM	10	107	0	0	117	2	3	2	0	7	0	71	7	0	78	19	0	15	0	34	236
8:30 AM	14	91	0	0	105	2	3	2	0	7	0	97	5	0	102	9	0	18	0	27	241
8:45 AM	13	75	0	0	88	0	1	1	0	2	0	95	6	0	101	1	0	19	0	20	211
Total	46	345	0	0	391	5	9	6	0	20	0	337	27	0	364	40	0	65	0	105	880
Grand Total	69	636	0	0	705	5	9	10	0	24	0	625	38	0	663	79	0	122	0	201	1593
Approach %	9.8	90.2	0.0	0.0		20.8	37.5	41.7	0.0		0.0	94.3	5.7	0.0		39.3	0.0	60.7	0.0		
Total %	4.3	39.9	0.0	0.0	44.3	0.3	0.6	0.6	0.0	1.5	0.0	39.2	2.4	0.0	41.6	5.0	0.0	7.7	0.0	12.6	
Exiting Leg Total					752					0					725					116	1593
Cars	57	539	0	0	596	5	8	10	0	23	0	530	33	0	563	74	0	117	0	191	1373
% Cars	82.6	84.7	0.0	0.0	84.5	100.0	88.9	100.0	0.0	95.8	0.0	84.8	86.8	0.0	84.9	93.7	0.0	95.9	0.0	95.0	86.2
Exiting Leg Total					652					0					623					98	1373
Heavy Vehicles	12	97	0	0	109	0	1	0	0	1	0	95	5	0	100	5	0	5	0	10	220
% Heavy Vehicles	17.4	15.3	0.0	0.0	15.5	0.0	11.1	0.0	0.0	4.2	0.0	15.2	13.2	0.0	15.1	6.3	0.0	4.1	0.0	5.0	13.8
Exiting Leg Total					100					0					102					18	220

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

8:00 AM	North Harvard Street from North					Kingsley Street from East					North Harvard Street from South					Franklin Street 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	9	72	0	0	81	1	2	1	0	4	0	74	9	0	83	11	0	13	0	24	192
8:15 AM	10	107	0	0	117	2	3	2	0	7	0	71	7	0	78	19	0	15	0	34	236
8:30 AM	14	91	0	0	105	2	3	2	0	7	0	97	5	0	102	9	0	18	0	27	241
8:45 AM	13	75	0	0	88	0	1	1	0	2	0	95	6	0	101	1	0	19	0	20	211
Total Volume	46	345	0	0	391	5	9	6	0	20	0	337	27	0	364	40	0	65	0	105	880
% Approach Total	11.8	88.2	0.0	0.0		25.0	45.0	30.0	0.0		0.0	92.6	7.4	0.0		38.1	0.0	61.9	0.0		
PHF	0.821	0.806	0.000	0.000	0.835	0.625	0.750	0.750	0.000	0.714	0.000	0.869	0.750	0.000	0.892	0.526	0.000	0.855	0.000	0.772	0.913
Cars	36	298	0	0	334	5	8	6	0	19	0	289	22	0	311	37	0	61	0	98	762
Cars %	78.3	86.4	0.0	0.0	85.4	100.0	88.9	100.0	0.0	95.0	0.0	85.8	81.5	0.0	85.4	92.5	0.0	93.8	0.0	93.3	86.6
Heavy Vehicles	10	47	0	0	57	0	1	0	0	1	0	48	5	0	53	3	0	4	0	7	118
Heavy Vehicles %	21.7	13.6	0.0	0.0	14.6	0.0	11.1	0.0	0.0	5.0	0.0	14.2	18.5	0.0	14.6	7.5	0.0	6.2	0.0	6.7	13.4
Cars Enter Leg	36	298	0	0	334	5	8	6	0	19	0	289	22	0	311	37	0	61	0	98	762
Heavy Enter Leg	10	47	0	0	57	0	1	0	0	1	0	48	5	0	53	3	0	4	0	7	118
Total Entering Leg	46	345	0	0	391	5	9	6	0	20	0	337	27	0	364	40	0	65	0	105	880
Cars Exiting Leg					355					0					341					66	762
Heavy Exiting Leg					52					0					50					16	118
Total Exiting Leg					407					0					391					82	880

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	5	63	0	0	68	0	0	0	0	0	0	44	5	0	49	11	0	9	0	20	137
7:15 AM	6	65	0	0	71	0	0	1	0	1	0	64	3	0	67	7	0	12	0	19	158
7:30 AM	5	56	0	0	61	0	0	2	0	2	0	65	1	0	66	11	0	16	0	27	156
7:45 AM	5	57	0	0	62	0	0	1	0	1	0	68	2	0	70	8	0	19	0	27	160
Total	21	241	0	0	262	0	0	4	0	4	0	241	11	0	252	37	0	56	0	93	611
8:00 AM	8	67	0	0	75	1	2	1	0	4	0	62	8	0	70	11	0	13	0	24	173
8:15 AM	5	93	0	0	98	2	3	2	0	7	0	64	5	0	69	17	0	15	0	32	206
8:30 AM	12	77	0	0	89	2	2	2	0	6	0	81	4	0	85	9	0	16	0	25	205
8:45 AM	11	61	0	0	72	0	1	1	0	2	0	82	5	0	87	0	0	17	0	17	178
Total	36	298	0	0	334	5	8	6	0	19	0	289	22	0	311	37	0	61	0	98	762
Grand Total	57	539	0	0	596	5	8	10	0	23	0	530	33	0	563	74	0	117	0	191	1373
Approach %	9.6	90.4	0.0	0.0		21.7	34.8	43.5	0.0		0.0	94.1	5.9	0.0		38.7	0.0	61.3	0.0		
Total %	4.2	39.3	0.0	0.0	43.4	0.4	0.6	0.7	0.0	1.7	0.0	38.6	2.4	0.0	41.0	5.4	0.0	8.5	0.0	13.9	
Exiting Leg Total					652					0					623					98	1373

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

8:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
8:00 AM	8	67	0	0	75	1	2	1	0	4	0	62	8	0	70	11	0	13	0	24	173
8:15 AM	5	93	0	0	98	2	3	2	0	7	0	64	5	0	69	17	0	15	0	32	206
8:30 AM	12	77	0	0	89	2	2	2	0	6	0	81	4	0	85	9	0	16	0	25	205
8:45 AM	11	61	0	0	72	0	1	1	0	2	0	82	5	0	87	0	0	17	0	17	178
Total Volume	36	298	0	0	334	5	8	6	0	19	0	289	22	0	311	37	0	61	0	98	762
% Approach Total	10.8	89.2	0.0	0.0		26.3	42.1	31.6	0.0		0.0	92.9	7.1	0.0		37.8	0.0	62.2	0.0		
PHF	0.750	0.801	0.000	0.000	0.852	0.625	0.667	0.750	0.000	0.679	0.000	0.881	0.688	0.000	0.894	0.544	0.000	0.897	0.000	0.766	0.925
Entering Leg	36	298	0	0	334	5	8	6	0	19	0	289	22	0	311	37	0	61	0	98	762
Exiting Leg					355					0					341					66	762
Total					689					19					652					164	1524

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**

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

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	7	0	0	7	0	0	0	0	0	0	11	0	0	11	0	0	1	0	1	19
7:15 AM	0	11	0	0	11	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	20
7:30 AM	2	22	0	0	24	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	41
7:45 AM	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	22
Total	2	50	0	0	52	0	0	0	0	0	0	47	0	0	47	2	0	1	0	3	102
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	19
8:15 AM	5	14	0	0	19	0	0	0	0	0	0	7	2	0	9	2	0	0	0	2	30
8:30 AM	2	14	0	0	16	0	1	0	0	1	0	16	1	0	17	0	0	2	0	2	36
8:45 AM	2	14	0	0	16	0	0	0	0	0	0	13	1	0	14	1	0	2	0	3	33
Total	10	47	0	0	57	0	1	0	0	1	0	48	5	0	53	3	0	4	0	7	118
Grand Total	12	97	0	0	109	0	1	0	0	1	0	95	5	0	100	5	0	5	0	10	220
Approach %	11.0	89.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	95.0	5.0	0.0		50.0	0.0	50.0	0.0		
Total %	5.5	44.1	0.0	0.0	49.5	0.0	0.5	0.0	0.0	0.5	0.0	43.2	2.3	0.0	45.5	2.3	0.0	2.3	0.0	4.5	
Exiting Leg Total					100					0					102					18	220
Buses	7	33	0	0	40	0	0	0	0	0	0	27	5	0	32	3	0	3	0	6	78
% Buses	58.3	34.0	0.0	0.0	36.7	0.0	0.0	0.0	0.0	0.0	0.0	28.4	100.0	0.0	32.0	60.0	0.0	60.0	0.0	60.0	35.5
Exiting Leg Total					30					0					36					12	78
Single-Unit Trucks	5	52	0	0	57	0	0	0	0	0	0	57	0	0	57	2	0	2	0	4	118
% Single-Unit	41.7	53.6	0.0	0.0	52.3	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	57.0	40.0	0.0	40.0	0.0	40.0	53.6
Exiting Leg Total					59					0					54					5	118
Articulated Trucks	0	12	0	0	12	0	1	0	0	1	0	11	0	0	11	0	0	0	0	0	24
% Articulated	0.0	12.4	0.0	0.0	11.0	0.0	100.0	0.0	0.0	100.0	0.0	11.6	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	10.9
Exiting Leg Total					11					0					12					1	24

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

8:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	19
8:15 AM	5	14	0	0	19	0	0	0	0	0	0	7	2	0	9	2	0	0	0	2	30
8:30 AM	2	14	0	0	16	0	1	0	0	1	0	16	1	0	17	0	0	2	0	2	36
8:45 AM	2	14	0	0	16	0	0	0	0	0	0	13	1	0	14	1	0	2	0	3	33
Total Volume	10	47	0	0	57	0	1	0	0	1	0	48	5	0	53	3	0	4	0	7	118
% Approach Total	17.5	82.5	0.0	0.0		0.0	100.0	0.0	0.0		0.0	90.6	9.4	0.0		42.9	0.0	57.1	0.0		
PHF	0.500	0.839	0.000	0.000	0.750	0.000	0.250	0.000	0.000	0.250	0.000	0.750	0.625	0.000	0.779	0.375	0.000	0.500	0.000	0.583	0.819
Buses	7	16	0	0	23	0	0	0	0	0	0	14	5	0	19	3	0	2	0	5	47
Buses %	70.0	34.0	0.0	0.0	40.4	0.0	0.0	0.0	0.0	0.0	0.0	29.2	100.0	0.0	35.8	100.0	0.0	50.0	0.0	71.4	39.8
Single-Unit Trucks	3	22	0	0	25	0	0	0	0	0	0	32	0	0	32	0	0	2	0	2	59
Single-Unit %	30.0	46.8	0.0	0.0	43.9	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	60.4	0.0	0.0	50.0	0.0	28.6	50.0
Articulated Trucks	0	9	0	0	9	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	12
Articulated %	0.0	19.1	0.0	0.0	15.8	0.0	100.0	0.0	0.0	100.0	0.0	4.2	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	10.2
Buses	7	16	0	0	23	0	0	0	0	0	0	14	5	0	19	3	0	2	0	5	47
Single-Unit Trucks	3	22	0	0	25	0	0	0	0	0	0	32	0	0	32	0	0	2	0	2	59
Articulated Trucks	0	9	0	0	9	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	12
Total Entering Leg	10	47	0	0	57	0	1	0	0	1	0	48	5	0	53	3	0	4	0	7	118
Buses					16					0					19					12	47
Single-Unit Trucks					34					0					22					3	59
Articulated Trucks					2					0					9					1	12
Total Exiting Leg					52					0					50					16	118

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**

Class: **Cars**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	4	49	0	0	53	0	0	0	0	0	0	35	5	0	40	10	0	7	0	17	110
7:15 AM	6	45	0	0	51	0	0	1	0	1	0	50	3	0	53	5	0	9	0	14	119
7:30 AM	3	43	0	0	46	0	0	2	0	2	0	56	1	0	57	10	0	15	0	25	130
7:45 AM	5	45	0	0	50	0	0	1	0	1	0	60	2	0	62	7	0	19	0	26	139
Total	18	182	0	0	200	0	0	4	0	4	0	201	11	0	212	32	0	50	0	82	498
8:00 AM	5	65	0	0	70	1	0	1	0	2	0	60	8	0	68	11	0	12	0	23	163
8:15 AM	5	84	0	0	89	2	3	2	0	7	0	60	5	0	65	16	0	15	0	31	192
8:30 AM	12	73	0	0	85	2	1	2	0	5	0	70	4	0	74	9	0	15	0	24	188
8:45 AM	10	55	0	0	65	0	1	1	0	2	0	70	5	0	75	0	0	15	0	15	157
Total	32	277	0	0	309	5	5	6	0	16	0	260	22	0	282	36	0	57	0	93	700
Grand Total	50	459	0	0	509	5	5	10	0	20	0	461	33	0	494	68	0	107	0	175	1198
Approach %	9.8	90.2	0.0	0.0		25.0	25.0	50.0	0.0		0.0	93.3	6.7	0.0		38.9	0.0	61.1	0.0		
Total %	4.2	38.3	0.0	0.0	42.5	0.4	0.4	0.8	0.0	1.7	0.0	38.5	2.8	0.0	41.2	5.7	0.0	8.9	0.0	14.6	
Exiting Leg Total					573					0					537					88	1198

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

8:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
8:00 AM	5	65	0	0	70	1	0	1	0	2	0	60	8	0	68	11	0	12	0	23	163
8:15 AM	5	84	0	0	89	2	3	2	0	7	0	60	5	0	65	16	0	15	0	31	192
8:30 AM	12	73	0	0	85	2	1	2	0	5	0	70	4	0	74	9	0	15	0	24	188
8:45 AM	10	55	0	0	65	0	1	1	0	2	0	70	5	0	75	0	0	15	0	15	157
Total Volume	32	277	0	0	309	5	5	6	0	16	0	260	22	0	282	36	0	57	0	93	700
% Approach Total	10.4	89.6	0.0	0.0		31.3	31.3	37.5	0.0		0.0	92.2	7.8	0.0		38.7	0.0	61.3	0.0		
PHF	0.667	0.824	0.000	0.000	0.868	0.625	0.417	0.750	0.000	0.571	0.000	0.929	0.688	0.000	0.940	0.563	0.000	0.950	0.000	0.750	0.911
Entering Leg	32	277	0	0	309	5	5	6	0	16	0	260	22	0	282	36	0	57	0	93	700
Exiting Leg					322					0					319					59	700
Total					631					16					601					152	1400

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Light Goods Vehicle**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	1	13	0	0	14	0	0	0	0	0	0	9	0	0	9	1	0	2	0	3	26
7:15 AM	0	19	0	0	19	0	0	0	0	0	0	14	0	0	14	2	0	3	0	5	38
7:30 AM	2	13	0	0	15	0	0	0	0	0	0	9	0	0	9	1	0	1	0	2	26
7:45 AM	0	12	0	0	12	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	21
Total	3	57	0	0	60	0	0	0	0	0	0	40	0	0	40	5	0	6	0	11	111
8:00 AM	3	2	0	0	5	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	10
8:15 AM	0	9	0	0	9	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	14
8:30 AM	0	4	0	0	4	0	1	0	0	1	0	11	0	0	11	0	0	1	0	1	17
8:45 AM	1	6	0	0	7	0	0	0	0	0	0	12	0	0	12	0	0	2	0	2	21
Total	4	21	0	0	25	0	3	0	0	3	0	29	0	0	29	1	0	4	0	5	62
Grand Total	7	78	0	0	85	0	3	0	0	3	0	69	0	0	69	6	0	10	0	16	173
Approach %	8.2	91.8	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		37.5	0.0	62.5	0.0		
Total %	4.0	45.1	0.0	0.0	49.1	0.0	1.7	0.0	0.0	1.7	0.0	39.9	0.0	0.0	39.9	3.5	0.0	5.8	0.0	9.2	
Exiting Leg Total					79					0					84					10	173

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

7:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	1	13	0	0	14	0	0	0	0	0	0	9	0	0	9	1	0	2	0	3	26
7:15 AM	0	19	0	0	19	0	0	0	0	0	0	14	0	0	14	2	0	3	0	5	38
7:30 AM	2	13	0	0	15	0	0	0	0	0	0	9	0	0	9	1	0	1	0	2	26
7:45 AM	0	12	0	0	12	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	21
Total Volume	3	57	0	0	60	0	0	0	0	0	0	40	0	0	40	5	0	6	0	11	111
% Approach Total	5.0	95.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		45.5	0.0	54.5	0.0		
PHF	0.375	0.750	0.000	0.000	0.789	0.000	0.000	0.000	0.000	0.000	0.000	0.714	0.000	0.000	0.714	0.625	0.000	0.500	0.000	0.550	0.730
Entering Leg	3	57	0	0	60	0	0	0	0	0	0	40	0	0	40	5	0	6	0	11	111
Exiting Leg					46					0					62					3	111
Total					106					0					102					14	222

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Buses**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	10
7:15 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
7:30 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
7:45 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
Total	0	17	0	0	17	0	0	0	0	0	0	13	0	0	13	0	0	1	0	1	31
8:00 AM	1	2	0	0	3	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	8
8:15 AM	4	6	0	0	10	0	0	0	0	0	0	1	2	0	3	2	0	0	0	2	15
8:30 AM	1	3	0	0	4	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	7
8:45 AM	1	5	0	0	6	0	0	0	0	0	0	8	1	0	9	1	0	1	0	2	17
Total	7	16	0	0	23	0	0	0	0	0	0	14	5	0	19	3	0	2	0	5	47
Grand Total	7	33	0	0	40	0	0	0	0	0	0	27	5	0	32	3	0	3	0	6	78
Approach %	17.5	82.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	84.4	15.6	0.0		50.0	0.0	50.0	0.0		
Total %	9.0	42.3	0.0	0.0	51.3	0.0	0.0	0.0	0.0	0.0	0.0	34.6	6.4	0.0	41.0	3.8	0.0	3.8	0.0	7.7	
Exiting Leg Total					30					0					36					12	78

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

8:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
8:00 AM	1	2	0	0	3	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	8
8:15 AM	4	6	0	0	10	0	0	0	0	0	0	1	2	0	3	2	0	0	0	2	15
8:30 AM	1	3	0	0	4	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	7
8:45 AM	1	5	0	0	6	0	0	0	0	0	0	8	1	0	9	1	0	1	0	2	17
Total Volume	7	16	0	0	23	0	0	0	0	0	0	14	5	0	19	3	0	2	0	5	47
% Approach Total	30.4	69.6	0.0	0.0		0.0	0.0	0.0	0.0		0.0	73.7	26.3	0.0		60.0	0.0	40.0	0.0		
PHF	0.438	0.667	0.000	0.000	0.575	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.625	0.000	0.528	0.375	0.000	0.500	0.000	0.625	0.691
Entering Leg	7	16	0	0	23	0	0	0	0	0	0	14	5	0	19	3	0	2	0	5	47
Exiting Leg					16					0					19					12	47
Total					39					0					38					17	94

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Single-Unit Trucks**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
7:15 AM	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	13
7:30 AM	2	15	0	0	17	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	27
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	11
Total	2	30	0	0	32	0	0	0	0	0	0	25	0	0	25	2	0	0	0	2	59
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
8:15 AM	1	7	0	0	8	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	13
8:30 AM	1	6	0	0	7	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	22
8:45 AM	1	6	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	13
Total	3	22	0	0	25	0	0	0	0	0	0	32	0	0	32	0	0	2	0	2	59
Grand Total	5	52	0	0	57	0	0	0	0	0	0	57	0	0	57	2	0	2	0	4	118
Approach %	8.8	91.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		
Total %	4.2	44.1	0.0	0.0	48.3	0.0	0.0	0.0	0.0	0.0	0.0	48.3	0.0	0.0	48.3	1.7	0.0	1.7	0.0	3.4	
Exiting Leg Total					59					0					54					5	118

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

7:15 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	7	0	0	7	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	13
7:30 AM	2	15	0	0	17	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	27
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	11
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	11
Total Volume	2	30	0	0	32	0	0	0	0	0	0	28	0	0	28	2	0	0	0	2	62
% Approach Total	6.3	93.8	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		
PHF	0.250	0.500	0.000	0.000	0.471	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.000	0.000	0.700	0.500	0.000	0.000	0.000	0.500	0.574
Entering Leg	2	30	0	0	32	0	0	0	0	0	0	28	0	0	28	2	0	0	0	2	62
Exiting Leg					28					0					32					2	62
Total					60					0					60					4	124

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**

Class: **Articulated Trucks**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	1	0	0	1	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	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	12
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	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:30 AM	0	5	0	0	5	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	7
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	9	0	0	9	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	12
Grand Total	0	12	0	0	12	0	1	0	0	1	0	11	0	0	11	0	0	0	0	0	24
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	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	4.2	0.0	0.0	4.2	0.0	45.8	0.0	0.0	45.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					11					0					12					1	24

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

7:00 AM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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	1	0	0	1	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	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Volume	0	3	0	0	3	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	12
% 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	0.0	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	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.429
Entering Leg	0	3	0	0	3	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	12
Exiting Leg					9					0					3					0	12
Total					12					0					12					0	24

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Bicycles (on Roadway and Crosswalks)**

	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	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	6	0	0	0	6	6
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	6	0	0	0	0	6	0	0	3	0	0	0	3	10
7:30 AM	7	0	0	0	0	0	7	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	8	0	0	0	8	18
7:45 AM	9	0	0	0	0	0	9	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	11	0	0	0	11	22
Total	16	0	0	0	0	0	16	0	2	0	0	0	0	2	0	10	0	0	0	0	10	0	0	28	0	0	0	28	56
8:00 AM	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	3	0	0	0	0	3	2	0	6	0	0	0	8	18
8:15 AM	3	2	0	0	0	0	5	0	1	0	0	0	0	1	0	3	0	0	0	0	3	1	0	21	0	2	0	24	33
8:30 AM	7	2	0	0	0	0	9	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	24	0	0	0	24	40
8:45 AM	2	1	0	0	1	0	4	0	1	0	0	0	0	1	0	4	0	0	0	0	4	0	1	17	0	0	0	18	27
Total	19	5	0	0	1	0	25	0	2	0	0	0	0	2	0	17	0	0	0	0	17	3	1	68	0	2	0	74	118
Grand Total	35	5	0	0	1	0	41	0	4	0	0	0	0	4	0	27	0	0	0	0	27	3	1	96	0	2	0	102	174
Approach %	85.4	12.2	0.0	0.0	2.4	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		2.9	1.0	94.1	0.0	2.0	0.0		
Total %	20.1	2.9	0.0	0.0	0.6	0.0	23.6	0.0	2.3	0.0	0.0	0.0	0.0	2.3	0.0	15.5	0.0	0.0	0.0	0.0	15.5	1.7	0.6	55.2	0.0	1.1	0.0	58.6	
Exiting Leg Total							124							1							8							41	174

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

8:00 AM	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
8:00 AM	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	3	0	0	0	0	3	2	0	6	0	0	0	8	18
8:15 AM	3	2	0	0	0	0	5	0	1	0	0	0	0	1	0	3	0	0	0	0	3	1	0	21	0	2	0	24	33
8:30 AM	7	2	0	0	0	0	9	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	24	0	0	0	24	40
8:45 AM	2	1	0	0	1	0	4	0	1	0	0	0	0	1	0	4	0	0	0	0	4	0	1	17	0	0	0	18	27
Total Volume	19	5	0	0	1	0	25	0	2	0	0	0	0	2	0	17	0	0	0	0	17	3	1	68	0	2	0	74	118
% Approach Total	76.0	20.0	0.0	0.0	4.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		4.1	1.4	91.9	0.0	2.7	0.0		
PHF	0.679	0.625	0.000	0.000	0.250	0.000	0.694	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.607	0.000	0.000	0.000	0.000	0.607	0.375	0.250	0.708	0.000	0.250	0.000	0.771	0.738
Entering Leg	19	5	0	0	1	0	25	0	2	0	0	0	0	2	0	17	0	0	0	0	17	3	1	68	0	2	0	74	118
Exiting Leg							86							1							8							23	118
Total							111							3							25							97	236

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Pedestrians**

	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
7:00 AM	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	0	2	2	0	0	0	0	3	3	6	12
7:15 AM	0	0	0	0	2	2	4	0	0	0	0	0	5	5	0	0	0	0	1	1	2	0	0	0	0	1	5	6	17
7:30 AM	0	0	0	0	4	1	5	0	0	0	0	0	2	2	0	0	0	0	0	1	1	0	0	0	0	8	3	11	19
7:45 AM	0	0	0	0	5	1	6	0	0	0	0	1	3	4	0	0	0	0	3	4	7	0	0	0	0	6	3	9	26
Total	0	0	0	0	11	6	17	0	0	0	0	2	11	13	0	0	0	0	4	8	12	0	0	0	0	18	14	32	74
8:00 AM	0	0	0	0	6	1	7	0	0	0	0	0	9	9	0	0	0	0	0	2	2	0	0	0	0	9	1	10	28
8:15 AM	0	0	0	0	2	1	3	0	0	0	0	0	5	5	0	0	0	0	0	3	3	0	0	0	0	14	6	20	31
8:30 AM	0	0	0	0	5	1	6	0	0	0	0	2	7	9	0	0	0	0	0	9	9	0	0	0	0	10	3	13	37
8:45 AM	0	0	0	0	8	5	13	0	0	0	0	0	9	9	0	0	0	0	0	2	2	0	0	0	0	7	4	11	35
Total	0	0	0	0	21	8	29	0	0	0	0	2	30	32	0	0	0	0	0	16	16	0	0	0	0	40	14	54	131
Grand Total	0	0	0	0	32	14	46	0	0	0	0	4	41	45	0	0	0	0	4	24	28	0	0	0	0	58	28	86	205
Approach %	0	0	0	0	69.6	30.4		0	0	0	0	8.89	91.1		0	0	0	0	14.3	85.7		0	0	0	0	67.4	32.6		
Total %	0	0	0	0	15.6	6.83	22.4	0	0	0	0	1.95	20	22	0	0	0	0	1.95	11.7	13.7	0	0	0	0	28.3	13.7	42	
Exiting Leg Total							46							45							28							86	205

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

8:00 AM	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
8:00 AM	0	0	0	0	6	1	7	0	0	0	0	0	9	9	0	0	0	0	0	2	2	0	0	0	0	9	1	10	28
8:15 AM	0	0	0	0	2	1	3	0	0	0	0	0	5	5	0	0	0	0	0	3	3	0	0	0	0	14	6	20	31
8:30 AM	0	0	0	0	5	1	6	0	0	0	0	2	7	9	0	0	0	0	0	9	9	0	0	0	0	10	3	13	37
8:45 AM	0	0	0	0	8	5	13	0	0	0	0	0	9	9	0	0	0	0	0	2	2	0	0	0	0	7	4	11	35
Total Volume	0	0	0	0	21	8	29	0	0	0	0	2	30	32	0	0	0	0	0	16	16	0	0	0	0	40	14	54	131
% Approach Total	0.0	0.0	0.0	0.0	72.4	27.6		0.0	0.0	0.0	0.0	6.3	93.8		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	74.1	25.9		
PHF	0.000	0.000	0.000	0.000	0.656	0.400	0.558	0.000	0.000	0.000	0.000	0.250	0.833	0.889	0.000	0.000	0.000	0.000	0.000	0.444	0.444	0.000	0.000	0.000	0.000	0.714	0.583	0.675	0.885
Entering Leg	0	0	0	0	21	8	29	0	0	0	0	2	30	32	0	0	0	0	0	16	16	0	0	0	0	40	14	54	131
Exiting Leg							29							32							16							54	131
Total							58							64							32							108	262

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars and Heavy Vehicles (Combined)

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	13	106	0	0	119	1	2	5	0	8	0	79	3	0	82	6	0	16	0	22	231
4:15 PM	18	114	0	0	132	3	2	2	0	7	0	75	1	0	76	4	0	6	0	10	225
4:30 PM	18	121	0	0	139	3	3	6	0	12	0	61	7	0	68	7	0	19	0	26	245
4:45 PM	17	114	0	0	131	0	1	3	0	4	0	67	7	0	74	7	0	7	0	14	223
Total	66	455	0	0	521	7	8	16	0	31	0	282	18	0	300	24	0	48	0	72	924
5:00 PM	14	126	0	0	140	1	4	2	0	7	0	55	6	0	61	5	0	5	0	10	218
5:15 PM	11	105	0	0	116	1	1	8	0	10	0	58	2	0	60	7	0	9	1	17	203
5:30 PM	17	117	0	0	134	1	3	0	0	4	0	69	4	0	73	12	0	9	0	21	232
5:45 PM	17	139	0	0	156	1	4	3	0	8	0	63	4	0	67	5	0	8	0	13	244
Total	59	487	0	0	546	4	12	13	0	29	0	245	16	0	261	29	0	31	1	61	897
Grand Total	125	942	0	0	1067	11	20	29	0	60	0	527	34	0	561	53	0	79	1	133	1821
Approach %	11.7	88.3	0.0	0.0		18.3	33.3	48.3	0.0		0.0	93.9	6.1	0.0		39.8	0.0	59.4	0.8		
Total %	6.9	51.7	0.0	0.0	58.6	0.6	1.1	1.6	0.0	3.3	0.0	28.9	1.9	0.0	30.8	2.9	0.0	4.3	0.1	7.3	
Exiting Leg Total					617					0					1024					180	1821
Cars	123	875	0	0	998	11	20	28	0	59	0	487	34	0	521	49	0	77	1	127	1705
% Cars	98.4	92.9	0.0	0.0	93.5	100.0	100.0	96.6	0.0	98.3	0.0	92.4	100.0	0.0	92.9	92.5	0.0	97.5	100.0	95.5	93.6
Exiting Leg Total					575					0					952					178	1705
Heavy Vehicles	2	67	0	0	69	0	0	1	0	1	0	40	0	0	40	4	0	2	0	6	116
% Heavy Vehicles	1.6	7.1	0.0	0.0	6.5	0.0	0.0	3.4	0.0	1.7	0.0	7.6	0.0	0.0	7.1	7.5	0.0	2.5	0.0	4.5	6.4
Exiting Leg Total					42					0					72					2	116

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	13	106	0	0	119	1	2	5	0	8	0	79	3	0	82	6	0	16	0	22	231
4:15 PM	18	114	0	0	132	3	2	2	0	7	0	75	1	0	76	4	0	6	0	10	225
4:30 PM	18	121	0	0	139	3	3	6	0	12	0	61	7	0	68	7	0	19	0	26	245
4:45 PM	17	114	0	0	131	0	1	3	0	4	0	67	7	0	74	7	0	7	0	14	223
Total Volume	66	455	0	0	521	7	8	16	0	31	0	282	18	0	300	24	0	48	0	72	924
% Approach Total	12.7	87.3	0.0	0.0		22.6	25.8	51.6	0.0		0.0	94.0	6.0	0.0		33.3	0.0	66.7	0.0		
PHF	0.917	0.940	0.000	0.000	0.937	0.583	0.667	0.667	0.000	0.646	0.000	0.892	0.643	0.000	0.915	0.857	0.000	0.632	0.000	0.692	0.943
Cars	65	416	0	0	481	7	8	15	0	30	0	255	18	0	273	23	0	48	0	71	855
Cars %	98.5	91.4	0.0	0.0	92.3	100.0	100.0	93.8	0.0	96.8	0.0	90.4	100.0	0.0	91.0	95.8	0.0	100.0	0.0	98.6	92.5
Heavy Vehicles	1	39	0	0	40	0	0	1	0	1	0	27	0	0	27	1	0	0	0	1	69
Heavy Vehicles %	1.5	8.6	0.0	0.0	7.7	0.0	0.0	6.3	0.0	3.2	0.0	9.6	0.0	0.0	9.0	4.2	0.0	0.0	0.0	1.4	7.5
Cars Enter Leg	65	416	0	0	481	7	8	15	0	30	0	255	18	0	273	23	0	48	0	71	855
Heavy Enter Leg	1	39	0	0	40	0	0	1	0	1	0	27	0	0	27	1	0	0	0	1	69
Total Entering Leg	66	455	0	0	521	7	8	16	0	31	0	282	18	0	300	24	0	48	0	72	924
Cars Exiting Leg					310					0					454					91	855
Heavy Exiting Leg					27					0					41					1	69
Total Exiting Leg					337					0					495					92	924

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	13	93	0	0	106	1	2	5	0	8	0	67	3	0	70	6	0	16	0	22	206
4:15 PM	18	104	0	0	122	3	2	2	0	7	0	72	1	0	73	4	0	6	0	10	212
4:30 PM	17	111	0	0	128	3	3	6	0	12	0	55	7	0	62	7	0	19	0	26	228
4:45 PM	17	108	0	0	125	0	1	2	0	3	0	61	7	0	68	6	0	7	0	13	209
Total	65	416	0	0	481	7	8	15	0	30	0	255	18	0	273	23	0	48	0	71	855
5:00 PM	14	119	0	0	133	1	4	2	0	7	0	52	6	0	58	4	0	4	0	8	206
5:15 PM	10	99	0	0	109	1	1	8	0	10	0	53	2	0	55	6	0	8	1	15	189
5:30 PM	17	110	0	0	127	1	3	0	0	4	0	65	4	0	69	12	0	9	0	21	221
5:45 PM	17	131	0	0	148	1	4	3	0	8	0	62	4	0	66	4	0	8	0	12	234
Total	58	459	0	0	517	4	12	13	0	29	0	232	16	0	248	26	0	29	1	56	850
Grand Total	123	875	0	0	998	11	20	28	0	59	0	487	34	0	521	49	0	77	1	127	1705
Approach %	12.3	87.7	0.0	0.0		18.6	33.9	47.5	0.0		0.0	93.5	6.5	0.0		38.6	0.0	60.6	0.8		
Total %	7.2	51.3	0.0	0.0	58.5	0.6	1.2	1.6	0.0	3.5	0.0	28.6	2.0	0.0	30.6	2.9	0.0	4.5	0.1	7.4	
Exiting Leg Total					575					0					952					178	1705

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	13	93	0	0	106	1	2	5	0	8	0	67	3	0	70	6	0	16	0	22	206
4:15 PM	18	104	0	0	122	3	2	2	0	7	0	72	1	0	73	4	0	6	0	10	212
4:30 PM	17	111	0	0	128	3	3	6	0	12	0	55	7	0	62	7	0	19	0	26	228
4:45 PM	17	108	0	0	125	0	1	2	0	3	0	61	7	0	68	6	0	7	0	13	209
Total Volume	65	416	0	0	481	7	8	15	0	30	0	255	18	0	273	23	0	48	0	71	855
% Approach Total	13.5	86.5	0.0	0.0		23.3	26.7	50.0	0.0		0.0	93.4	6.6	0.0		32.4	0.0	67.6	0.0		
PHF	0.903	0.937	0.000	0.000	0.939	0.583	0.667	0.625	0.000	0.625	0.000	0.885	0.643	0.000	0.935	0.821	0.000	0.632	0.000	0.683	0.938
Entering Leg	65	416	0	0	481	7	8	15	0	30	0	255	18	0	273	23	0	48	0	71	855
Exiting Leg					310					0					454					91	855
Total					791					30					727					162	1710

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**

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

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	13	0	0	13	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	25
4:15 PM	0	10	0	0	10	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	13
4:30 PM	1	10	0	0	11	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17
4:45 PM	0	6	0	0	6	0	0	1	0	1	0	6	0	0	6	1	0	0	0	1	14
Total	1	39	0	0	40	0	0	1	0	1	0	27	0	0	27	1	0	0	0	1	69
5:00 PM	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	12
5:15 PM	1	6	0	0	7	0	0	0	0	0	0	5	0	0	5	1	0	1	0	2	14
5:30 PM	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
5:45 PM	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	10
Total	1	28	0	0	29	0	0	0	0	0	0	13	0	0	13	3	0	2	0	5	47
Grand Total	2	67	0	0	69	0	0	1	0	1	0	40	0	0	40	4	0	2	0	6	116
Approach %	2.9	97.1	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		66.7	0.0	33.3	0.0		
Total %	1.7	57.8	0.0	0.0	59.5	0.0	0.0	0.9	0.0	0.9	0.0	34.5	0.0	0.0	34.5	3.4	0.0	1.7	0.0	5.2	
Exiting Leg Total					42					0					72					2	116
Buses	2	36	0	0	38	0	0	0	0	0	0	26	0	0	26	2	0	0	0	2	66
% Buses	100.0	53.7	0.0	0.0	55.1	0.0	0.0	0.0	0.0	0.0	0.0	65.0	0.0	0.0	65.0	50.0	0.0	0.0	0.0	33.3	56.9
Exiting Leg Total					26					0					38					2	66
Single-Unit Trucks	0	28	0	0	28	0	0	1	0	1	0	13	0	0	13	2	0	1	0	3	45
% Single-Unit	0.0	41.8	0.0	0.0	40.6	0.0	0.0	100.0	0.0	100.0	0.0	32.5	0.0	0.0	32.5	50.0	0.0	50.0	0.0	50.0	38.8
Exiting Leg Total					14					0					31					0	45
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
% Articulated	0.0	4.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	0.0	0.0	50.0	0.0	16.7	4.3
Exiting Leg Total					2					0					3					0	5

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	13	0	0	13	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	25
4:15 PM	0	10	0	0	10	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	13
4:30 PM	1	10	0	0	11	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17
4:45 PM	0	6	0	0	6	0	0	1	0	1	0	6	0	0	6	1	0	0	0	1	14
Total Volume	1	39	0	0	40	0	0	1	0	1	0	27	0	0	27	1	0	0	0	1	69
% Approach Total	2.5	97.5	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.750	0.000	0.000	0.769	0.000	0.000	0.250	0.000	0.250	0.000	0.563	0.000	0.000	0.563	0.250	0.000	0.000	0.000	0.250	0.690
Buses	1	18	0	0	19	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	36
Buses %	100.0	46.2	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0	63.0	0.0	0.0	63.0	0.0	0.0	0.0	0.0	0.0	52.2
Single-Unit Trucks	0	19	0	0	19	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	30
Single-Unit %	0.0	48.7	0.0	0.0	47.5	0.0	0.0	100.0	0.0	100.0	0.0	33.3	0.0	0.0	33.3	100.0	0.0	0.0	0.0	100.0	43.5
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Articulated %	0.0	5.1	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	4.3
Buses	1	18	0	0	19	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	36
Single-Unit Trucks	0	19	0	0	19	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	30
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Entering Leg	1	39	0	0	40	0	0	1	0	1	0	27	0	0	27	1	0	0	0	1	69
Buses					17					0					18					1	36
Single-Unit Trucks					9					0					21					0	30
Articulated Trucks					1					0					2					0	3
Total Exiting Leg					27					0					41					1	69

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Cars**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	10	80	0	0	90	1	2	3	0	6	0	66	3	0	69	6	0	11	0	17	182
4:15 PM	17	94	0	0	111	3	2	2	0	7	0	70	1	0	71	3	0	5	0	8	197
4:30 PM	16	103	0	0	119	2	3	5	0	10	0	50	5	0	55	6	0	18	0	24	208
4:45 PM	15	96	0	0	111	0	1	2	0	3	0	54	7	0	61	5	0	6	0	11	186
Total	58	373	0	0	431	6	8	12	0	26	0	240	16	0	256	20	0	40	0	60	773
5:00 PM	12	117	0	0	129	1	4	2	0	7	0	50	6	0	56	4	0	3	0	7	199
5:15 PM	10	96	0	0	106	1	1	8	0	10	0	51	2	0	53	6	0	7	1	14	183
5:30 PM	16	104	0	0	120	1	3	0	0	4	0	61	4	0	65	12	0	9	0	21	210
5:45 PM	17	117	0	0	134	1	4	2	0	7	0	62	4	0	66	4	0	8	0	12	219
Total	55	434	0	0	489	4	12	12	0	28	0	224	16	0	240	26	0	27	1	54	811
Grand Total	113	807	0	0	920	10	20	24	0	54	0	464	32	0	496	46	0	67	1	114	1584
Approach %	12.3	87.7	0.0	0.0		18.5	37.0	44.4	0.0		0.0	93.5	6.5	0.0		40.4	0.0	58.8	0.9		
Total %	7.1	50.9	0.0	0.0	58.1	0.6	1.3	1.5	0.0	3.4	0.0	29.3	2.0	0.0	31.3	2.9	0.0	4.2	0.1	7.2	
Exiting Leg Total					541					0					877					166	1584

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

5:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
5:00 PM	12	117	0	0	129	1	4	2	0	7	0	50	6	0	56	4	0	3	0	7	199
5:15 PM	10	96	0	0	106	1	1	8	0	10	0	51	2	0	53	6	0	7	1	14	183
5:30 PM	16	104	0	0	120	1	3	0	0	4	0	61	4	0	65	12	0	9	0	21	210
5:45 PM	17	117	0	0	134	1	4	2	0	7	0	62	4	0	66	4	0	8	0	12	219
Total Volume	55	434	0	0	489	4	12	12	0	28	0	224	16	0	240	26	0	27	1	54	811
% Approach Total	11.2	88.8	0.0	0.0		14.3	42.9	42.9	0.0		0.0	93.3	6.7	0.0		48.1	0.0	50.0	1.9		
PHF	0.809	0.927	0.000	0.000	0.912	1.000	0.750	0.375	0.000	0.700	0.000	0.903	0.667	0.000	0.909	0.542	0.000	0.750	0.250	0.643	0.926
Entering Leg	55	434	0	0	489	4	12	12	0	28	0	224	16	0	240	26	0	27	1	54	811
Exiting Leg					255					0					472					84	811
Total					744					28					712					138	1622

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**

Class: **Light Goods Vehicle**

	North Harvard Street from North					Kingsley Street from East					North Harvard Street from South					Franklin Street 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	3	13	0	0	16	0	0	2	0	2	0	1	0	0	1	0	0	5	0	5	24
4:15 PM	1	10	0	0	11	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	15
4:30 PM	0	7	0	0	7	1	0	1	0	2	0	5	2	0	7	1	0	1	0	2	18
4:45 PM	2	12	0	0	14	0	0	0	0	0	0	7	0	0	7	1	0	1	0	2	23
Total	6	42	0	0	48	1	0	3	0	4	0	15	2	0	17	3	0	8	0	11	80
5:00 PM	2	2	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	7
5:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	6
5:30 PM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
5:45 PM	0	14	0	0	14	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	15
Total	3	25	0	0	28	0	0	1	0	1	0	8	0	0	8	0	0	2	0	2	39
Grand Total	9	67	0	0	76	1	0	4	0	5	0	23	2	0	25	3	0	10	0	13	119
Approach %	11.8	88.2	0.0	0.0		20.0	0.0	80.0	0.0		0.0	92.0	8.0	0.0		23.1	0.0	76.9	0.0		
Total %	7.6	56.3	0.0	0.0	63.9	0.8	0.0	3.4	0.0	4.2	0.0	19.3	1.7	0.0	21.0	2.5	0.0	8.4	0.0	10.9	
Exiting Leg Total					34					0					74					11	119

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

4:00 PM	North Harvard Street from North					Kingsley Street from East					North Harvard Street from South					Franklin Street 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	3	13	0	0	16	0	0	2	0	2	0	1	0	0	1	0	0	5	0	5	24
4:15 PM	1	10	0	0	11	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	15
4:30 PM	0	7	0	0	7	1	0	1	0	2	0	5	2	0	7	1	0	1	0	2	18
4:45 PM	2	12	0	0	14	0	0	0	0	0	0	7	0	0	7	1	0	1	0	2	23
Total Volume	6	42	0	0	48	1	0	3	0	4	0	15	2	0	17	3	0	8	0	11	80
% Approach Total	12.5	87.5	0.0	0.0		25.0	0.0	75.0	0.0		0.0	88.2	11.8	0.0		27.3	0.0	72.7	0.0		
PHF	0.500	0.808	0.000	0.000	0.750	0.250	0.000	0.375	0.000	0.500	0.000	0.536	0.250	0.000	0.607	0.750	0.000	0.400	0.000	0.550	0.833
Entering Leg	6	42	0	0	48	1	0	3	0	4	0	15	2	0	17	3	0	8	0	11	80
Exiting Leg					24					0					48					8	80
Total					72					4					65					19	160

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Buses**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	7	0	0	7	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	16
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	1	4	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
4:45 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total	1	18	0	0	19	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	36
5:00 PM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	9
5:15 PM	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
5:30 PM	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
5:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
Total	1	18	0	0	19	0	0	0	0	0	0	9	0	0	9	2	0	0	0	2	30
Grand Total	2	36	0	0	38	0	0	0	0	0	0	26	0	0	26	2	0	0	0	2	66
Approach %	5.3	94.7	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		
Total %	3.0	54.5	0.0	0.0	57.6	0.0	0.0	0.0	0.0	0.0	0.0	39.4	0.0	0.0	39.4	3.0	0.0	0.0	0.0	3.0	
Exiting Leg Total					26					0					38					2	66

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	7	0	0	7	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	16
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	1	4	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
4:45 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total Volume	1	18	0	0	19	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	36
% Approach Total	5.3	94.7	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		
PHF	0.250	0.643	0.000	0.000	0.679	0.000	0.000	0.000	0.000	0.000	0.000	0.472	0.000	0.000	0.472	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	1	18	0	0	19	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	36
Exiting Leg					17					0					18					1	36
Total					36					0					35					1	72

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**

Class: **Single-Unit Trucks**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
4:15 PM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:45 PM	0	3	0	0	3	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	7
Total	0	19	0	0	19	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	30
5:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
5:45 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
Total	0	9	0	0	9	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	15
Grand Total	0	28	0	0	28	0	0	1	0	1	0	13	0	0	13	2	0	1	0	3	45
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		66.7	0.0	33.3	0.0		
Total %	0.0	62.2	0.0	0.0	62.2	0.0	0.0	2.2	0.0	2.2	0.0	28.9	0.0	0.0	28.9	4.4	0.0	2.2	0.0	6.7	
Exiting Leg Total					14					0					31					0	45

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 PM	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	9
4:15 PM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:45 PM	0	3	0	0	3	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	7
Total Volume	0	19	0	0	19	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	30
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.792	0.000	0.000	0.792	0.000	0.000	0.250	0.000	0.250	0.000	0.750	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.250	0.833
Entering Leg	0	19	0	0	19	0	0	1	0	1	0	9	0	0	9	1	0	0	0	1	30
Exiting Leg					9					0					21					0	30
Total					28					1					30					1	60

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Articulated Trucks**

	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 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	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	2	0	0	2	0	0	0	0	0	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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
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	1	0	1	2
Grand Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
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	0.0	100.0	0.0		
Total %	0.0	60.0	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	0.0	0.0	20.0	0.0	20.0	
Exiting Leg Total					2					0					3					0	5

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

4:00 PM	North Harvard Street					Kingsley Street					North Harvard Street					Franklin 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
4:00 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	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	2	0	0	2	0	0	0	0	0	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 Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% 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	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	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	0.375
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Exiting Leg					1					0					2					0	3
Total					3					0					3					0	6

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Bicycles (on Roadway and Crosswalks)**

	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
4:00 PM	6	2	0	0	0	0	8	0	0	0	0	1	0	1	0	2	0	0	0	0	2	0	0	4	0	0	0	4	15
4:15 PM	7	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	13
4:30 PM	5	3	0	0	0	0	8	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	6	0	0	0	6	15
4:45 PM	8	5	0	0	0	0	13	0	0	0	0	0	3	3	0	1	0	0	0	0	1	0	1	6	0	0	0	7	24
Total	26	11	0	0	0	0	37	0	0	0	0	1	3	4	0	4	0	0	0	0	4	0	1	21	0	0	0	22	67
5:00 PM	9	2	0	0	0	0	11	0	1	0	0	0	0	1	0	1	0	0	0	2	3	0	0	3	0	0	1	4	19
5:15 PM	12	2	0	0	0	0	14	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	7	0	0	1	8	25
5:30 PM	5	3	0	0	0	0	8	0	1	0	0	0	0	1	0	5	0	0	0	0	5	1	0	7	0	0	0	8	22
5:45 PM	5	2	0	0	0	0	7	0	3	0	0	0	0	3	0	1	0	0	0	0	1	0	0	7	0	0	0	7	18
Total	31	9	0	0	0	0	40	0	5	0	0	0	0	5	0	10	0	0	0	2	12	1	0	24	0	0	2	27	84
Grand Total	57	20	0	0	0	0	77	0	5	0	0	1	3	9	0	14	0	0	0	2	16	1	1	45	0	0	2	49	151
Approach %	74.0	26.0	0.0	0.0	0.0	0.0		0.0	55.6	0.0	0.0	11.1	33.3		0.0	87.5	0.0	0.0	0.0	12.5		2.0	2.0	91.8	0.0	0.0	4.1		
Total %	37.7	13.2	0.0	0.0	0.0	0.0	51.0	0.0	3.3	0.0	0.0	0.7	2.0	6.0	0.0	9.3	0.0	0.0	0.0	1.3	10.6	0.7	0.7	29.8	0.0	0.0	1.3	32.5	
Exiting Leg Total							59							5							23							64	151

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

4:45 PM	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
4:45 PM	8	5	0	0	0	0	13	0	0	0	0	0	3	3	0	1	0	0	0	0	1	0	1	6	0	0	0	7	24
5:00 PM	9	2	0	0	0	0	11	0	1	0	0	0	0	1	0	1	0	0	0	2	3	0	0	3	0	0	1	4	19
5:15 PM	12	2	0	0	0	0	14	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	7	0	0	1	8	25
5:30 PM	5	3	0	0	0	0	8	0	1	0	0	0	0	1	0	5	0	0	0	0	5	1	0	7	0	0	0	8	22
Total Volume	34	12	0	0	0	0	46	0	2	0	0	0	3	5	0	10	0	0	0	2	12	1	1	23	0	0	2	27	90
% Approach Total	73.9	26.1	0.0	0.0	0.0	0.0		0.0	40.0	0.0	0.0	0.0	60.0		0.0	83.3	0.0	0.0	0.0	16.7		3.7	3.7	85.2	0.0	0.0	7.4		
PHF	0.708	0.600	0.000	0.000	0.000	0.000	0.821	0.000	0.500	0.000	0.000	0.000	0.250	0.417	0.000	0.500	0.000	0.000	0.000	0.250	0.600	0.250	0.250	0.821	0.000	0.000	0.500	0.844	0.900
Entering Leg	34	12	0	0	0	0	46	0	2	0	0	0	3	5	0	10	0	0	0	2	12	1	1	23	0	0	2	27	90
Exiting Leg							33							4							15							38	90
Total							79							9							27							65	180

PDI File #: **186524 F**
Location: **N: North Harvard Street S: North Harvard Street**
Location: **E: Kingsley Street W: Franklin Street**
City, State: **Allston, MA**
Client: **VHB/ P. Dunford**
Site Code: **14351.00**
Count Date: **Thursday, October 25, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Pedestrians**

	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
4:00 PM	0	0	0	0	0	5	5	0	0	0	0	7	13	20	0	0	0	0	3	0	3	0	0	0	0	7	8	15	43
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	5	7	0	0	0	0	1	0	1	0	0	0	0	4	3	7	15
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	0	0	0	1	6	7	10
4:45 PM	0	0	0	0	0	2	2	0	0	0	0	1	4	5	0	0	0	0	0	1	1	0	0	0	0	3	14	17	25
Total	0	0	0	0	0	7	7	0	0	0	0	11	23	34	0	0	0	0	5	1	6	0	0	0	0	15	31	46	93
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	0	0	0	0	0	6	12	18	31
5:15 PM	0	0	0	0	2	0	2	0	0	0	0	12	5	17	0	0	0	0	1	1	2	0	0	0	0	3	9	12	33
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	3	6	9	0	0	0	0	3	1	4	0	0	0	0	5	16	21	35
5:45 PM	0	0	0	0	0	4	4	0	0	0	0	4	6	10	0	0	0	0	4	4	8	0	0	0	0	4	20	24	46
Total	0	0	0	0	2	5	7	0	0	0	0	23	26	49	0	0	0	0	8	6	14	0	0	0	0	18	57	75	145
Grand Total	0	0	0	0	2	12	14	0	0	0	0	34	49	83	0	0	0	0	13	7	20	0	0	0	0	33	88	121	238
Approach %	0	0	0	0	14.3	85.7		0	0	0	0	41	59		0	0	0	0	65	35		0	0	0	0	27.3	72.7		
Total %	0	0	0	0	0.84	5.04	5.88	0	0	0	0	14.3	20.6	34.9	0	0	0	0	5.46	2.94	8.4	0	0	0	0	13.9	37	50.8	
Exiting Leg Total							14							83							20							121	238

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

5:00 PM	North Harvard Street							Kingsley Street							North Harvard Street							Franklin Street							
	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	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	0	0	0	0	0	6	12	18	31
5:15 PM	0	0	0	0	2	0	2	0	0	0	0	12	5	17	0	0	0	0	1	1	2	0	0	0	0	3	9	12	33
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	3	6	9	0	0	0	0	3	1	4	0	0	0	0	5	16	21	35
5:45 PM	0	0	0	0	0	4	4	0	0	0	0	4	6	10	0	0	0	0	4	4	8	0	0	0	0	4	20	24	46
Total Volume	0	0	0	0	2	5	7	0	0	0	0	23	26	49	0	0	0	0	8	6	14	0	0	0	0	18	57	75	145
% Approach Total	0.0	0.0	0.0	0.0	28.6	71.4		0.0	0.0	0.0	0.0	46.9	53.1		0.0	0.0	0.0	0.0	57.1	42.9		0.0	0.0	0.0	0.0	24.0	76.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.313	0.438	0.000	0.000	0.000	0.000	0.479	0.722	0.721	0.000	0.000	0.000	0.000	0.500	0.375	0.438	0.000	0.000	0.000	0.000	0.750	0.713	0.781	0.788
Entering Leg	0	0	0	0	2	5	7	0	0	0	0	23	26	49	0	0	0	0	8	6	14	0	0	0	0	18	57	75	145
Exiting Leg							7							49							14							75	145
Total							14							98							28							150	290

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 H.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
07:00 AM	2	0	2	0	10	54	10	0	14	6	5	0	4	50	4	0
07:15 AM	0	0	0	0	6	77	9	0	20	12	8	0	5	56	1	0
07:30 AM	0	1	4	0	10	70	1	0	29	12	8	0	4	61	7	0
07:45 AM	1	0	3	0	17	67	1	0	22	16	8	0	4	78	12	0
08:00 AM	4	0	6	0	10	88	7	0	44	16	8	0	3	78	12	0
08:15 AM	7	1	3	0	11	100	3	0	43	16	5	0	8	91	14	0
08:30 AM	4	0	6	0	15	86	4	0	36	23	5	0	5	93	16	0
08:45 AM	5	3	6	0	19	84	5	0	27	15	4	0	2	66	14	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 H.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
07:00 AM	0	0	1	0	0	9	0	0	6	0	4	0	0	7	0	0
07:15 AM	0	0	0	0	2	11	3	0	1	0	0	0	1	5	0	0
07:30 AM	0	1	0	0	1	6	1	0	7	0	2	0	1	6	0	0
07:45 AM	0	0	1	0	1	8	3	0	0	0	1	0	2	11	1	0
08:00 AM	0	0	1	0	3	7	2	0	5	0	1	0	0	7	0	0
08:15 AM	0	0	1	0	1	6	5	0	3	0	0	0	0	7	1	0
08:30 AM	0	0	0	0	2	7	2	0	5	0	0	0	0	7	0	0
08:45 AM	0	0	0	0	1	7	4	0	1	0	0	0	3	10	1	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 H.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	0	0	2	0	1	0	0	0	0	0	1	0	2	0	0
07:15 AM	0	0	0	2	1	0	1	0	0	0	0	7	0	9	0	1
07:30 AM	0	0	0	4	0	3	0	0	0	0	0	2	0	8	0	2
07:45 AM	0	0	0	4	0	1	0	0	0	0	0	8	0	11	0	1
08:00 AM	0	0	0	4	1	3	0	0	1	0	0	11	0	8	1	1
08:15 AM	0	0	0	5	0	3	1	0	1	0	0	3	0	7	0	1
08:30 AM	0	0	0	1	0	2	0	0	1	0	0	3	0	10	0	1
08:45 AM	0	0	0	7	0	4	0	1	1	0	0	5	0	8	0	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 HH.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
04:00 PM	6	1	16	0	5	92	3	0	12	2	7	0	2	54	3	0
04:15 PM	4	1	4	0	8	95	6	0	6	0	5	0	0	60	2	0
04:30 PM	7	0	7	0	2	95	0	0	7	5	9	0	1	76	2	0
04:45 PM	5	0	8	0	3	96	4	0	13	3	6	0	1	83	1	0
05:00 PM	13	0	21	0	10	98	10	0	27	7	8	0	1	88	7	1
05:15 PM	14	1	10	0	7	94	8	0	11	7	12	0	3	83	6	0
05:30 PM	12	0	7	0	4	115	4	1	21	7	19	0	3	59	1	0
05:45 PM	11	0	12	0	8	116	3	0	15	3	17	0	0	77	5	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 HH.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
04:00 PM	0	0	0	0	1	3	2	0	5	0	0	0	0	5	1	0
04:15 PM	0	1	0	0	1	7	4	0	1	0	1	0	1	3	0	0
04:30 PM	0	0	0	0	1	4	2	0	3	0	0	0	2	2	0	0
04:45 PM	0	0	1	0	2	4	4	0	0	0	0	0	1	7	2	0
05:00 PM	0	0	0	0	1	2	3	0	3	0	0	0	2	4	0	0
05:15 PM	1	0	0	0	1	4	0	0	5	0	0	0	0	3	0	0
05:30 PM	0	0	0	0	1	5	1	0	3	0	0	0	0	2	0	0
05:45 PM	0	0	0	0	1	2	4	0	1	0	0	0	0	3	0	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 HH.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: Batten Way
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	Batten Way From North				Western Avenue From East				Hague Street From South				Western Avenue From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
04:00 PM	1	0	1	5	0	7	0	0	0	0	0	6	0	2	1	1
04:15 PM	0	0	0	7	0	9	0	0	0	0	0	3	0	1	0	1
04:30 PM	0	0	0	5	0	6	0	0	0	0	0	9	0	0	0	3
04:45 PM	0	0	0	4	0	6	0	0	0	0	0	4	0	1	0	0
05:00 PM	0	0	0	7	1	4	0	0	1	0	0	5	0	2	0	0
05:15 PM	0	2	0	5	0	16	2	0	1	0	0	6	0	4	0	1
05:30 PM	0	0	1	6	0	16	2	0	0	0	0	9	0	8	0	1
05:45 PM	0	0	0	3	1	10	0	0	0	2	0	9	0	2	0	2

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 J.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
07:00 AM	0	0	0	0	18	58	14	0	9	0	8	0	6	58	18	0
07:15 AM	0	0	0	0	18	79	10	0	12	0	7	0	14	56	12	0
07:30 AM	0	0	0	0	25	77	11	0	5	0	3	0	9	71	19	0
07:45 AM	0	0	0	0	28	74	15	0	11	0	2	0	8	86	20	0
08:00 AM	0	0	0	0	38	105	8	0	3	0	2	0	3	117	19	0
08:15 AM	0	0	0	0	25	93	10	0	5	0	2	0	9	129	22	0
08:30 AM	0	0	0	0	23	90	6	0	0	0	2	0	8	112	17	1
08:45 AM	0	0	0	0	28	94	7	2	5	0	2	0	2	77	21	1

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 J.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
07:00 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	9	4	0
07:15 AM	0	0	0	0	3	14	1	0	1	0	0	0	1	4	1	0
07:30 AM	0	0	0	0	1	5	0	0	0	0	0	0	1	11	2	0
07:45 AM	0	0	0	0	1	10	0	0	0	0	0	0	0	9	1	0
08:00 AM	0	0	0	0	3	9	0	0	0	0	1	0	1	13	1	0
08:15 AM	0	0	0	0	2	11	1	0	1	0	1	0	0	11	1	0
08:30 AM	0	0	0	0	2	9	1	0	0	0	0	0	2	9	3	0
08:45 AM	0	0	0	0	1	8	0	0	2	0	0	0	0	9	2	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 J.ppd
Start Date: 4/3/2012
Start Time: 7:00:00 AM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	0	0	1	0	1	1	1	0	0	0	17	0	3	0	17
07:15 AM	0	0	0	1	2	2	0	2	0	0	0	20	1	7	1	19
07:30 AM	0	0	0	4	1	3	0	1	0	0	0	19	0	8	0	18
07:45 AM	0	0	1	4	1	1	1	0	0	0	0	18	0	8	0	17
08:00 AM	0	0	0	2	4	5	0	0	0	0	0	12	0	10	0	10
08:15 AM	0	0	0	7	11	2	1	1	0	0	1	14	0	7	0	11
08:30 AM	0	0	0	3	4	2	0	1	1	0	0	10	1	11	0	9
08:45 AM	0	0	0	7	3	4	0	1	0	0	0	14	0	9	0	10

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 JJ.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
04:00 PM	0	0	0	0	17	85	0	1	13	0	1	0	3	96	7	0
04:15 PM	0	0	0	0	8	93	3	1	9	0	2	0	3	98	3	0
04:30 PM	0	0	0	0	11	90	6	0	16	0	2	0	2	120	2	0
04:45 PM	0	0	0	0	10	88	2	2	8	0	2	0	2	129	8	0
05:00 PM	0	0	1	0	8	96	2	1	11	0	5	0	4	161	7	1
05:15 PM	0	0	0	0	12	90	5	1	9	0	3	0	3	116	7	0
05:30 PM	0	0	0	0	11	103	5	3	6	0	4	0	4	106	11	1
05:45 PM	0	0	0	0	19	97	6	2	13	0	4	0	5	118	6	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 JJ.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
04:00 PM	0	0	0	0	0	5	0	0	1	0	0	0	0	11	0	0
04:15 PM	0	0	0	0	0	11	0	0	0	0	0	0	0	3	1	0
04:30 PM	0	0	0	0	2	7	0	0	0	0	0	0	0	5	0	0
04:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	6	1	0
05:00 PM	0	0	0	0	1	5	0	0	1	0	0	0	1	6	1	0
05:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0
05:30 PM	0	0	0	0	1	6	2	0	0	0	0	0	0	5	0	0
05:45 PM	0	0	0	0	1	5	0	0	0	0	1	0	0	4	0	0

File Name: C:\Users\PDI Dell\Desktop\PDI Folder\122864\122864 JJ.ppd
Start Date: 4/3/2012
Start Time: 4:00:00 PM
Site Code: 10463.00
Comment 1: N/S: HBS East Driveway/ Genzyme Driveway
Comment 2: E/W: Western Avenue
Comment 3: City, State: Boston, MA
Comment 4: Client: VHB/ K. Keen

	HBS East Driveway From North				Western Avenue From East				Genzyme Driveway From South				Western Avenue From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
04:00 PM	0	0	0	5	0	8	0	0	0	1	0	19	0	3	0	17
04:15 PM	0	0	0	3	0	9	0	0	0	0	0	23	0	1	0	20
04:30 PM	0	0	0	5	0	5	0	0	0	0	0	26	0	1	0	19
04:45 PM	0	0	0	7	1	6	0	1	1	1	0	15	0	1	0	7
05:00 PM	0	0	0	2	2	1	0	1	1	0	0	18	0	3	0	14
05:15 PM	0	0	0	6	0	15	0	0	0	0	0	14	0	6	0	10
05:30 PM	0	0	0	0	0	16	0	0	0	0	0	24	0	5	0	20
05:45 PM	0	0	0	1	1	9	0	0	0	0	0	21	0	2	0	15

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	1	33	0	0	34	13	32	0	0	45	15	51	0	0	66	19	92	1	0	112	257
6:15 AM	0	46	0	0	46	9	42	0	0	51	8	88	0	0	96	27	102	0	0	129	322
6:30 AM	0	57	0	0	57	17	62	1	0	80	19	95	0	0	114	52	134	0	0	186	437
6:45 AM	3	66	0	0	69	18	82	0	0	100	24	120	0	0	144	52	141	0	0	193	506
Total	4	202	0	0	206	57	218	1	0	276	66	354	0	0	420	150	469	1	0	620	1522
7:00 AM	0	74	0	0	74	24	91	0	0	115	35	118	0	0	153	71	161	0	0	232	574
7:15 AM	0	55	0	0	55	12	118	0	0	130	33	134	0	0	167	76	183	0	0	259	611
7:30 AM	1	83	0	0	84	20	154	0	0	174	41	146	0	0	187	73	231	0	0	304	749
7:45 AM	0	68	0	0	68	24	163	0	0	187	38	161	0	0	199	86	237	1	0	324	778
Total	1	280	0	0	281	80	526	0	0	606	147	559	0	0	706	306	812	1	0	1119	2712
8:00 AM	1	57	0	0	58	24	158	0	0	182	49	186	0	0	235	85	241	0	0	326	801
8:15 AM	0	50	0	0	50	29	140	0	0	169	39	192	1	0	232	105	234	0	0	339	790
8:30 AM	0	48	0	0	48	25	121	0	0	146	65	157	0	0	222	103	239	0	0	342	758
8:45 AM	0	63	0	0	63	36	133	0	0	169	57	199	0	0	256	83	260	0	0	343	831
Total	1	218	0	0	219	114	552	0	0	666	210	734	1	0	945	376	974	0	0	1350	3180
Grand Total	6	700	0	0	706	251	1296	1	0	1548	423	1647	1	0	2071	832	2255	2	0	3089	7414
Approach %	0.8	99.2	0.0	0.0		16.2	83.7	0.1	0.0		20.4	79.5	0.0	0.0		26.9	73.0	0.1	0.0		
Total %	0.1	9.4	0.0	0.0	9.5	3.4	17.5	0.0	0.0	20.9	5.7	22.2	0.0	0.0	27.9	11.2	30.4	0.0	0.0	41.7	
Exiting Leg Total					1900					2678					1533					1303	7414
Cars	5	601	0	0	606	228	1282	1	0	1511	416	1522	1	0	1939	830	2245	0	0	3075	7131
% Cars	83.3	85.9	0.0	0.0	85.8	90.8	98.9	100.0	0.0	97.6	98.3	92.4	100.0	0.0	93.6	99.8	99.6	0.0	0.0	99.5	96.2
Exiting Leg Total					1750					2661					1432					1288	7131
Heavy Vehicles	1	99	0	0	100	23	14	0	0	37	7	125	0	0	132	2	10	2	0	14	283
% Heavy Vehicles	16.7	14.1	0.0	0.0	14.2	9.2	1.1	0.0	0.0	2.4	1.7	7.6	0.0	0.0	6.4	0.2	0.4	100.0	0.0	0.5	3.8
Exiting Leg Total					150					17					101					15	283

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	57	0	0	58	24	158	0	0	182	49	186	0	0	235	85	241	0	0	326	801
8:15 AM	0	50	0	0	50	29	140	0	0	169	39	192	1	0	232	105	234	0	0	339	790
8:30 AM	0	48	0	0	48	25	121	0	0	146	65	157	0	0	222	103	239	0	0	342	758
8:45 AM	0	63	0	0	63	36	133	0	0	169	57	199	0	0	256	83	260	0	0	343	831
Total Volume	1	218	0	0	219	114	552	0	0	666	210	734	1	0	945	376	974	0	0	1350	3180
% Approach Total	0.5	99.5	0.0	0.0		17.1	82.9	0.0	0.0		22.2	77.7	0.1	0.0		27.9	72.1	0.0	0.0		
PHF	0.250	0.865	0.000	0.000	0.869	0.792	0.873	0.000	0.000	0.915	0.808	0.922	0.250	0.000	0.923	0.895	0.937	0.000	0.000	0.984	0.957
Cars	1	180	0	0	181	107	546	0	0	653	206	686	1	0	893	375	971	0	0	1346	3073
Cars %	100.0	82.6	0.0	0.0	82.6	93.9	98.9	0.0	0.0	98.0	98.1	93.5	100.0	0.0	94.5	99.7	99.7	0.0	0.0	99.7	96.6
Heavy Vehicles	0	38	0	0	38	7	6	0	0	13	4	48	0	0	52	1	3	0	0	4	107
Heavy Vehicles %	0.0	17.4	0.0	0.0	17.4	6.1	1.1	0.0	0.0	2.0	1.9	6.5	0.0	0.0	5.5	0.3	0.3	0.0	0.0	0.3	3.4
Cars Enter Leg	1	180	0	0	181	107	546	0	0	653	206	686	1	0	893	375	971	0	0	1346	3073
Heavy Enter Leg	0	38	0	0	38	7	6	0	0	13	4	48	0	0	52	1	3	0	0	4	107
Total Entering Leg	1	218	0	0	219	114	552	0	0	666	210	734	1	0	945	376	974	0	0	1350	3180
Cars Exiting Leg					793					1177					555					548	3073
Heavy Exiting Leg					55					7					39					6	107
Total Exiting Leg					848					1184					594					554	3180

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars-Combined (Motorcycles, Cars, Light Goods)

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	1	29	0	0	30	13	32	0	0	45	15	48	0	0	63	19	92	0	0	111	249
6:15 AM	0	42	0	0	42	9	42	0	0	51	8	77	0	0	85	27	102	0	0	129	307
6:30 AM	0	48	0	0	48	16	62	1	0	79	18	88	0	0	106	52	134	0	0	186	419
6:45 AM	3	58	0	0	61	16	82	0	0	98	24	109	0	0	133	52	141	0	0	193	485
Total	4	177	0	0	181	54	218	1	0	273	65	322	0	0	387	150	469	0	0	619	1460
7:00 AM	0	68	0	0	68	21	90	0	0	111	34	104	0	0	138	71	161	0	0	232	549
7:15 AM	0	45	0	0	45	9	113	0	0	122	32	123	0	0	155	76	181	0	0	257	579
7:30 AM	0	72	0	0	72	17	153	0	0	170	41	135	0	0	176	72	228	0	0	300	718
7:45 AM	0	59	0	0	59	20	162	0	0	182	38	152	0	0	190	86	235	0	0	321	752
Total	0	244	0	0	244	67	518	0	0	585	145	514	0	0	659	305	805	0	0	1110	2598
8:00 AM	1	49	0	0	50	24	154	0	0	178	48	171	0	0	219	85	240	0	0	325	772
8:15 AM	0	43	0	0	43	26	139	0	0	165	39	184	1	0	224	105	232	0	0	337	769
8:30 AM	0	42	0	0	42	23	120	0	0	143	64	145	0	0	209	102	239	0	0	341	735
8:45 AM	0	46	0	0	46	34	133	0	0	167	55	186	0	0	241	83	260	0	0	343	797
Total	1	180	0	0	181	107	546	0	0	653	206	686	1	0	893	375	971	0	0	1346	3073
Grand Total	5	601	0	0	606	228	1282	1	0	1511	416	1522	1	0	1939	830	2245	0	0	3075	7131
Approach %	0.8	99.2	0.0	0.0		15.1	84.8	0.1	0.0		21.5	78.5	0.1	0.0		27.0	73.0	0.0	0.0		
Total %	0.1	8.4	0.0	0.0	8.5	3.2	18.0	0.0	0.0	21.2	5.8	21.3	0.0	0.0	27.2	11.6	31.5	0.0	0.0	43.1	
Exiting Leg Total					1750					2661					1432					1288	7131

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	49	0	0	50	24	154	0	0	178	48	171	0	0	219	85	240	0	0	325	772
8:15 AM	0	43	0	0	43	26	139	0	0	165	39	184	1	0	224	105	232	0	0	337	769
8:30 AM	0	42	0	0	42	23	120	0	0	143	64	145	0	0	209	102	239	0	0	341	735
8:45 AM	0	46	0	0	46	34	133	0	0	167	55	186	0	0	241	83	260	0	0	343	797
Total Volume	1	180	0	0	181	107	546	0	0	653	206	686	1	0	893	375	971	0	0	1346	3073
% Approach Total	0.6	99.4	0.0	0.0		16.4	83.6	0.0	0.0		23.1	76.8	0.1	0.0		27.9	72.1	0.0	0.0		
PHF	0.250	0.918	0.000	0.000	0.905	0.787	0.886	0.000	0.000	0.917	0.805	0.922	0.250	0.000	0.926	0.893	0.934	0.000	0.000	0.981	0.964
Entering Leg	1	180	0	0	181	107	546	0	0	653	206	686	1	0	893	375	971	0	0	1346	3073
Exiting Leg					793					1177					555					548	3073
Total					974					1830					1448					1894	6146

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

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

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	8
6:15 AM	0	4	0	0	4	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	15
6:30 AM	0	9	0	0	9	1	0	0	0	1	1	7	0	0	8	0	0	0	0	0	18
6:45 AM	0	8	0	0	8	2	0	0	0	2	0	11	0	0	11	0	0	0	0	0	21
Total	0	25	0	0	25	3	0	0	0	3	1	32	0	0	33	0	0	1	0	1	62
7:00 AM	0	6	0	0	6	3	1	0	0	4	1	14	0	0	15	0	0	0	0	0	25
7:15 AM	0	10	0	0	10	3	5	0	0	8	1	11	0	0	12	0	2	0	0	2	32
7:30 AM	1	11	0	0	12	3	1	0	0	4	0	11	0	0	11	1	3	0	0	4	31
7:45 AM	0	9	0	0	9	4	1	0	0	5	0	9	0	0	9	0	2	1	0	3	26
Total	1	36	0	0	37	13	8	0	0	21	2	45	0	0	47	1	7	1	0	9	114
8:00 AM	0	8	0	0	8	0	4	0	0	4	1	15	0	0	16	0	1	0	0	1	29
8:15 AM	0	7	0	0	7	3	1	0	0	4	0	8	0	0	8	0	2	0	0	2	21
8:30 AM	0	6	0	0	6	2	1	0	0	3	1	12	0	0	13	1	0	0	0	1	23
8:45 AM	0	17	0	0	17	2	0	0	0	2	2	13	0	0	15	0	0	0	0	0	34
Total	0	38	0	0	38	7	6	0	0	13	4	48	0	0	52	1	3	0	0	4	107
Grand Total	1	99	0	0	100	23	14	0	0	37	7	125	0	0	132	2	10	2	0	14	283
Approach %	1.0	99.0	0.0	0.0		62.2	37.8	0.0	0.0		5.3	94.7	0.0	0.0		14.3	71.4	14.3	0.0		
Total %	0.4	35.0	0.0	0.0	35.3	8.1	4.9	0.0	0.0	13.1	2.5	44.2	0.0	0.0	46.6	0.7	3.5	0.7	0.0	4.9	
Exiting Leg Total					150					17					101					15	283
Buses	0	48	0	0	48	12	8	0	0	20	1	56	0	0	57	0	10	0	0	10	135
% Buses	0.0	48.5	0.0	0.0	48.0	52.2	57.1	0.0	0.0	54.1	14.3	44.8	0.0	0.0	43.2	0.0	100.0	0.0	0.0	71.4	47.7
Exiting Leg Total					68					11					48					8	135
Single-Unit Trucks	1	50	0	0	51	11	6	0	0	17	6	62	0	0	68	2	0	2	0	4	140
% Single-Unit	100.0	50.5	0.0	0.0	51.0	47.8	42.9	0.0	0.0	45.9	85.7	49.6	0.0	0.0	51.5	100.0	0.0	100.0	0.0	28.6	49.5
Exiting Leg Total					75					6					52					7	140
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
% Articulated	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	2.8
Exiting Leg Total					7					0					1					0	8

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

7:15 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	10	0	0	10	3	5	0	0	8	1	11	0	0	12	0	2	0	0	2	32
7:30 AM	1	11	0	0	12	3	1	0	0	4	0	11	0	0	11	1	3	0	0	4	31
7:45 AM	0	9	0	0	9	4	1	0	0	5	0	9	0	0	9	0	2	1	0	3	26
8:00 AM	0	8	0	0	8	0	4	0	0	4	1	15	0	0	16	0	1	0	0	1	29
Total Volume	1	38	0	0	39	10	11	0	0	21	2	46	0	0	48	1	8	1	0	10	118
% Approach Total	2.6	97.4	0.0	0.0		47.6	52.4	0.0	0.0		4.2	95.8	0.0	0.0		10.0	80.0	10.0	0.0		
PHF	0.250	0.864	0.000	0.000	0.813	0.625	0.550	0.000	0.000	0.656	0.500	0.767	0.000	0.000	0.750	0.250	0.667	0.250	0.000	0.625	0.922
Buses	0	19	0	0	19	7	7	0	0	14	0	22	0	0	22	0	8	0	0	8	63
Buses %	0.0	50.0	0.0	0.0	48.7	70.0	63.6	0.0	0.0	66.7	0.0	47.8	0.0	0.0	45.8	0.0	100.0	0.0	0.0	80.0	53.4
Single-Unit Trucks	1	18	0	0	19	3	4	0	0	7	2	21	0	0	23	1	0	1	0	2	51
Single-Unit %	100.0	47.4	0.0	0.0	48.7	30.0	36.4	0.0	0.0	33.3	100.0	45.7	0.0	0.0	47.9	100.0	0.0	100.0	0.0	20.0	43.2
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Articulated %	0.0	2.6	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	3.4
Buses	0	19	0	0	19	7	7	0	0	14	0	22	0	0	22	0	8	0	0	8	63
Single-Unit Trucks	1	18	0	0	19	3	4	0	0	7	2	21	0	0	23	1	0	1	0	2	51
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total Entering Leg	1	38	0	0	39	10	11	0	0	21	2	46	0	0	48	1	8	1	0	10	118
Buses					29					8					19					7	63
Single-Unit Trucks					25					2					19					5	51
Articulated Trucks					3					0					1					0	4
Total Exiting Leg					57					10					39					12	118

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	1	25	0	0	26	9	27	0	0	36	13	32	0	0	45	19	81	0	0	100	207
6:15 AM	0	39	0	0	39	8	38	0	0	46	2	63	0	0	65	26	83	0	0	109	259
6:30 AM	0	44	0	0	44	14	54	1	0	69	15	67	0	0	82	47	116	0	0	163	358
6:45 AM	3	55	0	0	58	10	72	0	0	82	22	91	0	0	113	49	128	0	0	177	430
Total	4	163	0	0	167	41	191	1	0	233	52	253	0	0	305	141	408	0	0	549	1254
7:00 AM	0	60	0	0	60	17	84	0	0	101	31	92	0	0	123	70	154	0	0	224	508
7:15 AM	0	43	0	0	43	8	104	0	0	112	26	105	0	0	131	73	177	0	0	250	536
7:30 AM	0	66	0	0	66	16	145	0	0	161	39	127	0	0	166	70	219	0	0	289	682
7:45 AM	0	57	0	0	57	14	154	0	0	168	36	138	0	0	174	85	225	0	0	310	709
Total	0	226	0	0	226	55	487	0	0	542	132	462	0	0	594	298	775	0	0	1073	2435
8:00 AM	1	43	0	0	44	23	146	0	0	169	46	151	0	0	197	80	230	0	0	310	720
8:15 AM	0	39	0	0	39	24	127	0	0	151	38	171	1	0	210	99	223	0	0	322	722
8:30 AM	0	33	0	0	33	22	106	0	0	128	60	129	0	0	189	96	228	0	0	324	674
8:45 AM	0	43	0	0	43	32	124	0	0	156	50	174	0	0	224	79	242	0	0	321	744
Total	1	158	0	0	159	101	503	0	0	604	194	625	1	0	820	354	923	0	0	1277	2860
Grand Total	5	547	0	0	552	197	1181	1	0	1379	378	1340	1	0	1719	793	2106	0	0	2899	6549
Approach %	0.9	99.1	0.0	0.0		14.3	85.6	0.1	0.0		22.0	78.0	0.1	0.0		27.4	72.6	0.0	0.0		
Total %	0.1	8.4	0.0	0.0	8.4	3.0	18.0	0.0	0.0	21.1	5.8	20.5	0.0	0.0	26.2	12.1	32.2	0.0	0.0	44.3	
Exiting Leg Total					1537					2484					1341					1187	6549

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	43	0	0	44	23	146	0	0	169	46	151	0	0	197	80	230	0	0	310	720
8:15 AM	0	39	0	0	39	24	127	0	0	151	38	171	1	0	210	99	223	0	0	322	722
8:30 AM	0	33	0	0	33	22	106	0	0	128	60	129	0	0	189	96	228	0	0	324	674
8:45 AM	0	43	0	0	43	32	124	0	0	156	50	174	0	0	224	79	242	0	0	321	744
Total Volume	1	158	0	0	159	101	503	0	0	604	194	625	1	0	820	354	923	0	0	1277	2860
% Approach Total	0.6	99.4	0.0	0.0		16.7	83.3	0.0	0.0		23.7	76.2	0.1	0.0		27.7	72.3	0.0	0.0		
PHF	0.250	0.919	0.000	0.000	0.903	0.789	0.861	0.000	0.000	0.893	0.808	0.898	0.250	0.000	0.915	0.894	0.954	0.000	0.000	0.985	0.961
Entering Leg	1	158	0	0	159	101	503	0	0	604	194	625	1	0	820	354	923	0	0	1277	2860
Exiting Leg					726					1117					512					505	2860
Total					885					1721					1332					1782	5720

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	4	0	0	4	4	5	0	0	9	2	15	0	0	17	0	11	0	0	11	41
6:15 AM	0	3	0	0	3	1	3	0	0	4	6	14	0	0	20	1	18	0	0	19	46
6:30 AM	0	4	0	0	4	2	8	0	0	10	3	21	0	0	24	5	16	0	0	21	59
6:45 AM	0	3	0	0	3	6	10	0	0	16	1	18	0	0	19	3	11	0	0	14	52
Total	0	14	0	0	14	13	26	0	0	39	12	68	0	0	80	9	56	0	0	65	198
7:00 AM	0	8	0	0	8	4	6	0	0	10	3	12	0	0	15	1	5	0	0	6	39
7:15 AM	0	2	0	0	2	1	9	0	0	10	6	18	0	0	24	3	4	0	0	7	43
7:30 AM	0	6	0	0	6	1	8	0	0	9	2	8	0	0	10	2	9	0	0	11	36
7:45 AM	0	2	0	0	2	6	8	0	0	14	2	14	0	0	16	1	10	0	0	11	43
Total	0	18	0	0	18	12	31	0	0	43	13	52	0	0	65	7	28	0	0	35	161
8:00 AM	0	6	0	0	6	1	7	0	0	8	2	20	0	0	22	5	9	0	0	14	50
8:15 AM	0	4	0	0	4	2	12	0	0	14	1	12	0	0	13	6	9	0	0	15	46
8:30 AM	0	8	0	0	8	1	14	0	0	15	4	15	0	0	19	6	11	0	0	17	59
8:45 AM	0	3	0	0	3	2	7	0	0	9	5	9	0	0	14	4	17	0	0	21	47
Total	0	21	0	0	21	6	40	0	0	46	12	56	0	0	68	21	46	0	0	67	202
Grand Total	0	53	0	0	53	31	97	0	0	128	37	176	0	0	213	37	130	0	0	167	561
Approach %	0.0	100.0	0.0	0.0		24.2	75.8	0.0	0.0		17.4	82.6	0.0	0.0		22.2	77.8	0.0	0.0		
Total %	0.0	9.4	0.0	0.0	9.4	5.5	17.3	0.0	0.0	22.8	6.6	31.4	0.0	0.0	38.0	6.6	23.2	0.0	0.0	29.8	
Exiting Leg Total					207					167					90					97	561

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	6	0	0	6	1	7	0	0	8	2	20	0	0	22	5	9	0	0	14	50
8:15 AM	0	4	0	0	4	2	12	0	0	14	1	12	0	0	13	6	9	0	0	15	46
8:30 AM	0	8	0	0	8	1	14	0	0	15	4	15	0	0	19	6	11	0	0	17	59
8:45 AM	0	3	0	0	3	2	7	0	0	9	5	9	0	0	14	4	17	0	0	21	47
Total Volume	0	21	0	0	21	6	40	0	0	46	12	56	0	0	68	21	46	0	0	67	202
% Approach Total	0.0	100.0	0.0	0.0		13.0	87.0	0.0	0.0		17.6	82.4	0.0	0.0		31.3	68.7	0.0	0.0		
PHF	0.000	0.656	0.000	0.000	0.656	0.750	0.714	0.000	0.000	0.767	0.600	0.700	0.000	0.000	0.773	0.875	0.676	0.000	0.000	0.798	0.856
Entering Leg	0	21	0	0	21	6	40	0	0	46	12	56	0	0	68	21	46	0	0	67	202
Exiting Leg					62					58					42					40	202
Total					83					104					110					107	404

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
6:15 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
6:30 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
6:45 AM	0	3	0	0	3	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	8
Total	0	11	0	0	11	2	0	0	0	2	0	10	0	0	10	0	0	0	0	0	23
7:00 AM	0	4	0	0	4	2	1	0	0	3	0	5	0	0	5	0	0	0	0	0	12
7:15 AM	0	5	0	0	5	2	5	0	0	7	0	6	0	0	6	0	2	0	0	2	20
7:30 AM	0	4	0	0	4	2	0	0	0	2	0	6	0	0	6	0	3	0	0	3	15
7:45 AM	0	5	0	0	5	3	0	0	0	3	0	3	0	0	3	0	2	0	0	2	13
Total	0	18	0	0	18	9	6	0	0	15	0	20	0	0	20	0	7	0	0	7	60
8:00 AM	0	5	0	0	5	0	2	0	0	2	0	7	0	0	7	0	1	0	0	1	15
8:15 AM	0	5	0	0	5	1	0	0	0	1	0	6	0	0	6	0	2	0	0	2	14
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
8:45 AM	0	7	0	0	7	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	15
Total	0	19	0	0	19	1	2	0	0	3	1	26	0	0	27	0	3	0	0	3	52
Grand Total	0	48	0	0	48	12	8	0	0	20	1	56	0	0	57	0	10	0	0	10	135
Approach %	0.0	100.0	0.0	0.0		60.0	40.0	0.0	0.0		1.8	98.2	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	35.6	0.0	0.0	35.6	8.9	5.9	0.0	0.0	14.8	0.7	41.5	0.0	0.0	42.2	0.0	7.4	0.0	0.0	7.4	
Exiting Leg Total					68					11					48					8	135

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

7:15 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	5	0	0	5	2	5	0	0	7	0	6	0	0	6	0	2	0	0	2	20
7:30 AM	0	4	0	0	4	2	0	0	0	2	0	6	0	0	6	0	3	0	0	3	15
7:45 AM	0	5	0	0	5	3	0	0	0	3	0	3	0	0	3	0	2	0	0	2	13
8:00 AM	0	5	0	0	5	0	2	0	0	2	0	7	0	0	7	0	1	0	0	1	15
Total Volume	0	19	0	0	19	7	7	0	0	14	0	22	0	0	22	0	8	0	0	8	63
% Approach Total	0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.950	0.000	0.000	0.950	0.583	0.350	0.000	0.000	0.500	0.000	0.786	0.000	0.000	0.786	0.000	0.667	0.000	0.000	0.667	0.788
Entering Leg	0	19	0	0	19	7	7	0	0	14	0	22	0	0	22	0	8	0	0	8	63
Exiting Leg					29					8					19					7	63
Total					48					22					41					15	126

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3
6:15 AM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
6:30 AM	0	6	0	0	6	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	12
6:45 AM	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	12
Total	0	14	0	0	14	1	0	0	0	1	1	18	0	0	19	0	0	1	0	1	35
7:00 AM	0	2	0	0	2	1	0	0	0	1	1	9	0	0	10	0	0	0	0	0	13
7:15 AM	0	5	0	0	5	1	0	0	0	1	1	5	0	0	6	0	0	0	0	0	12
7:30 AM	1	7	0	0	8	1	1	0	0	2	0	5	0	0	5	1	0	0	0	1	16
7:45 AM	0	4	0	0	4	1	1	0	0	2	0	6	0	0	6	0	0	1	0	1	13
Total	1	18	0	0	19	4	2	0	0	6	2	25	0	0	27	1	0	1	0	2	54
8:00 AM	0	2	0	0	2	0	2	0	0	2	1	5	0	0	6	0	0	0	0	0	10
8:15 AM	0	2	0	0	2	2	1	0	0	3	0	2	0	0	2	0	0	0	0	0	7
8:30 AM	0	4	0	0	4	2	1	0	0	3	1	6	0	0	7	1	0	0	0	1	15
8:45 AM	0	10	0	0	10	2	0	0	0	2	1	6	0	0	7	0	0	0	0	0	19
Total	0	18	0	0	18	6	4	0	0	10	3	19	0	0	22	1	0	0	0	1	51
Grand Total	1	50	0	0	51	11	6	0	0	17	6	62	0	0	68	2	0	2	0	4	140
Approach %	2.0	98.0	0.0	0.0		64.7	35.3	0.0	0.0		8.8	91.2	0.0	0.0		50.0	0.0	50.0	0.0		
Total %	0.7	35.7	0.0	0.0	36.4	7.9	4.3	0.0	0.0	12.1	4.3	44.3	0.0	0.0	48.6	1.4	0.0	1.4	0.0	2.9	
Exiting Leg Total					75					6					52					7	140

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

7:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	0	0	2	1	0	0	0	1	1	9	0	0	10	0	0	0	0	0	13
7:15 AM	0	5	0	0	5	1	0	0	0	1	1	5	0	0	6	0	0	0	0	0	12
7:30 AM	1	7	0	0	8	1	1	0	0	2	0	5	0	0	5	1	0	0	0	1	16
7:45 AM	0	4	0	0	4	1	1	0	0	2	0	6	0	0	6	0	0	1	0	1	13
Total Volume	1	18	0	0	19	4	2	0	0	6	2	25	0	0	27	1	0	1	0	2	54
% Approach Total	5.3	94.7	0.0	0.0		66.7	33.3	0.0	0.0		7.4	92.6	0.0	0.0		50.0	0.0	50.0	0.0		
PHF	0.250	0.643	0.000	0.000	0.594	1.000	0.500	0.000	0.000	0.750	0.500	0.694	0.000	0.000	0.675	0.250	0.000	0.250	0.000	0.500	0.844
Entering Leg	1	18	0	0	19	4	2	0	0	6	2	25	0	0	27	1	0	1	0	2	54
Exiting Leg					30					2					19					3	54
Total					49					8					46					5	108

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
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	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
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	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Grand Total	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
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	0.0	0.0	0.0		
Total %	0.0	12.5	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	87.5	0.0	0.0	87.5	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					7					0					1					0	8

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

6:00 AM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 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	0	4	0	0	4	0	0	0	0	0	4
% 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	0.333	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.333
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Exiting Leg					4					0					0					0	4
Total					4					0					4					0	8

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
6:00 AM	0	3	0	0	0	0	3	0	0	0	0	1	1	2	0	4	0	0	0	2	6	0	0	0	0	1	0	1	12
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	0	0	2	6	0	0	0	0	0	1	1	8
6:30 AM	1	4	0	0	0	0	5	0	0	0	0	3	1	4	0	8	0	0	1	3	12	0	0	0	0	2	2	4	25
6:45 AM	0	5	0	0	0	0	5	0	0	0	0	2	0	2	0	10	0	0	1	8	19	0	0	0	0	2	4	6	32
Total	1	12	0	0	0	0	13	0	0	0	0	7	2	9	0	26	0	0	2	15	43	0	0	0	0	5	7	12	77
7:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	0	3	1	5	10
7:15 AM	0	6	0	0	0	0	6	0	0	0	0	2	1	3	0	7	1	0	0	6	14	0	0	0	0	0	0	0	23
7:30 AM	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0	13	0	0	0	10	23	0	0	0	0	3	1	4	34
7:45 AM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	12	0	0	2	6	20	0	0	0	0	2	5	7	32
Total	0	20	0	0	0	0	20	0	0	0	0	2	1	3	0	35	1	0	2	22	60	0	1	0	0	8	7	16	99
8:00 AM	0	9	0	0	0	0	9	0	0	0	0	7	3	10	0	15	0	0	8	24	47	3	0	0	0	1	2	6	72
8:15 AM	0	12	0	0	0	0	12	0	0	1	0	5	1	7	0	11	0	0	4	20	35	1	0	0	0	5	4	10	64
8:30 AM	0	13	0	0	0	0	13	1	0	0	0	4	6	11	0	14	0	0	3	18	35	1	0	0	0	3	1	5	64
8:45 AM	0	9	0	0	0	0	9	0	0	0	0	4	3	7	0	23	0	0	4	23	50	1	0	0	0	11	0	12	78
Total	0	43	0	0	0	0	43	1	0	1	0	20	13	35	0	63	0	0	19	85	167	6	0	0	0	20	7	33	278
Grand Total	1	75	0	0	0	0	76	1	0	1	0	29	16	47	0	124	1	0	23	122	270	6	1	0	0	33	21	61	454
Approach %	1.3	98.7	0.0	0.0	0.0	0.0		2.1	0.0	2.1	0.0	61.7	34.0		0.0	45.9	0.4	0.0	8.5	45.2		9.8	1.6	0.0	0.0	54.1	34.4		
Total %	0.2	16.5	0.0	0.0	0.0	0.0	16.7	0.2	0.0	0.2	0.0	6.4	3.5	10.4	0.0	27.3	0.2	0.0	5.1	26.9	59.5	1.3	0.2	0.0	0.0	7.3	4.6	13.4	
Exiting Leg Total							125							46							227							56	454

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
8:00 AM	0	9	0	0	0	0	9	0	0	0	0	7	3	10	0	15	0	0	8	24	47	3	0	0	0	1	2	6	72
8:15 AM	0	12	0	0	0	0	12	0	0	1	0	5	1	7	0	11	0	0	4	20	35	1	0	0	0	5	4	10	64
8:30 AM	0	13	0	0	0	0	13	1	0	0	0	4	6	11	0	14	0	0	3	18	35	1	0	0	0	3	1	5	64
8:45 AM	0	9	0	0	0	0	9	0	0	0	0	4	3	7	0	23	0	0	4	23	50	1	0	0	0	11	0	12	78
Total Volume	0	43	0	0	0	0	43	1	0	1	0	20	13	35	0	63	0	0	19	85	167	6	0	0	0	20	7	33	278
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		2.9	0.0	2.9	0.0	57.1	37.1		0.0	37.7	0.0	0.0	11.4	50.9		18.2	0.0	0.0	0.0	60.6	21.2		
PHF	0.000	0.827	0.000	0.000	0.000	0.000	0.827	0.250	0.000	0.250	0.000	0.714	0.542	0.795	0.000	0.685	0.000	0.000	0.594	0.885	0.835	0.500	0.000	0.000	0.000	0.455	0.438	0.688	0.891
Entering Leg	0	43	0	0	0	0	43	1	0	1	0	20	13	35	0	63	0	0	19	85	167	6	0	0	0	20	7	33	278
Exiting Leg							64							33							154							27	278
Total							107							68							321							60	556

PDI File #: **186146 F**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **6:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	14	8	22	0	0	0	0	5	7	12	40
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	8	7	15	0	0	0	0	5	11	16	0	0	0	0	2	4	6	37
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	9	6	15	0	0	0	0	14	10	24	0	0	0	0	5	14	19	58
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	19	7	26	0	0	0	0	19	12	31	0	0	0	0	10	8	18	75
Total	0	0	0	0	0	0	0	0	0	0	0	41	21	62	0	0	0	0	52	41	93	0	0	0	0	22	33	55	210
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	15	24	0	0	0	0	14	14	28	0	0	0	0	6	25	31	83
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	16	10	26	0	0	0	0	17	13	30	0	0	0	0	18	8	26	82
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	25	20	45	0	0	0	0	19	19	38	0	0	0	0	20	14	34	117
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	17	15	32	0	0	0	0	7	9	16	0	0	0	0	16	9	25	73
Total	0	0	0	0	0	0	0	0	0	0	0	67	60	127	0	0	0	0	57	55	112	0	0	0	0	60	56	116	355
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	27	13	40	0	0	0	0	7	8	15	0	0	0	0	18	13	31	86
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	37	17	54	0	0	0	0	7	12	19	0	0	0	0	26	15	41	114
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	27	12	39	0	0	0	0	11	5	16	0	0	0	0	27	20	47	102
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	40	39	79	0	0	0	0	20	12	32	0	0	0	0	24	23	47	158
Total	0	0	0	0	0	0	0	0	0	0	0	131	81	212	0	0	0	0	45	37	82	0	0	0	0	95	71	166	460
Grand Total	0	0	0	0	0	0	0	0	0	0	0	239	162	401	0	0	0	0	154	133	287	0	0	0	0	177	160	337	1025
Approach %	0	0	0	0	0	0		0	0	0	0	59.6	40.4		0	0	0	0	53.7	46.3		0	0	0	0	52.5	47.5		
Total %	0	0	0	0	0	0	0	0	0	0	0	23.3	15.8	39.1	0	0	0	0	15	13	28	0	0	0	0	17.3	15.6	32.9	
Exiting Leg Total							0							401							287							337	1025

Peak Hour Analysis from 06:00 AM to 09:00 AM begins at:

8:00 AM	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	27	13	40	0	0	0	0	7	8	15	0	0	0	0	18	13	31	86
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	37	17	54	0	0	0	0	7	12	19	0	0	0	0	26	15	41	114
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	27	12	39	0	0	0	0	11	5	16	0	0	0	0	27	20	47	102
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	40	39	79	0	0	0	0	20	12	32	0	0	0	0	24	23	47	158
Total Volume	0	0	0	0	0	0	0	0	0	0	0	131	81	212	0	0	0	0	45	37	82	0	0	0	0	95	71	166	460
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	61.8	38.2		0.0	0.0	0.0	0.0	54.9	45.1		0.0	0.0	0.0	0.0	57.2	42.8		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.819	0.519	0.671	0.000	0.000	0.000	0.000	0.563	0.771	0.641	0.000	0.000	0.000	0.000	0.880	0.772	0.883	0.728
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	131	81	212	0	0	0	0	45	37	82	0	0	0	0	95	71	166	460
Exiting Leg							0							212							82							166	460
Total							0							424							164							332	920

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	54	0	0	55	19	209	0	0	228	63	143	0	0	206	76	131	2	0	209	698
4:15 PM	5	83	1	0	89	19	217	0	0	236	63	147	2	0	212	50	120	0	0	170	707
4:30 PM	8	60	0	0	68	23	232	0	0	255	60	161	3	0	224	63	163	0	0	226	773
4:45 PM	2	43	0	0	45	22	220	0	0	242	77	172	1	0	250	73	166	0	0	239	776
Total	16	240	1	0	257	83	878	0	0	961	263	623	6	0	892	262	580	2	0	844	2954
5:00 PM	3	60	0	0	63	27	236	0	0	263	83	139	2	0	224	69	195	0	0	264	814
5:15 PM	3	52	1	0	56	31	208	0	0	239	85	171	1	0	257	91	190	0	0	281	833
5:30 PM	2	63	1	0	66	32	210	0	0	242	93	116	3	0	212	71	207	0	0	278	798
5:45 PM	3	55	0	0	58	21	188	0	0	209	87	135	1	0	223	78	180	0	0	258	748
Total	11	230	2	0	243	111	842	0	0	953	348	561	7	0	916	309	772	0	0	1081	3193
6:00 PM	3	68	0	0	71	25	216	0	0	241	66	147	0	0	213	70	170	0	0	240	765
6:15 PM	7	58	0	0	65	25	212	0	0	237	63	146	0	0	209	69	185	0	0	254	765
6:30 PM	5	75	1	0	81	24	188	0	0	212	68	147	0	0	215	71	150	0	0	221	729
6:45 PM	4	72	1	0	77	28	157	0	0	185	53	142	0	0	195	62	126	1	0	189	646
Total	19	273	2	0	294	102	773	0	0	875	250	582	0	0	832	272	631	1	0	904	2905
Grand Total	46	743	5	0	794	296	2493	0	0	2789	861	1766	13	0	2640	843	1983	3	0	2829	9052
Approach %	5.8	93.6	0.6	0.0		10.6	89.4	0.0	0.0		32.6	66.9	0.5	0.0		29.8	70.1	0.1	0.0		
Total %	0.5	8.2	0.1	0.0	8.8	3.3	27.5	0.0	0.0	30.8	9.5	19.5	0.1	0.0	29.2	9.3	21.9	0.0	0.0	31.3	
Exiting Leg Total					2065					2849					1586					2552	9052
Cars	46	692	5	0	743	288	2478	0	0	2766	861	1688	13	0	2562	841	1975	3	0	2819	8890
% Cars	100.0	93.1	100.0	0.0	93.6	97.3	99.4	0.0	0.0	99.2	100.0	95.6	100.0	0.0	97.0	99.8	99.6	100.0	0.0	99.6	98.2
Exiting Leg Total					1979					2841					1533					2537	8890
Heavy Vehicles	0	51	0	0	51	8	15	0	0	23	0	78	0	0	78	2	8	0	0	10	162
% Heavy Vehicles	0.0	6.9	0.0	0.0	6.4	2.7	0.6	0.0	0.0	0.8	0.0	4.4	0.0	0.0	3.0	0.2	0.4	0.0	0.0	0.4	1.8
Exiting Leg Total					86					8					53					15	162

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:45 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	43	0	0	45	22	220	0	0	242	77	172	1	0	250	73	166	0	0	239	776
5:00 PM	3	60	0	0	63	27	236	0	0	263	83	139	2	0	224	69	195	0	0	264	814
5:15 PM	3	52	1	0	56	31	208	0	0	239	85	171	1	0	257	91	190	0	0	281	833
5:30 PM	2	63	1	0	66	32	210	0	0	242	93	116	3	0	212	71	207	0	0	278	798
Total Volume	10	218	2	0	230	112	874	0	0	986	338	598	7	0	943	304	758	0	0	1062	3221
% Approach Total	4.3	94.8	0.9	0.0		11.4	88.6	0.0	0.0		35.8	63.4	0.7	0.0		28.6	71.4	0.0	0.0		
PHF	0.833	0.865	0.500	0.000	0.871	0.875	0.926	0.000	0.000	0.937	0.909	0.869	0.583	0.000	0.917	0.835	0.915	0.000	0.000	0.945	0.967
Cars	10	203	2	0	215	110	871	0	0	981	338	569	7	0	914	303	755	0	0	1058	3168
Cars %	100.0	93.1	100.0	0.0	93.5	98.2	99.7	0.0	0.0	99.5	100.0	95.2	100.0	0.0	96.9	99.7	99.6	0.0	0.0	99.6	98.4
Heavy Vehicles	0	15	0	0	15	2	3	0	0	5	0	29	0	0	29	1	3	0	0	4	53
Heavy Vehicles %	0.0	6.9	0.0	0.0	6.5	1.8	0.3	0.0	0.0	0.5	0.0	4.8	0.0	0.0	3.1	0.3	0.4	0.0	0.0	0.4	1.6
Cars Enter Leg	10	203	2	0	215	110	871	0	0	981	338	569	7	0	914	303	755	0	0	1058	3168
Heavy Enter Leg	0	15	0	0	15	2	3	0	0	5	0	29	0	0	29	1	3	0	0	4	53
Total Entering Leg	10	218	2	0	230	112	874	0	0	986	338	598	7	0	943	304	758	0	0	1062	3221
Cars Exiting Leg					679					1095					506					888	3168
Heavy Exiting Leg					31					3					16					3	53
Total Exiting Leg					710					1098					522					891	3221

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars-Combined (Motorcycles, Cars, Light Goods)

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	49	0	0	50	17	205	0	0	222	63	136	0	0	199	76	131	2	0	209	680
4:15 PM	5	77	1	0	83	18	213	0	0	231	63	134	2	0	199	50	118	0	0	168	681
4:30 PM	8	56	0	0	64	23	232	0	0	255	60	155	3	0	218	63	161	0	0	224	761
4:45 PM	2	42	0	0	44	21	219	0	0	240	77	160	1	0	238	73	165	0	0	238	760
Total	16	224	1	0	241	79	869	0	0	948	263	585	6	0	854	262	575	2	0	839	2882
5:00 PM	3	55	0	0	58	27	236	0	0	263	83	134	2	0	219	69	194	0	0	263	803
5:15 PM	3	48	1	0	52	31	207	0	0	238	85	165	1	0	251	90	189	0	0	279	820
5:30 PM	2	58	1	0	61	31	209	0	0	240	93	110	3	0	206	71	207	0	0	278	785
5:45 PM	3	49	0	0	52	21	187	0	0	208	87	132	1	0	220	77	179	0	0	256	736
Total	11	210	2	0	223	110	839	0	0	949	348	541	7	0	896	307	769	0	0	1076	3144
6:00 PM	3	65	0	0	68	24	213	0	0	237	66	144	0	0	210	70	170	0	0	240	755
6:15 PM	7	54	0	0	61	24	212	0	0	236	63	139	0	0	202	69	185	0	0	254	753
6:30 PM	5	72	1	0	78	24	188	0	0	212	68	140	0	0	208	71	150	0	0	221	719
6:45 PM	4	67	1	0	72	27	157	0	0	184	53	139	0	0	192	62	126	1	0	189	637
Total	19	258	2	0	279	99	770	0	0	869	250	562	0	0	812	272	631	1	0	904	2864
Grand Total	46	692	5	0	743	288	2478	0	0	2766	861	1688	13	0	2562	841	1975	3	0	2819	8890
Approach %	6.2	93.1	0.7	0.0		10.4	89.6	0.0	0.0		33.6	65.9	0.5	0.0		29.8	70.1	0.1	0.0		
Total %	0.5	7.8	0.1	0.0	8.4	3.2	27.9	0.0	0.0	31.1	9.7	19.0	0.1	0.0	28.8	9.5	22.2	0.0	0.0	31.7	
Exiting Leg Total					1979					2841					1533					2537	8890

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:45 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	42	0	0	44	21	219	0	0	240	77	160	1	0	238	73	165	0	0	238	760
5:00 PM	3	55	0	0	58	27	236	0	0	263	83	134	2	0	219	69	194	0	0	263	803
5:15 PM	3	48	1	0	52	31	207	0	0	238	85	165	1	0	251	90	189	0	0	279	820
5:30 PM	2	58	1	0	61	31	209	0	0	240	93	110	3	0	206	71	207	0	0	278	785
Total Volume	10	203	2	0	215	110	871	0	0	981	338	569	7	0	914	303	755	0	0	1058	3168
% Approach Total	4.7	94.4	0.9	0.0		11.2	88.8	0.0	0.0		37.0	62.3	0.8	0.0		28.6	71.4	0.0	0.0		
PHF	0.833	0.875	0.500	0.000	0.881	0.887	0.923	0.000	0.000	0.933	0.909	0.862	0.583	0.000	0.910	0.842	0.912	0.000	0.000	0.948	0.966
Entering Leg	10	203	2	0	215	110	871	0	0	981	338	569	7	0	914	303	755	0	0	1058	3168
Exiting Leg					679					1095					506					888	3168
Total					894					2076					1420					1946	6336

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

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

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	5	0	0	5	2	4	0	0	6	0	7	0	0	7	0	0	0	0	0	18
4:15 PM	0	6	0	0	6	1	4	0	0	5	0	13	0	0	13	0	2	0	0	2	26
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	2	0	0	2	12
4:45 PM	0	1	0	0	1	1	1	0	0	2	0	12	0	0	12	0	1	0	0	1	16
Total	0	16	0	0	16	4	9	0	0	13	0	38	0	0	38	0	5	0	0	5	72
5:00 PM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	11
5:15 PM	0	4	0	0	4	0	1	0	0	1	0	6	0	0	6	1	1	0	0	2	13
5:30 PM	0	5	0	0	5	1	1	0	0	2	0	6	0	0	6	0	0	0	0	0	13
5:45 PM	0	6	0	0	6	0	1	0	0	1	0	3	0	0	3	1	1	0	0	2	12
Total	0	20	0	0	20	1	3	0	0	4	0	20	0	0	20	2	3	0	0	5	49
6:00 PM	0	3	0	0	3	1	3	0	0	4	0	3	0	0	3	0	0	0	0	0	10
6:15 PM	0	4	0	0	4	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	12
6:30 PM	0	3	0	0	3	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	10
6:45 PM	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	9
Total	0	15	0	0	15	3	3	0	0	6	0	20	0	0	20	0	0	0	0	0	41
Grand Total	0	51	0	0	51	8	15	0	0	23	0	78	0	0	78	2	8	0	0	10	162
Approach %	0.0	100.0	0.0	0.0		34.8	65.2	0.0	0.0		0.0	100.0	0.0	0.0		20.0	80.0	0.0	0.0		
Total %	0.0	31.5	0.0	0.0	31.5	4.9	9.3	0.0	0.0	14.2	0.0	48.1	0.0	0.0	48.1	1.2	4.9	0.0	0.0	6.2	
Exiting Leg Total					86					8					53					15	162
Buses	0	40	0	0	40	6	9	0	0	15	0	62	0	0	62	1	6	0	0	7	124
% Buses	0.0	78.4	0.0	0.0	78.4	75.0	60.0	0.0	0.0	65.2	0.0	79.5	0.0	0.0	79.5	50.0	75.0	0.0	0.0	70.0	76.5
Exiting Leg Total					68					6					41					9	124
Single-Unit Trucks	0	8	0	0	8	2	6	0	0	8	0	15	0	0	15	1	2	0	0	3	34
% Single-Unit	0.0	15.7	0.0	0.0	15.7	25.0	40.0	0.0	0.0	34.8	0.0	19.2	0.0	0.0	19.2	50.0	25.0	0.0	0.0	30.0	21.0
Exiting Leg Total					17					2					9					6	34
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
% Articulated	0.0	5.9	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	2.5
Exiting Leg Total					1					0					3					0	4

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:00 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	5	0	0	5	2	4	0	0	6	0	7	0	0	7	0	0	0	0	0	18
4:15 PM	0	6	0	0	6	1	4	0	0	5	0	13	0	0	13	0	2	0	0	2	26
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	2	0	0	2	12
4:45 PM	0	1	0	0	1	1	1	0	0	2	0	12	0	0	12	0	1	0	0	1	16
Total Volume	0	16	0	0	16	4	9	0	0	13	0	38	0	0	38	0	5	0	0	5	72
% Approach Total	0.0	100.0	0.0	0.0		30.8	69.2	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.000	0.667	0.500	0.563	0.000	0.000	0.542	0.000	0.731	0.000	0.000	0.731	0.000	0.625	0.000	0.000	0.625	0.692
Buses	0	12	0	0	12	3	6	0	0	9	0	27	0	0	27	0	4	0	0	4	52
Buses %	0.0	75.0	0.0	0.0	75.0	75.0	66.7	0.0	0.0	69.2	0.0	71.1	0.0	0.0	71.1	0.0	80.0	0.0	0.0	80.0	72.2
Single-Unit Trucks	0	3	0	0	3	1	3	0	0	4	0	11	0	0	11	0	1	0	0	1	19
Single-Unit %	0.0	18.8	0.0	0.0	18.8	25.0	33.3	0.0	0.0	30.8	0.0	28.9	0.0	0.0	28.9	0.0	20.0	0.0	0.0	20.0	26.4
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated %	0.0	6.3	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Buses	0	12	0	0	12	3	6	0	0	9	0	27	0	0	27	0	4	0	0	4	52
Single-Unit Trucks	0	3	0	0	3	1	3	0	0	4	0	11	0	0	11	0	1	0	0	1	19
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	0	16	0	0	16	4	9	0	0	13	0	38	0	0	38	0	5	0	0	5	72
Buses					30					4					12					6	52
Single-Unit Trucks					12					1					3					3	19
Articulated Trucks					0					0					1					0	1
Total Exiting Leg					42					5					16					9	72

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	42	0	0	43	16	194	0	0	210	54	125	0	0	179	71	120	2	0	193	625
4:15 PM	5	74	1	0	80	15	197	0	0	212	60	126	2	0	188	48	113	0	0	161	641
4:30 PM	8	52	0	0	60	23	223	0	0	246	53	147	3	0	203	58	150	0	0	208	717
4:45 PM	2	40	0	0	42	21	213	0	0	234	72	157	1	0	230	69	163	0	0	232	738
Total	16	208	1	0	225	75	827	0	0	902	239	555	6	0	800	246	546	2	0	794	2721
5:00 PM	3	53	0	0	56	27	232	0	0	259	80	131	2	0	213	67	190	0	0	257	785
5:15 PM	3	43	1	0	47	30	204	0	0	234	84	158	1	0	243	86	182	0	0	268	792
5:30 PM	2	57	1	0	60	30	206	0	0	236	92	108	3	0	203	69	200	0	0	269	768
5:45 PM	3	49	0	0	52	20	180	0	0	200	85	129	1	0	215	77	173	0	0	250	717
Total	11	202	2	0	215	107	822	0	0	929	341	526	7	0	874	299	745	0	0	1044	3062
6:00 PM	3	62	0	0	65	22	211	0	0	233	65	139	0	0	204	68	167	0	0	235	737
6:15 PM	7	53	0	0	60	24	209	0	0	233	62	137	0	0	199	68	180	0	0	248	740
6:30 PM	5	68	1	0	74	24	178	0	0	202	68	133	0	0	201	68	147	0	0	215	692
6:45 PM	4	62	1	0	67	26	150	0	0	176	53	136	0	0	189	61	126	1	0	188	620
Total	19	245	2	0	266	96	748	0	0	844	248	545	0	0	793	265	620	1	0	886	2789
Grand Total	46	655	5	0	706	278	2397	0	0	2675	828	1626	13	0	2467	810	1911	3	0	2724	8572
Approach %	6.5	92.8	0.7	0.0		10.4	89.6	0.0	0.0		33.6	65.9	0.5	0.0		29.7	70.2	0.1	0.0		
Total %	0.5	7.6	0.1	0.0	8.2	3.2	28.0	0.0	0.0	31.2	9.7	19.0	0.2	0.0	28.8	9.4	22.3	0.0	0.0	31.8	
Exiting Leg Total					1907					2744					1465					2456	8572

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:45 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	40	0	0	42	21	213	0	0	234	72	157	1	0	230	69	163	0	0	232	738
5:00 PM	3	53	0	0	56	27	232	0	0	259	80	131	2	0	213	67	190	0	0	257	785
5:15 PM	3	43	1	0	47	30	204	0	0	234	84	158	1	0	243	86	182	0	0	268	792
5:30 PM	2	57	1	0	60	30	206	0	0	236	92	108	3	0	203	69	200	0	0	269	768
Total Volume	10	193	2	0	205	108	855	0	0	963	328	554	7	0	889	291	735	0	0	1026	3083
% Approach Total	4.9	94.1	1.0	0.0		11.2	88.8	0.0	0.0		36.9	62.3	0.8	0.0		28.4	71.6	0.0	0.0		
PHF	0.833	0.846	0.500	0.000	0.854	0.900	0.921	0.000	0.000	0.930	0.891	0.877	0.583	0.000	0.915	0.846	0.919	0.000	0.000	0.954	0.973
Entering Leg	10	193	2	0	205	108	855	0	0	963	328	554	7	0	889	291	735	0	0	1026	3083
Exiting Leg					662					1065					484					872	3083
Total					867					2028					1373					1898	6166

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Light Goods Vehicle

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	6	0	0	6	1	11	0	0	12	9	10	0	0	19	5	10	0	0	15	52
4:15 PM	0	2	0	0	2	3	15	0	0	18	3	8	0	0	11	2	5	0	0	7	38
4:30 PM	0	4	0	0	4	0	7	0	0	7	5	8	0	0	13	5	11	0	0	16	40
4:45 PM	0	2	0	0	2	0	4	0	0	4	5	3	0	0	8	4	2	0	0	6	20
Total	0	14	0	0	14	4	37	0	0	41	22	29	0	0	51	16	28	0	0	44	150
5:00 PM	0	1	0	0	1	0	4	0	0	4	3	3	0	0	6	2	4	0	0	6	17
5:15 PM	0	4	0	0	4	1	3	0	0	4	1	7	0	0	8	4	5	0	0	9	25
5:30 PM	0	1	0	0	1	1	2	0	0	3	1	2	0	0	3	2	6	0	0	8	15
5:45 PM	0	0	0	0	0	1	7	0	0	8	2	3	0	0	5	0	6	0	0	6	19
Total	0	6	0	0	6	3	16	0	0	19	7	15	0	0	22	8	21	0	0	29	76
6:00 PM	0	1	0	0	1	2	2	0	0	4	1	5	0	0	6	2	3	0	0	5	16
6:15 PM	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	1	4	0	0	5	10
6:30 PM	0	4	0	0	4	0	8	0	0	8	0	4	0	0	4	3	3	0	0	6	22
6:45 PM	0	4	0	0	4	1	6	0	0	7	0	2	0	0	2	1	0	0	0	1	14
Total	0	10	0	0	10	3	18	0	0	21	2	12	0	0	14	7	10	0	0	17	62
Grand Total	0	30	0	0	30	10	71	0	0	81	31	56	0	0	87	31	59	0	0	90	288
Approach %	0.0	100.0	0.0	0.0		12.3	87.7	0.0	0.0		35.6	64.4	0.0	0.0		34.4	65.6	0.0	0.0		
Total %	0.0	10.4	0.0	0.0	10.4	3.5	24.7	0.0	0.0	28.1	10.8	19.4	0.0	0.0	30.2	10.8	20.5	0.0	0.0	31.3	
Exiting Leg Total					66					90					61					71	288

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:00 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	6	0	0	6	1	11	0	0	12	9	10	0	0	19	5	10	0	0	15	52
4:15 PM	0	2	0	0	2	3	15	0	0	18	3	8	0	0	11	2	5	0	0	7	38
4:30 PM	0	4	0	0	4	0	7	0	0	7	5	8	0	0	13	5	11	0	0	16	40
4:45 PM	0	2	0	0	2	0	4	0	0	4	5	3	0	0	8	4	2	0	0	6	20
Total Volume	0	14	0	0	14	4	37	0	0	41	22	29	0	0	51	16	28	0	0	44	150
% Approach Total	0.0	100.0	0.0	0.0		9.8	90.2	0.0	0.0		43.1	56.9	0.0	0.0		36.4	63.6	0.0	0.0		
PHF	0.000	0.583	0.000	0.000	0.583	0.333	0.617	0.000	0.000	0.569	0.611	0.725	0.000	0.000	0.671	0.800	0.636	0.000	0.000	0.688	0.721
Entering Leg	0	14	0	0	14	4	37	0	0	41	22	29	0	0	51	16	28	0	0	44	150
Exiting Leg					33					50					30					37	150
Total					47					91					81					81	300

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	3	0	0	5	0	5	0	0	5	0	0	0	0	0	13
4:15 PM	0	4	0	0	4	1	2	0	0	3	0	11	0	0	11	0	1	0	0	1	19
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	10
4:45 PM	0	1	0	0	1	0	1	0	0	1	0	7	0	0	7	0	1	0	0	1	10
Total	0	12	0	0	12	3	6	0	0	9	0	27	0	0	27	0	4	0	0	4	52
5:00 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	8
5:15 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	8
5:30 PM	0	3	0	0	3	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	10
5:45 PM	0	6	0	0	6	0	1	0	0	1	0	3	0	0	3	1	0	0	0	1	11
Total	0	15	0	0	15	0	2	0	0	2	0	17	0	0	17	1	2	0	0	3	37
6:00 PM	0	3	0	0	3	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	7
6:15 PM	0	2	0	0	2	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	10
6:30 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
6:45 PM	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	9
Total	0	13	0	0	13	3	1	0	0	4	0	18	0	0	18	0	0	0	0	0	35
Grand Total	0	40	0	0	40	6	9	0	0	15	0	62	0	0	62	1	6	0	0	7	124
Approach %	0.0	100.0	0.0	0.0		40.0	60.0	0.0	0.0		0.0	100.0	0.0	0.0		14.3	85.7	0.0	0.0		
Total %	0.0	32.3	0.0	0.0	32.3	4.8	7.3	0.0	0.0	12.1	0.0	50.0	0.0	0.0	50.0	0.8	4.8	0.0	0.0	5.6	
Exiting Leg Total					68					6					41					9	124

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:00 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	2	3	0	0	5	0	5	0	0	5	0	0	0	0	0	13
4:15 PM	0	4	0	0	4	1	2	0	0	3	0	11	0	0	11	0	1	0	0	1	19
4:30 PM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	10
4:45 PM	0	1	0	0	1	0	1	0	0	1	0	7	0	0	7	0	1	0	0	1	10
Total Volume	0	12	0	0	12	3	6	0	0	9	0	27	0	0	27	0	4	0	0	4	52
% Approach Total	0.0	100.0	0.0	0.0		33.3	66.7	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	0.375	0.500	0.000	0.000	0.450	0.000	0.614	0.000	0.000	0.614	0.000	0.500	0.000	0.000	0.500	0.684
Entering Leg	0	12	0	0	12	3	6	0	0	9	0	27	0	0	27	0	4	0	0	4	52
Exiting Leg					30					4					12					6	52
Total					42					13					39					10	104

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	2	0	0	2	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	7
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	6
Total	0	3	0	0	3	1	3	0	0	4	0	11	0	0	11	0	1	0	0	1	19
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	1	0	0	0	1	5
5:30 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	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	1	0	0	1	1
Total	0	4	0	0	4	1	1	0	0	2	0	2	0	0	2	1	1	0	0	2	10
6:00 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	3
6:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
6:45 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	2	0	0	2	0	2	0	0	2	0	0	0	0	0	5
Grand Total	0	8	0	0	8	2	6	0	0	8	0	15	0	0	15	1	2	0	0	3	34
Approach %	0.0	100.0	0.0	0.0		25.0	75.0	0.0	0.0		0.0	100.0	0.0	0.0		33.3	66.7	0.0	0.0		
Total %	0.0	23.5	0.0	0.0	23.5	5.9	17.6	0.0	0.0	23.5	0.0	44.1	0.0	0.0	44.1	2.9	5.9	0.0	0.0	8.8	
Exiting Leg Total					17					2					9					6	34

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:00 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	2	0	0	2	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	7
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	6
Total Volume	0	3	0	0	3	1	3	0	0	4	0	11	0	0	11	0	1	0	0	1	19
% Approach Total	0.0	100.0	0.0	0.0		25.0	75.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.375	0.000	0.000	0.375	0.250	0.375	0.000	0.000	0.500	0.000	0.550	0.000	0.000	0.550	0.000	0.250	0.000	0.000	0.250	0.679
Entering Leg	0	3	0	0	3	1	3	0	0	4	0	11	0	0	11	0	1	0	0	1	19
Exiting Leg					12					1					3					3	19
Total					15					5					14					4	38

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	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
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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	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	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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 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	0	0	0	0	0	0	0	0	0	1
Grand Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
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	0.0	0.0	0.0		
Total %	0.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					1					0					3					0	4

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

4:15 PM	JFK Street from North					Memorial Drive from East					JFK Street from South					Memorial Drive 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	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
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% 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	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	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	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Exiting Leg					1					0					1					0	2
Total					2					0					2					0	4

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
4:00 PM	0	3	0	0	0	0	3	0	0	0	0	1	2	3	0	2	0	0	2	1	5	2	0	0	0	5	1	8	19
4:15 PM	0	4	0	0	0	0	4	0	0	0	0	1	0	1	0	7	1	0	6	1	15	0	0	0	0	2	4	6	26
4:30 PM	0	12	0	0	0	0	12	0	0	0	0	1	3	4	0	11	0	0	5	3	19	1	0	0	0	1	0	2	37
4:45 PM	1	8	0	0	0	0	9	0	0	0	0	0	5	5	0	8	1	0	11	1	21	6	0	0	0	3	0	9	44
Total	1	27	0	0	0	0	28	0	0	0	0	3	10	13	0	28	2	0	24	6	60	9	0	0	0	11	5	25	126
5:00 PM	0	13	0	0	0	0	13	0	0	0	0	2	0	2	0	17	0	0	13	3	33	0	0	0	0	2	3	5	53
5:15 PM	0	16	0	0	0	0	16	0	0	0	0	2	4	6	0	18	0	0	15	6	39	0	0	0	0	5	4	9	70
5:30 PM	0	16	0	0	0	0	16	0	0	0	0	1	1	2	0	10	1	0	9	8	28	0	0	0	0	2	1	3	49
5:45 PM	0	12	0	0	0	0	12	0	0	0	0	3	2	5	0	16	0	0	22	12	50	0	0	0	0	7	6	13	80
Total	0	57	0	0	0	0	57	0	0	0	0	8	7	15	0	61	1	0	59	29	150	0	0	0	0	16	14	30	252
6:00 PM	1	12	0	0	0	0	13	0	1	0	0	0	2	3	0	13	0	0	20	6	39	0	0	0	0	1	3	4	59
6:15 PM	0	7	0	0	0	0	7	0	1	0	0	0	0	1	0	13	0	0	11	6	30	0	0	0	0	3	0	3	41
6:30 PM	0	12	0	0	0	0	12	0	0	0	0	0	3	3	0	17	0	0	14	5	36	0	0	0	0	4	3	7	58
6:45 PM	0	8	0	0	0	0	8	0	0	0	0	1	1	2	0	16	0	0	8	8	32	0	0	0	0	4	2	6	48
Total	1	39	0	0	0	0	40	0	2	0	0	1	6	9	0	59	0	0	53	25	137	0	0	0	0	12	8	20	206
Grand Total	2	123	0	0	0	0	125	0	2	0	0	12	23	37	0	148	3	0	136	60	347	9	0	0	0	39	27	75	584
Approach %	1.6	98.4	0.0	0.0	0.0	0.0		0.0	5.4	0.0	0.0	32.4	62.2		0.0	42.7	0.9	0.0	39.2	17.3		12.0	0.0	0.0	0.0	52.0	36.0		
Total %	0.3	21.1	0.0	0.0	0.0	0.0	21.4	0.0	0.3	0.0	0.0	2.1	3.9	6.3	0.0	25.3	0.5	0.0	23.3	10.3	59.4	1.5	0.0	0.0	0.0	6.7	4.6	12.8	
Exiting Leg Total							148							35							328							73	584

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

5:15 PM	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
5:15 PM	0	16	0	0	0	0	16	0	0	0	0	2	4	6	0	18	0	0	15	6	39	0	0	0	0	5	4	9	70
5:30 PM	0	16	0	0	0	0	16	0	0	0	0	1	1	2	0	10	1	0	9	8	28	0	0	0	0	2	1	3	49
5:45 PM	0	12	0	0	0	0	12	0	0	0	0	3	2	5	0	16	0	0	22	12	50	0	0	0	0	7	6	13	80
6:00 PM	1	12	0	0	0	0	13	0	1	0	0	0	2	3	0	13	0	0	20	6	39	0	0	0	0	1	3	4	59
Total Volume	1	56	0	0	0	0	57	0	1	0	0	6	9	16	0	57	1	0	66	32	156	0	0	0	0	15	14	29	258
% Approach Total	1.8	98.2	0.0	0.0	0.0	0.0		0.0	6.3	0.0	0.0	37.5	56.3		0.0	36.5	0.6	0.0	42.3	20.5		0.0	0.0	0.0	0.0	51.7	48.3		
PHF	0.250	0.875	0.000	0.000	0.000	0.000	0.891	0.000	0.250	0.000	0.000	0.500	0.563	0.667	0.000	0.792	0.250	0.000	0.750	0.667	0.780	0.000	0.000	0.000	0.000	0.536	0.583	0.558	0.806
Entering Leg	1	56	0	0	0	0	57	0	1	0	0	6	9	16	0	57	1	0	66	32	156	0	0	0	0	15	14	29	258
Exiting Leg							57							15							154							32	258
Total							114							31							310							61	516

PDI File #: **186146 FF**
Location: **N: JFK Street S: JFK Street**
Location: **E: Memorial Drive W: Memorial Drive**
City, State: **Cambridge, MA**
Client: **TetraTech/ S. Patangay**
Site Code: **143-4522-14001.04**
Count Date: **Thursday, May 3, 2018**
Start Time: **4:00 PM**
End Time: **7:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	19	22	41	0	0	0	0	13	10	23	0	0	0	0	14	22	36	100
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	22	37	59	0	0	0	0	11	7	18	0	0	0	0	12	30	42	119
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	31	37	68	0	0	0	0	12	8	20	0	0	0	0	16	21	37	125
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	30	36	66	0	0	0	0	13	16	29	0	0	0	0	22	32	54	149
Total	0	0	0	0	0	0	0	0	0	0	0	102	132	234	0	0	0	0	49	41	90	0	0	0	0	64	105	169	493
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	42	69	111	0	0	0	0	14	9	23	0	0	0	0	26	51	77	211
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	27	51	78	0	0	0	0	19	18	37	0	0	0	0	31	44	75	190
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	34	50	84	0	0	0	0	6	17	23	0	0	0	0	36	39	75	182
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	35	42	77	0	0	0	0	26	8	34	0	0	0	0	44	60	104	215
Total	0	0	0	0	0	0	0	0	0	0	0	138	212	350	0	0	0	0	65	52	117	0	0	0	0	137	194	331	798
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	37	46	83	0	0	0	0	12	12	24	0	0	0	0	14	36	50	157
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	40	52	92	0	0	0	0	17	17	34	0	0	0	0	28	49	77	203
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	44	52	96	0	0	0	0	25	30	55	0	0	0	0	30	36	66	217
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	47	53	100	0	0	0	0	19	21	40	0	0	0	0	24	34	58	198
Total	0	0	0	0	0	0	0	0	0	0	0	168	203	371	0	0	0	0	73	80	153	0	0	0	0	96	155	251	775
Grand Total	0	0	0	0	0	0	0	0	0	0	0	408	547	955	0	0	0	0	187	173	360	0	0	0	0	297	454	751	2066
Approach %	0	0	0	0	0	0		0	0	0	0	42.7	57.3		0	0	0	0	51.9	48.1		0	0	0	0	39.5	60.5		
Total %	0	0	0	0	0	0	0	0	0	0	0	19.7	26.5	46.2	0	0	0	0	9.05	8.37	17.4	0	0	0	0	14.4	22	36.4	
Exiting Leg Total							0							955							360							751	2066

Peak Hour Analysis from 04:00 PM to 07:00 PM begins at:

5:00 PM	JFK Street from North							Memorial Drive from East							JFK Street from South							Memorial Drive 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	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	42	69	111	0	0	0	0	14	9	23	0	0	0	0	26	51	77	211
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	27	51	78	0	0	0	0	19	18	37	0	0	0	0	31	44	75	190
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	34	50	84	0	0	0	0	6	17	23	0	0	0	0	36	39	75	182
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	35	42	77	0	0	0	0	26	8	34	0	0	0	0	44	60	104	215
Total Volume	0	0	0	0	0	0	0	0	0	0	0	138	212	350	0	0	0	0	65	52	117	0	0	0	0	137	194	331	798
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	39.4	60.6		0.0	0.0	0.0	0.0	55.6	44.4		0.0	0.0	0.0	0.0	41.4	58.6		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.821	0.768	0.788	0.000	0.000	0.000	0.000	0.625	0.722	0.791	0.000	0.000	0.000	0.000	0.778	0.808	0.796	0.928
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	138	212	350	0	0	0	0	65	52	117	0	0	0	0	137	194	331	798
Exiting Leg							0							350							117							331	798
Total							0							700							234							662	1596

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 1

Groups Printed- Cars - Trucks

	Memorial Dr From North			River St From East			Memorial Dr From South			River St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	21	195	0	0	0	0	0	137	12	42	182	158	747
07:15 AM	10	183	0	0	0	0	0	176	12	28	190	155	754
07:30 AM	14	234	0	0	0	0	0	165	15	42	233	163	866
07:45 AM	23	222	0	0	0	0	0	183	16	50	233	173	900
Total	68	834	0	0	0	0	0	661	55	162	838	649	3267
08:00 AM	19	199	0	0	0	0	0	176	14	53	222	191	874
08:15 AM	15	224	0	0	0	0	0	186	25	38	190	194	872
08:30 AM	18	202	0	0	0	0	0	140	24	44	185	203	816
08:45 AM	24	240	0	0	0	0	0	151	27	38	163	141	784
Total	76	865	0	0	0	0	0	653	90	173	760	729	3346
Grand Total	144	1699	0	0	0	0	0	1314	145	335	1598	1378	6613
Apprch %	7.8	92.2	0	0	0	0	0	90.1	9.9	10.1	48.3	41.6	
Total %	2.2	25.7	0	0	0	0	0	19.9	2.2	5.1	24.2	20.8	
Cars	144	1696	0	0	0	0	0	1314	145	332	1552	1378	6561
% Cars	100	99.8	0	0	0	0	0	100	100	99.1	97.1	100	99.2
Trucks	0	3	0	0	0	0	0	0	0	3	46	0	52
% Trucks	0	0.2	0	0	0	0	0	0	0	0.9	2.9	0	0.8

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 2

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	**234**	0	**248**	0	0	0	0	0	165	15	180	42	**233**	163	438	866
07:45 AM	**23**	222	0	245	0	0	0	0	0	183	16	199	50	233	173	456	**900**
08:00 AM	19	199	0	218	0	0	0	0	0	176	14	190	**53**	222	191	**466**	874
08:15 AM	15	224	0	239	0	0	0	0	0	**186**	**25**	**211**	38	190	**194**	422	872
Total Volume	71	879	0	950	0	0	0	0	0	710	70	780	183	878	721	1782	3512
% App. Total	7.5	92.5	0		0	0	0		0	91	9		10.3	49.3	40.5		
PHF	.772	.939	.000	.958	.000	.000	.000	.000	.000	.954	.700	.924	.863	.942	.929	.956	.976
Cars	71	877	0	948	0	0	0	0	0	710	70	780	182	853	721	1756	3484
% Cars	100	99.8	0	99.8	0	0	0	0	0	100	100	100	99.5	97.2	100	98.5	99.2
Trucks	0	2	0	2	0	0	0	0	0	0	0	0	1	25	0	26	28
% Trucks	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0.5	2.8	0	1.5	0.8

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018

Groups Printed- Bikes Peds

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	6	0	1	0	0	0	0	0	2	0	2	0	0	0	23	26	8	34
07:15 AM	0	5	0	2	0	0	0	1	0	3	0	3	0	5	0	15	21	13	34
07:30 AM	0	8	0	1	0	2	0	1	0	4	0	7	0	4	0	21	30	18	48
07:45 AM	1	11	0	1	0	0	0	0	0	1	0	6	0	2	0	12	19	15	34
Total	1	30	0	5	0	2	0	2	0	10	0	18	0	11	0	71	96	54	150
08:00 AM	0	16	0	2	0	1	0	2	0	6	0	3	1	2	0	28	35	26	61
08:15 AM	0	13	0	2	0	0	0	2	0	5	0	1	0	7	0	14	19	25	44
08:30 AM	0	12	0	3	0	0	0	4	0	2	0	6	2	6	0	22	35	22	57
08:45 AM	0	10	0	4	0	1	0	0	0	0	0	11	0	3	0	16	31	14	45
Total	0	51	0	11	0	2	0	8	0	13	0	21	3	18	0	80	120	87	207
Grand Total	1	81	0	16	0	4	0	10	0	23	0	39	3	29	0	151	216	141	357
Apprch %	1.2	98.8	0		0	100	0		0	100	0		9.4	90.6	0				
Total %	0.7	57.4	0		0	2.8	0		0	16.3	0		2.1	20.6	0		60.5	39.5	

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 14

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**1**	11	0	12	0	0	0	0	0	1	0	1	0	2	0	2	15
08:00 AM	0	**16**	0	**16**	0	**1**	0	**1**	0	**6**	0	**6**	1	2	0	3	**26**
08:15 AM	0	13	0	13	0	0	0	0	0	5	0	5	0	**7**	0	7	25
08:30 AM	0	12	0	12	0	0	0	0	0	2	0	2	**2**	6	0	**8**	22
Total Volume	1	52	0	53	0	1	0	1	0	14	0	14	3	17	0	20	88
% App. Total	1.9	98.1	0		0	100	0		0	100	0		15	85	0		
PHF	.250	.813	.000	.828	.000	.250	.000	.250	.000	.583	.000	.583	.375	.607	.000	.625	.846

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 1

Groups Printed- Cars - Trucks

	Memorial Dr From North			River St From East			Memorial Dr From South			River St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	11	137	0	0	0	0	0	217	18	59	164	119	725
04:15 PM	14	133	0	0	0	0	0	213	7	72	184	141	764
04:30 PM	21	170	0	0	0	0	0	226	6	75	144	111	753
04:45 PM	19	166	0	0	0	0	0	221	10	54	200	126	796
Total	65	606	0	0	0	0	0	877	41	260	692	497	3038
05:00 PM	20	189	0	0	0	0	0	196	10	56	199	111	781
05:15 PM	19	160	0	0	0	0	0	210	8	63	172	100	732
05:30 PM	15	113	0	0	0	0	0	169	12	70	183	116	678
05:45 PM	15	173	1	0	0	0	0	197	12	35	139	121	693
Total	69	635	1	0	0	0	0	772	42	224	693	448	2884
Grand Total	134	1241	1	0	0	0	0	1649	83	484	1385	945	5922
Apprch %	9.7	90.2	0.1	0	0	0	0	95.2	4.8	17.2	49.2	33.6	
Total %	2.3	21	0	0	0	0	0	27.8	1.4	8.2	23.4	16	
Cars	134	1240	1	0	0	0	0	1649	83	484	1358	943	5892
% Cars	100	99.9	100	0	0	0	0	100	100	100	98.1	99.8	99.5
Trucks	0	1	0	0	0	0	0	0	0	0	27	2	30
% Trucks	0	0.1	0	0	0	0	0	0	0	0	1.9	0.2	0.5

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 2

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	14	133	0	147	0	0	0	0	0	213	7	220	72	184	**141**	**397**	764
04:30 PM	**21**	170	0	191	0	0	0	0	0	**226**	6	**232**	**75**	144	111	330	753
04:45 PM	19	166	0	185	0	0	0	0	0	221	**10**	231	54	**200**	126	380	**796**
05:00 PM	20	**189**	0	**209**	0	0	0	0	0	196	10	206	56	199	111	366	781
Total Volume	74	658	0	732	0	0	0	0	0	856	33	889	257	727	489	1473	3094
% App. Total	10.1	89.9	0		0	0	0		0	96.3	3.7		17.4	49.4	33.2		
PHF	.881	.870	.000	.876	.000	.000	.000	.000	.000	.947	.825	.958	.857	.909	.867	.928	.972
Cars	74	657	0	731	0	0	0	0	0	856	33	889	257	713	489	1459	3079
% Cars	100	99.8	0	99.9	0	0	0	0	0	100	100	100	100	98.1	100	99.0	99.5
Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	14	0	14	15
% Trucks	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0	1.9	0	1.0	0.5

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018

Groups Printed- Bikes Peds

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	4	0	2	0	0	0	2	0	1	0	8	0	3	0	12	24	8	32
04:15 PM	0	4	0	4	0	0	0	3	0	1	0	3	0	1	0	13	23	6	29
04:30 PM	0	5	0	0	0	2	0	0	0	7	0	3	0	5	0	19	22	19	41
04:45 PM	0	0	0	4	0	0	1	3	0	4	0	2	0	2	0	24	33	7	40
Total	0	13	0	10	0	2	1	8	0	13	0	16	0	11	0	68	102	40	142
05:00 PM	0	2	0	2	0	1	0	0	0	4	0	11	0	2	0	27	40	9	49
05:15 PM	0	2	0	5	0	0	0	0	0	6	0	12	0	0	0	28	45	8	53
05:30 PM	0	4	0	4	0	0	0	2	0	6	0	10	0	4	0	50	66	14	80
05:45 PM	0	3	0	9	0	0	0	8	0	4	0	10	0	6	0	57	84	13	97
Total	0	11	0	20	0	1	0	10	0	20	0	43	0	12	0	162	235	44	279
Grand Total	0	24	0	30	0	3	1	18	0	33	0	59	0	23	0	230	337	84	421
Apprch %	0	100	0		0	75	25		0	100	0		0	100	0				
Total %	0	28.6	0		0	3.6	1.2		0	39.3	0		0	27.4	0		80	20	

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: River Street
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260013
Site Code : 17260013
Start Date : 4/11/2018
Page No : 14

	Memorial Dr From North				River St From East				Memorial Dr From South				River St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	2	0	2	0	**1**	0	**1**	0	4	0	4	0	2	0	2	9
05:15 PM	0	2	0	2	0	0	0	0	0	**6**	0	**6**	0	0	0	0	8
05:30 PM	0	**4**	0	**4**	0	0	0	0	0	6	0	6	0	4	0	4	**14**
05:45 PM	0	3	0	3	0	0	0	0	0	4	0	4	0	**6**	0	**6**	13
Total Volume	0	11	0	11	0	1	0	1	0	20	0	20	0	12	0	12	44
% App. Total	0	100	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.688	.000	.688	.000	.250	.000	.250	.000	.833	.000	.833	.000	.500	.000	.500	.786

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

Groups Printed- Cars - Trucks

	Memorial Dr From North			Western Ave From East			Memorial Dr From South			Western Ave From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	177	66	24	180	25	46	127	0	0	0	0	645
07:15 AM	0	190	57	17	218	26	72	112	0	0	0	0	692
07:30 AM	0	240	78	22	207	26	74	150	0	0	0	0	797
07:45 AM	0	216	68	29	221	28	74	138	0	0	0	0	774
Total	0	823	269	92	826	105	266	527	0	0	0	0	2908
08:00 AM	0	228	52	28	221	25	96	151	0	0	0	0	801
08:15 AM	0	198	45	25	241	24	80	136	0	0	0	0	749
08:30 AM	0	208	56	29	236	30	75	115	0	0	0	0	749
08:45 AM	0	251	53	25	177	25	64	116	0	0	0	0	711
Total	0	885	206	107	875	104	315	518	0	0	0	0	3010
Grand Total	0	1708	475	199	1701	209	581	1045	0	0	0	0	5918
Apprch %	0	78.2	21.8	9.4	80.7	9.9	35.7	64.3	0	0	0	0	
Total %	0	28.9	8	3.4	28.7	3.5	9.8	17.7	0	0	0	0	
Cars	0	1707	466	197	1656	209	581	1041	0	0	0	0	5857
% Cars	0	99.9	98.1	99	97.4	100	100	99.6	0	0	0	0	99
Trucks	0	1	9	2	45	0	0	4	0	0	0	0	61
% Trucks	0	0.1	1.9	1	2.6	0	0	0.4	0	0	0	0	1

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**240**	**78**	**318**	22	207	26	255	74	150	0	224	0	0	0	0	797
07:45 AM	0	216	68	284	**29**	221	**28**	278	74	138	0	212	0	0	0	0	774
08:00 AM	0	228	52	280	28	221	25	274	**96**	**151**	0	**247**	0	0	0	0	**801**
08:15 AM	0	198	45	243	25	**241**	24	**290**	80	136	0	216	0	0	0	0	749
Total Volume	0	882	243	1125	104	890	103	1097	324	575	0	899	0	0	0	0	3121
% App. Total	0	78.4	21.6		9.5	81.1	9.4		36	64	0		0	0	0		
PHF	.000	.919	.779	.884	.897	.923	.920	.946	.844	.952	.000	.910	.000	.000	.000	.000	.974
Cars	0	881	240	1121	103	859	103	1065	324	573	0	897	0	0	0	0	3083
% Cars	0	99.9	98.8	99.6	99.0	96.5	100	97.1	100	99.7	0	99.8	0	0	0	0	98.8
Trucks	0	1	3	4	1	31	0	32	0	2	0	2	0	0	0	0	38
% Trucks	0	0.1	1.2	0.4	1.0	3.5	0	2.9	0	0.3	0	0.2	0	0	0	0	1.2

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

Groups Printed- Bikes Peds

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	5	0	12	0	4	0	1	0	3	0	1	0	0	0	19	33	12	45
07:15 AM	0	6	0	9	0	3	0	3	0	3	0	0	0	0	0	16	28	12	40
07:30 AM	0	9	0	9	1	3	0	5	0	4	0	2	0	1	0	18	34	18	52
07:45 AM	0	11	0	20	0	5	0	1	0	2	0	1	0	0	0	23	45	18	63
Total	0	31	0	50	1	15	0	10	0	12	0	4	0	1	0	76	140	60	200
08:00 AM	0	14	0	19	0	9	0	7	0	7	1	2	0	1	0	11	39	32	71
08:15 AM	0	14	0	21	0	8	0	11	0	4	0	0	0	1	0	13	45	27	72
08:30 AM	0	24	0	19	0	9	0	6	1	7	0	0	0	0	0	20	45	41	86
08:45 AM	0	17	0	27	0	9	0	8	0	10	0	1	0	1	0	13	49	37	86
Total	0	69	0	86	0	35	0	32	1	28	1	3	0	3	0	57	178	137	315
Grand Total	0	100	0	136	1	50	0	42	1	40	1	7	0	4	0	133	318	197	515
Apprch %	0	100	0		2	98	0		2.4	95.2	2.4		0	100	0				
Total %	0	50.8	0		0.5	25.4	0		0.5	20.3	0.5		0	2	0		61.7	38.3	

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018
Page No : 14

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	14	0	14	0	**9**	0	**9**	0	7	**1**	8	0	**1**	0	**1**	32
08:15 AM	0	14	0	14	0	8	0	8	0	4	0	4	0	1	0	1	27
08:30 AM	0	**24**	0	**24**	0	9	0	9	**1**	7	0	8	0	0	0	0	**41**
08:45 AM	0	17	0	17	0	9	0	9	0	**10**	0	**10**	0	1	0	1	37
Total Volume	0	69	0	69	0	35	0	35	1	28	1	30	0	3	0	3	137
% App. Total	0	100	0		0	100	0		3.3	93.3	3.3		0	100	0		
PHF	.000	.719	.000	.719	.000	.972	.000	.972	.250	.700	.250	.750	.000	.750	.000	.750	.835

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

Groups Printed- Cars - Trucks

	Memorial Dr From North			Western Ave From East			Memorial Dr From South			Western Ave From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	135	90	17	243	26	111	158	0	0	0	0	780
04:15 PM	0	152	83	21	286	31	97	183	0	0	0	0	853
04:30 PM	0	142	63	28	265	25	124	171	0	0	0	0	818
04:45 PM	0	179	88	23	237	38	116	173	0	0	0	0	854
Total	0	608	324	89	1031	120	448	685	0	0	0	0	3305
05:00 PM	0	197	78	18	255	27	92	155	0	0	0	0	822
05:15 PM	0	166	106	26	250	20	111	167	0	0	0	0	846
05:30 PM	0	113	105	23	296	35	102	143	0	0	0	0	817
05:45 PM	0	173	93	23	243	24	105	141	0	0	0	0	802
Total	0	649	382	90	1044	106	410	606	0	0	0	0	3287
Grand Total	0	1257	706	179	2075	226	858	1291	0	0	0	0	6592
Apprch %	0	64	36	7.2	83.7	9.1	39.9	60.1	0	0	0	0	
Total %	0	19.1	10.7	2.7	31.5	3.4	13	19.6	0	0	0	0	
Cars	0	1256	696	179	2048	226	858	1291	0	0	0	0	6554
% Cars	0	99.9	98.6	100	98.7	100	100	100	0	0	0	0	99.4
Trucks	0	1	10	0	27	0	0	0	0	0	0	0	38
% Trucks	0	0.1	1.4	0	1.3	0	0	0	0	0	0	0	0.6

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018
Page No : 2

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	152	83	235	21	**286**	31	**338**	97	**183**	0	280	0	0	0	0	853
04:30 PM	0	142	63	205	**28**	265	25	318	**124**	171	0	**295**	0	0	0	0	818
04:45 PM	0	179	**88**	267	23	237	**38**	298	116	173	0	289	0	0	0	0	**854**
05:00 PM	0	**197**	78	**275**	18	255	27	300	92	155	0	247	0	0	0	0	822
Total Volume	0	670	312	982	90	1043	121	1254	429	682	0	1111	0	0	0	0	3347
% App. Total	0	68.2	31.8		7.2	83.2	9.6		38.6	61.4	0		0	0	0		
PHF	.000	.850	.886	.893	.804	.912	.796	.928	.865	.932	.000	.942	.000	.000	.000	.000	.980
Cars	0	669	307	976	90	1028	121	1239	429	682	0	1111	0	0	0	0	3326
% Cars	0	99.9	98.4	99.4	100	98.6	100	98.8	100	100	0	100	0	0	0	0	99.4
Trucks	0	1	5	6	0	15	0	15	0	0	0	0	0	0	0	0	21
% Trucks	0	0.1	1.6	0.6	0	1.4	0	1.2	0	0	0	0	0	0	0	0	0.6

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

Groups Printed- Bikes Peds

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	6	0	17	0	2	0	6	0	0	0	1	0	0	0	9	33	8	41
04:15 PM	0	4	2	14	0	1	0	1	0	1	0	0	0	2	0	14	29	10	39
04:30 PM	0	9	0	9	0	0	0	7	0	6	0	0	0	0	0	13	29	15	44
04:45 PM	0	0	0	11	0	2	0	6	0	7	0	0	0	1	0	15	32	10	42
Total	0	19	2	51	0	5	0	20	0	14	0	1	0	3	0	51	123	43	166
05:00 PM	0	4	0	19	0	5	0	6	0	8	0	2	0	2	0	27	54	19	73
05:15 PM	0	4	0	15	0	10	0	8	0	20	0	1	0	2	0	18	42	36	78
05:30 PM	0	8	0	11	0	6	0	12	1	14	0	2	0	2	0	47	72	31	103
05:45 PM	0	5	0	25	0	2	0	10	0	12	0	3	0	1	0	39	77	20	97
Total	0	21	0	70	0	23	0	36	1	54	0	8	0	7	0	131	245	106	351
Grand Total	0	40	2	121	0	28	0	56	1	68	0	9	0	10	0	182	368	149	517
Apprch %	0	95.2	4.8		0	100	0		1.4	98.6	0		0	100	0				
Total %	0	26.8	1.3		0	18.8	0		0.7	45.6	0		0	6.7	0		71.2	28.8	

Accurate Counts

978-664-2565

N/S Street : Memorial Drive
E/W Street: Western Avenue
City/State : Cambridge, MA
Weather : Cloudy

File Name : 17260011
Site Code : 17260011
Start Date : 4/11/2018

	Memorial Dr From North				Western Ave From East				Memorial Dr From South				Western Ave From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	4	0	4	0	5	0	5	0	8	0	8	0	**2**	0	**2**	19
05:15 PM	0	4	0	4	0	**10**	0	**10**	0	**20**	0	**20**	0	2	0	2	**36**
05:30 PM	0	**8**	0	**8**	0	6	0	6	**1**	14	0	15	0	2	0	2	31
05:45 PM	0	5	0	5	0	2	0	2	0	12	0	12	0	1	0	1	20
Total Volume	0	21	0	21	0	23	0	23	1	54	0	55	0	7	0	7	106
% App. Total	0	100	0		0	100	0		1.8	98.2	0		0	100	0		
PHF	.000	.656	.000	.656	.000	.575	.000	.575	.250	.675	.000	.688	.000	.875	.000	.875	.736

Volume
File Name: Y:\PDI 2016 Jobs\165257-Boston (Toole)\165257 (9) Volume.tf2
Start Date: 9/27/2016
Start Time: 12:00:00 AM
Site Code:
Location 1: North Harvard Street
Location 2: south of Soldiers Field Road

Date	Time	SB	NB	Total
9/27/2016	12:00 AM	24	20	44
9/27/2016	12:15 AM	22	19	41
9/27/2016	12:30 AM	11	6	17
9/27/2016	12:45 AM	9	12	21
9/27/2016	1:00 AM	8	5	13
9/27/2016	1:15 AM	10	10	20
9/27/2016	1:30 AM	14	3	17
9/27/2016	1:45 AM	7	7	14
9/27/2016	2:00 AM	3	4	7
9/27/2016	2:15 AM	10	5	15
9/27/2016	2:30 AM	7	4	11
9/27/2016	2:45 AM	7	5	12
9/27/2016	3:00 AM	2	2	4
9/27/2016	3:15 AM	5	3	8
9/27/2016	3:30 AM	3	3	6
9/27/2016	3:45 AM	2	3	5
9/27/2016	4:00 AM	4	4	8
9/27/2016	4:15 AM	7	5	12
9/27/2016	4:30 AM	5	2	7
9/27/2016	4:45 AM	13	4	17
9/27/2016	5:00 AM	25	13	38
9/27/2016	5:15 AM	40	16	56
9/27/2016	5:30 AM	38	16	54
9/27/2016	5:45 AM	33	34	67
9/27/2016	6:00 AM	43	29	72
9/27/2016	6:15 AM	52	43	95
9/27/2016	6:30 AM	61	66	127
9/27/2016	6:45 AM	74	84	158
9/27/2016	7:00 AM	79	76	155
9/27/2016	7:15 AM	72	68	140
9/27/2016	7:30 AM	65	91	156
9/27/2016	7:45 AM	74	101	175
9/27/2016	8:00 AM	88	99	187
9/27/2016	8:15 AM	82	122	204
9/27/2016	8:30 AM	79	125	204
9/27/2016	8:45 AM	95	142	237
9/27/2016	9:00 AM	101	123	224
9/27/2016	9:15 AM	96	120	216
9/27/2016	9:30 AM	90	114	204
9/27/2016	9:45 AM	89	120	209
9/27/2016	10:00 AM	79	109	188
9/27/2016	10:15 AM	97	94	191
9/27/2016	10:30 AM	69	91	160
9/27/2016	10:45 AM	65	72	137
9/27/2016	11:00 AM	74	69	143
9/27/2016	11:15 AM	65	77	142
9/27/2016	11:30 AM	78	79	157
9/27/2016	11:45 AM	79	57	136

Date	Time	SB	NB	Total
9/27/2016	12:00 PM	72	63	135
9/27/2016	12:15 PM	69	69	138
9/27/2016	12:30 PM	62	79	141
9/27/2016	12:45 PM	63	64	127
9/27/2016	1:00 PM	71	65	136
9/27/2016	1:15 PM	95	81	176
9/27/2016	1:30 PM	76	80	156
9/27/2016	1:45 PM	74	97	171
9/27/2016	2:00 PM	74	75	149
9/27/2016	2:15 PM	74	82	156
9/27/2016	2:30 PM	73	76	149
9/27/2016	2:45 PM	85	88	173
9/27/2016	3:00 PM	67	70	137
9/27/2016	3:15 PM	55	70	125
9/27/2016	3:30 PM	75	90	165
9/27/2016	3:45 PM	75	91	166
9/27/2016	4:00 PM	82	101	183
9/27/2016	4:15 PM	73	103	176
9/27/2016	4:30 PM	77	118	195
9/27/2016	4:45 PM	76	143	219
9/27/2016	5:00 PM	94	139	233
9/27/2016	5:15 PM	108	147	255
9/27/2016	5:30 PM	103	113	216
9/27/2016	5:45 PM	119	118	237
9/27/2016	6:00 PM	107	121	228
9/27/2016	6:15 PM	108	120	228
9/27/2016	6:30 PM	100	115	215
9/27/2016	6:45 PM	101	95	196
9/27/2016	7:00 PM	82	100	182
9/27/2016	7:15 PM	81	111	192
9/27/2016	7:30 PM	73	88	161
9/27/2016	7:45 PM	83	87	170
9/27/2016	8:00 PM	72	71	143
9/27/2016	8:15 PM	57	71	128
9/27/2016	8:30 PM	52	83	135
9/27/2016	8:45 PM	52	77	129
9/27/2016	9:00 PM	56	70	126
9/27/2016	9:15 PM	53	63	116
9/27/2016	9:30 PM	42	71	113
9/27/2016	9:45 PM	57	52	109
9/27/2016	10:00 PM	50	36	86
9/27/2016	10:15 PM	83	58	141
9/27/2016	10:30 PM	57	32	89
9/27/2016	10:45 PM	38	39	77
9/27/2016	11:00 PM	48	41	89
9/27/2016	11:15 PM	36	32	68
9/27/2016	11:30 PM	38	27	65
9/27/2016	11:45 PM	27	17	44

Volume
File Name: Y:\PDI 2016 Jobs\165257-Boston (Toole)\165257 (9) Volume.tf2
Start Date: 9/28/2016
Start Time: 12:00:00 AM
Site Code:
Location 1: North Harvard Street
Location 2: south of Soldiers Field Road

Date	Time	SB	NB	Total
9/28/2016	12:00 AM	25	19	44
9/28/2016	12:15 AM	18	23	41
9/28/2016	12:30 AM	17	10	27
9/28/2016	12:45 AM	17	12	29
9/28/2016	1:00 AM	11	10	21
9/28/2016	1:15 AM	8	16	24
9/28/2016	1:30 AM	8	5	13
9/28/2016	1:45 AM	11	7	18
9/28/2016	2:00 AM	5	7	12
9/28/2016	2:15 AM	6	14	20
9/28/2016	2:30 AM	5	7	12
9/28/2016	2:45 AM	7	4	11
9/28/2016	3:00 AM	6	3	9
9/28/2016	3:15 AM	3	5	8
9/28/2016	3:30 AM	3	2	5
9/28/2016	3:45 AM	4	1	5
9/28/2016	4:00 AM	7	3	10
9/28/2016	4:15 AM	4	6	10
9/28/2016	4:30 AM	4	9	13
9/28/2016	4:45 AM	14	5	19
9/28/2016	5:00 AM	33	8	41
9/28/2016	5:15 AM	67	19	86
9/28/2016	5:30 AM	37	20	57
9/28/2016	5:45 AM	59	31	90
9/28/2016	6:00 AM	74	41	115
9/28/2016	6:15 AM	125	55	180
9/28/2016	6:30 AM	97	96	193
9/28/2016	6:45 AM	62	71	133
9/28/2016	7:00 AM	65	102	167
9/28/2016	7:15 AM	90	100	190
9/28/2016	7:30 AM	83	141	224
9/28/2016	7:45 AM	91	132	223
9/28/2016	8:00 AM	96	127	223
9/28/2016	8:15 AM	102	141	243
9/28/2016	8:30 AM	90	146	236
9/28/2016	8:45 AM	114	138	252
9/28/2016	9:00 AM	95	117	212
9/28/2016	9:15 AM	82	103	185
9/28/2016	9:30 AM	88	97	185
9/28/2016	9:45 AM	91	98	189
9/28/2016	10:00 AM	65	96	161
9/28/2016	10:15 AM	86	79	165
9/28/2016	10:30 AM	74	83	157
9/28/2016	10:45 AM	74	64	138
9/28/2016	11:00 AM	61	58	119
9/28/2016	11:15 AM	52	67	119
9/28/2016	11:30 AM	71	80	151
9/28/2016	11:45 AM	79	77	156

Date	Time	SB	NB	Total
9/28/2016	12:00 PM	80	67	147
9/28/2016	12:15 PM	91	62	153
9/28/2016	12:30 PM	70	91	161
9/28/2016	12:45 PM	84	87	171
9/28/2016	1:00 PM	90	89	179
9/28/2016	1:15 PM	71	75	146
9/28/2016	1:30 PM	58	83	141
9/28/2016	1:45 PM	72	62	134
9/28/2016	2:00 PM	60	83	143
9/28/2016	2:15 PM	75	79	154
9/28/2016	2:30 PM	76	80	156
9/28/2016	2:45 PM	84	81	165
9/28/2016	3:00 PM	90	91	181
9/28/2016	3:15 PM	75	91	166
9/28/2016	3:30 PM	78	104	182
9/28/2016	3:45 PM	86	104	190
9/28/2016	4:00 PM	81	116	197
9/28/2016	4:15 PM	71	110	181
9/28/2016	4:30 PM	81	102	183
9/28/2016	4:45 PM	68	148	216
9/28/2016	5:00 PM	92	153	245
9/28/2016	5:15 PM	108	123	231
9/28/2016	5:30 PM	93	118	211
9/28/2016	5:45 PM	116	109	225
9/28/2016	6:00 PM	69	131	200
9/28/2016	6:15 PM	117	101	218
9/28/2016	6:30 PM	92	120	212
9/28/2016	6:45 PM	104	91	195
9/28/2016	7:00 PM	84	93	177
9/28/2016	7:15 PM	82	109	191
9/28/2016	7:30 PM	92	85	177
9/28/2016	7:45 PM	63	72	135
9/28/2016	8:00 PM	77	79	156
9/28/2016	8:15 PM	61	78	139
9/28/2016	8:30 PM	72	76	148
9/28/2016	8:45 PM	70	79	149
9/28/2016	9:00 PM	60	60	120
9/28/2016	9:15 PM	49	80	129
9/28/2016	9:30 PM	63	54	117
9/28/2016	9:45 PM	57	59	116
9/28/2016	10:00 PM	68	53	121
9/28/2016	10:15 PM	48	50	98
9/28/2016	10:30 PM	60	36	96
9/28/2016	10:45 PM	49	43	92
9/28/2016	11:00 PM	50	39	89
9/28/2016	11:15 PM	40	37	77
9/28/2016	11:30 PM	20	19	39
9/28/2016	11:45 PM	38	19	57

Volume
File Name: Y:\PDI 2016 Jobs\165257-Boston (Toole)\165257 (9) Volume.tf2
Start Date: 9/29/2016
Start Time: 12:00:00 AM
Site Code:
Location 1: North Harvard Street
Location 2: south of Soldiers Field Road

Date	Time	SB	NB	Total
9/29/2016	12:00 AM	35	20	55
9/29/2016	12:15 AM	21	14	35
9/29/2016	12:30 AM	18	16	34
9/29/2016	12:45 AM	12	10	22
9/29/2016	1:00 AM	14	13	27
9/29/2016	1:15 AM	10	11	21
9/29/2016	1:30 AM	14	4	18
9/29/2016	1:45 AM	4	8	12
9/29/2016	2:00 AM	11	10	21
9/29/2016	2:15 AM	7	5	12
9/29/2016	2:30 AM	7	5	12
9/29/2016	2:45 AM	5	4	9
9/29/2016	3:00 AM	2	1	3
9/29/2016	3:15 AM	6	3	9
9/29/2016	3:30 AM	0	1	1
9/29/2016	3:45 AM	3	6	9
9/29/2016	4:00 AM	1	6	7
9/29/2016	4:15 AM	4	2	6
9/29/2016	4:30 AM	7	3	10
9/29/2016	4:45 AM	10	2	12
9/29/2016	5:00 AM	27	18	45
9/29/2016	5:15 AM	39	14	53
9/29/2016	5:30 AM	47	17	64
9/29/2016	5:45 AM	46	30	76
9/29/2016	6:00 AM	51	40	91
9/29/2016	6:15 AM	53	47	100
9/29/2016	6:30 AM	57	73	130
9/29/2016	6:45 AM	75	76	151
9/29/2016	7:00 AM	76	88	164
9/29/2016	7:15 AM	65	82	147
9/29/2016	7:30 AM	92	102	194
9/29/2016	7:45 AM	99	100	199
9/29/2016	8:00 AM	91	109	200
9/29/2016	8:15 AM	103	150	253
9/29/2016	8:30 AM	97	130	227
9/29/2016	8:45 AM	105	129	234
9/29/2016	9:00 AM	73	87	160
9/29/2016	9:15 AM	94	95	189
9/29/2016	9:30 AM	82	124	206
9/29/2016	9:45 AM	84	100	184
9/29/2016	10:00 AM	87	78	165
9/29/2016	10:15 AM	80	85	165
9/29/2016	10:30 AM	62	97	159
9/29/2016	10:45 AM	65	72	137
9/29/2016	11:00 AM	70	82	152
9/29/2016	11:15 AM	77	69	146
9/29/2016	11:30 AM	68	78	146
9/29/2016	11:45 AM	72	63	135

Date	Time	SB	NB	Total
9/29/2016	12:00 PM	70	83	153
9/29/2016	12:15 PM	77	81	158
9/29/2016	12:30 PM	60	82	142
9/29/2016	12:45 PM	76	74	150
9/29/2016	1:00 PM	62	88	150
9/29/2016	1:15 PM	59	55	114
9/29/2016	1:30 PM	60	98	158
9/29/2016	1:45 PM	75	82	157
9/29/2016	2:00 PM	80	74	154
9/29/2016	2:15 PM	65	85	150
9/29/2016	2:30 PM	82	85	167
9/29/2016	2:45 PM	89	77	166
9/29/2016	3:00 PM	67	100	167
9/29/2016	3:15 PM	74	96	170
9/29/2016	3:30 PM	72	85	157
9/29/2016	3:45 PM	62	98	160
9/29/2016	4:00 PM	79	89	168
9/29/2016	4:15 PM	73	117	190
9/29/2016	4:30 PM	56	117	173
9/29/2016	4:45 PM	90	121	211
9/29/2016	5:00 PM	80	142	222
9/29/2016	5:15 PM	97	147	244
9/29/2016	5:30 PM	116	130	246
9/29/2016	5:45 PM	122	126	248
9/29/2016	6:00 PM	91	132	223
9/29/2016	6:15 PM	124	133	257
9/29/2016	6:30 PM	107	145	252
9/29/2016	6:45 PM	107	141	248
9/29/2016	7:00 PM	93	126	219
9/29/2016	7:15 PM	104	95	199
9/29/2016	7:30 PM	92	92	184
9/29/2016	7:45 PM	73	72	145
9/29/2016	8:00 PM	67	77	144
9/29/2016	8:15 PM	73	64	137
9/29/2016	8:30 PM	71	104	175
9/29/2016	8:45 PM	67	95	162
9/29/2016	9:00 PM	71	78	149
9/29/2016	9:15 PM	57	80	137
9/29/2016	9:30 PM	68	80	148
9/29/2016	9:45 PM	69	65	134
9/29/2016	10:00 PM	68	58	126
9/29/2016	10:15 PM	62	71	133
9/29/2016	10:30 PM	56	35	91
9/29/2016	10:45 PM	52	60	112
9/29/2016	11:00 PM	54	45	99
9/29/2016	11:15 PM	43	41	84
9/29/2016	11:30 PM	55	51	106
9/29/2016	11:45 PM	37	37	74

File Name: Y:\PDI 2018 Jobs\186397-Boston (HSH)\186397 (61) Volume.tf2
Start Date: 9/27/2018
Start Time: 12:00:00 AM
Site Code: TBA
Location 1: Western Avenue
Location 2: east of Hague Street

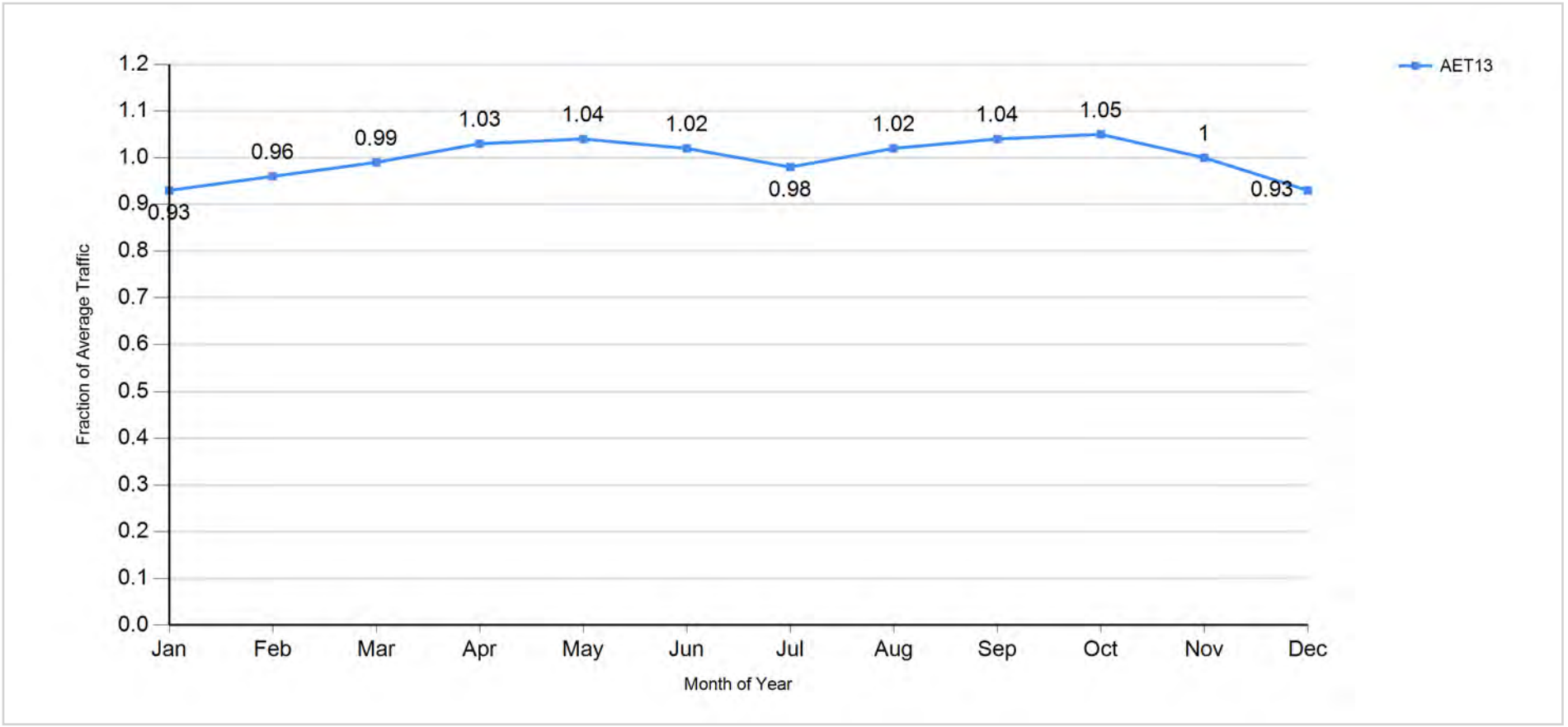
Date	Time	WB	EB	Date	Time	WB	EB
9/27/2018	12:00 AM	25	14	9/27/2018	12:00 PM	92	71
9/27/2018	12:15 AM	23	14	9/27/2018	12:15 PM	73	61
9/27/2018	12:30 AM	22	8	9/27/2018	12:30 PM	76	70
9/27/2018	12:45 AM	15	12	9/27/2018	12:45 PM	82	66
9/27/2018	01:00 AM	13	8	9/27/2018	01:00 PM	89	65
9/27/2018	01:15 AM	13	3	9/27/2018	01:15 PM	86	76
9/27/2018	01:30 AM	9	5	9/27/2018	01:30 PM	81	94
9/27/2018	01:45 AM	8	9	9/27/2018	01:45 PM	94	64
9/27/2018	02:00 AM	3	5	9/27/2018	02:00 PM	96	81
9/27/2018	02:15 AM	6	2	9/27/2018	02:15 PM	87	90
9/27/2018	02:30 AM	8	2	9/27/2018	02:30 PM	84	164
9/27/2018	02:45 AM	6	7	9/27/2018	02:45 PM	88	142
9/27/2018	03:00 AM	10	0	9/27/2018	03:00 PM	98	119
9/27/2018	03:15 AM	5	3	9/27/2018	03:15 PM	78	99
9/27/2018	03:30 AM	5	1	9/27/2018	03:30 PM	84	90
9/27/2018	03:45 AM	4	4	9/27/2018	03:45 PM	106	60
9/27/2018	04:00 AM	7	2	9/27/2018	04:00 PM	99	91
9/27/2018	04:15 AM	10	3	9/27/2018	04:15 PM	107	81
9/27/2018	04:30 AM	17	5	9/27/2018	04:30 PM	131	108
9/27/2018	04:45 AM	15	2	9/27/2018	04:45 PM	139	109
9/27/2018	05:00 AM	19	8	9/27/2018	05:00 PM	107	119
9/27/2018	05:15 AM	52	17	9/27/2018	05:15 PM	110	86
9/27/2018	05:30 AM	62	14	9/27/2018	05:30 PM	114	102
9/27/2018	05:45 AM	82	40	9/27/2018	05:45 PM	106	113
9/27/2018	06:00 AM	91	29	9/27/2018	06:00 PM	129	110
9/27/2018	06:15 AM	81	37	9/27/2018	06:15 PM	124	66
9/27/2018	06:30 AM	94	84	9/27/2018	06:30 PM	123	59
9/27/2018	06:45 AM	87	92	9/27/2018	06:45 PM	118	51
9/27/2018	07:00 AM	82	74	9/27/2018	07:00 PM	95	63
9/27/2018	07:15 AM	65	114	9/27/2018	07:15 PM	88	62
9/27/2018	07:30 AM	84	108	9/27/2018	07:30 PM	88	44
9/27/2018	07:45 AM	90	142	9/27/2018	07:45 PM	82	49
9/27/2018	08:00 AM	93	135	9/27/2018	08:00 PM	82	52
9/27/2018	08:15 AM	105	156	9/27/2018	08:15 PM	71	43
9/27/2018	08:30 AM	83	133	9/27/2018	08:30 PM	75	46
9/27/2018	08:45 AM	109	128	9/27/2018	08:45 PM	83	31
9/27/2018	09:00 AM	91	135	9/27/2018	09:00 PM	91	38
9/27/2018	09:15 AM	91	118	9/27/2018	09:15 PM	64	28
9/27/2018	09:30 AM	72	103	9/27/2018	09:30 PM	79	34
9/27/2018	09:45 AM	93	98	9/27/2018	09:45 PM	53	28
9/27/2018	10:00 AM	83	69	9/27/2018	10:00 PM	60	37
9/27/2018	10:15 AM	66	87	9/27/2018	10:15 PM	59	33
9/27/2018	10:30 AM	81	76	9/27/2018	10:30 PM	50	25
9/27/2018	10:45 AM	73	74	9/27/2018	10:45 PM	56	26
9/27/2018	11:00 AM	83	79	9/27/2018	11:00 PM	50	24
9/27/2018	11:15 AM	78	72	9/27/2018	11:15 PM	33	18
9/27/2018	11:30 AM	89	61	9/27/2018	11:30 PM	40	15
9/27/2018	11:45 AM	95	74	9/27/2018	11:45 PM	42	21

File Name: Y:\PDI 2018 Jobs\186397-Boston (HSH)\186397 (61) Volume.tf2
Start Date: 9/28/2018
Start Time: 12:00:00 AM
Site Code: TBA
Location 1: Western Avenue
Location 2: east of Hague Street

Date	Time	WB	EB	Date	Time	WB	EB
9/28/2018	12:00 AM	26	20	9/28/2018	12:00 PM	83	68
9/28/2018	12:15 AM	32	12	9/28/2018	12:15 PM	79	58
9/28/2018	12:30 AM	26	12	9/28/2018	12:30 PM	95	62
9/28/2018	12:45 AM	17	5	9/28/2018	12:45 PM	86	61
9/28/2018	01:00 AM	16	4	9/28/2018	01:00 PM	93	99
9/28/2018	01:15 AM	25	9	9/28/2018	01:15 PM	91	88
9/28/2018	01:30 AM	17	4	9/28/2018	01:30 PM	85	72
9/28/2018	01:45 AM	21	5	9/28/2018	01:45 PM	86	86
9/28/2018	02:00 AM	21	7	9/28/2018	02:00 PM	93	106
9/28/2018	02:15 AM	26	7	9/28/2018	02:15 PM	95	111
9/28/2018	02:30 AM	13	5	9/28/2018	02:30 PM	80	176
9/28/2018	02:45 AM	14	7	9/28/2018	02:45 PM	98	120
9/28/2018	03:00 AM	9	5	9/28/2018	03:00 PM	122	134
9/28/2018	03:15 AM	8	1	9/28/2018	03:15 PM	122	112
9/28/2018	03:30 AM	5	1	9/28/2018	03:30 PM	101	99
9/28/2018	03:45 AM	9	3	9/28/2018	03:45 PM	118	97
9/28/2018	04:00 AM	2	2	9/28/2018	04:00 PM	118	75
9/28/2018	04:15 AM	9	6	9/28/2018	04:15 PM	91	97
9/28/2018	04:30 AM	14	3	9/28/2018	04:30 PM	98	87
9/28/2018	04:45 AM	17	10	9/28/2018	04:45 PM	96	105
9/28/2018	05:00 AM	23	6	9/28/2018	05:00 PM	108	88
9/28/2018	05:15 AM	48	12	9/28/2018	05:15 PM	104	110
9/28/2018	05:30 AM	79	14	9/28/2018	05:30 PM	110	94
9/28/2018	05:45 AM	88	38	9/28/2018	05:45 PM	99	93
9/28/2018	06:00 AM	81	45	9/28/2018	06:00 PM	105	85
9/28/2018	06:15 AM	86	44	9/28/2018	06:15 PM	132	71
9/28/2018	06:30 AM	81	60	9/28/2018	06:30 PM	120	65
9/28/2018	06:45 AM	79	53	9/28/2018	06:45 PM	135	81
9/28/2018	07:00 AM	65	83	9/28/2018	07:00 PM	132	70
9/28/2018	07:15 AM	67	94	9/28/2018	07:15 PM	94	42
9/28/2018	07:30 AM	74	95	9/28/2018	07:30 PM	84	49
9/28/2018	07:45 AM	93	109	9/28/2018	07:45 PM	77	48
9/28/2018	08:00 AM	99	132	9/28/2018	08:00 PM	62	45
9/28/2018	08:15 AM	101	127	9/28/2018	08:15 PM	65	40
9/28/2018	08:30 AM	87	119	9/28/2018	08:30 PM	61	39
9/28/2018	08:45 AM	105	76	9/28/2018	08:45 PM	75	44
9/28/2018	09:00 AM	85	81	9/28/2018	09:00 PM	61	39
9/28/2018	09:15 AM	80	71	9/28/2018	09:15 PM	56	39
9/28/2018	09:30 AM	85	83	9/28/2018	09:30 PM	51	35
9/28/2018	09:45 AM	79	75	9/28/2018	09:45 PM	61	17
9/28/2018	10:00 AM	81	69	9/28/2018	10:00 PM	57	32
9/28/2018	10:15 AM	82	47	9/28/2018	10:15 PM	73	29
9/28/2018	10:30 AM	68	69	9/28/2018	10:30 PM	70	53
9/28/2018	10:45 AM	83	80	9/28/2018	10:45 PM	47	46
9/28/2018	11:00 AM	63	72	9/28/2018	11:00 PM	48	33
9/28/2018	11:15 AM	95	81	9/28/2018	11:15 PM	32	29
9/28/2018	11:30 AM	96	78	9/28/2018	11:30 PM	49	26
9/28/2018	11:45 AM	86	85	9/28/2018	11:45 PM	43	23

Massachusetts Highway Department

Traffic Pattern by Month for 1/1/2019 - 12/31/2019
Criteria: From 1/1/1900 To 12/31/2049 12:00:00 AM



Traffic Pattern by Month for 1/1/2019 - 12/31/2019
Criteria: From 1/1/1900 To 12/31/2049 12:00:00 AM

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U1-Boston	AET13	0	0.931	0.961	0.993	1.030	1.038	1.020	0.980	1.023	1.038	1.052	1.000	0.934
	Average of Weighted Factors		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at JFK Street													
3716883	BOSTON	01/12/2014	Property damage only (none injured)	11:20 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
3743356	BOSTON	02/11/2014	Property damage only (none injured)	1:25 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Head-on		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
3795752	BOSTON	04/27/2014	Property damage only (none injured)	6:50 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3796069	BOSTON	04/22/2014	Property damage only (none injured)	1:30 PM	1	State police	Collision with other light pole or other post/support	Daylight	Single vehicle crash		Dry	V1: Making U-turn	Clear
3797500	BOSTON	04/27/2014	Property damage only (none injured)	2:24 AM	2	State police	Collision with other movable object	Dark - lighted roadway	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Not Reported
3799769	BOSTON	04/16/2014	Non-fatal injury	3:27 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning left	Not Reported
3802093	BOSTON	04/28/2014	Non-fatal injury	1:57 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3818265	BOSTON	04/19/2014	Property damage only (none injured)	2:35 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Not reported		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
3818431	BOSTON	05/03/2014	Property damage only (none injured)	6:01 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
3828017	BOSTON	06/05/2014	Property damage only (none injured)	8:11 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3828018	BOSTON	06/07/2014	Property damage only (none injured)	6:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3845552	BOSTON	06/05/2014	Property damage only (none injured)	10:07 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3845635	BOSTON	06/05/2014	Property damage only (none injured)	11:13 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3868080	BOSTON	06/23/2014	Non-fatal injury	3:35 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Angle	P2: Entering or crossing specified	Dry	V1: Turning left	Clear
3871543	BOSTON	06/26/2014	Non-fatal injury	7:53 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3878656	BOSTON	07/05/2014	Property damage only (none injured)	6:48 AM	1	State police	Collision with guardrail	Dawn	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3882046	BOSTON	07/16/2014	Non-fatal injury	12:05 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Turning left	Rain
3882057	BOSTON	07/15/2014	Property damage only (none injured)	12:22 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3901160	BOSTON	08/05/2014	Property damage only (none injured)	2:25 PM	4	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3909148	BOSTON	08/13/2014	Property damage only (none injured)	4:12 PM	1	State police	Collision with animal - other	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3962300	BOSTON	10/04/2014	Property damage only (none injured)	10:25 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3962781	BOSTON	09/26/2014	Property damage only (none injured)	4:49 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3962784	BOSTON	09/30/2014	Property damage only (none injured)	5:04 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Changing lanes	Cloudy/Rain

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at JFK Street (cont.)													
3962786	BOSTON	10/01/2014	Property damage only (none injured)	4:58 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3962789	BOSTON	10/04/2014	Property damage only (none injured)	4:45 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3971980	BOSTON	10/02/2014	Property damage only (none injured)	8:36 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3971985	BOSTON	10/11/2014	Property damage only (none injured)	8:56 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
3971995	BOSTON	10/16/2014	Property damage only (none injured)	7:32 PM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3972020	BOSTON	10/24/2014	Property damage only (none injured)	7:01 AM	1	State police	Collision with guardrail	Dawn	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3972021	BOSTON	10/24/2014	Property damage only (none injured)	8:36 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3972030	BOSTON	10/29/2014	Property damage only (none injured)	7:24 PM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3972044	BOSTON	11/06/2014	Property damage only (none injured)	3:09 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3972046	BOSTON	11/07/2014	Property damage only (none injured)	3:41 AM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3973021	BOSTON	10/02/2014	Property damage only (none injured)	6:40 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Turning left	Rain
3973615	BOSTON	10/16/2014	Property damage only (none injured)	10:05 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Turning right	Rain
3976302	BOSTON	11/06/2014	Property damage only (none injured)	2:08 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3988037	BOSTON	12/17/2014	Property damage only (none injured)	10:35 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Changing lanes	Cloudy/Rain
3988039	BOSTON	12/24/2014	Non-fatal injury	2:09 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3988818	BOSTON	11/27/2014	Property damage only (none injured)	9:15 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Backing / V2: Travelling straight ahead	Clear
3991774	BOSTON	12/24/2014	Property damage only (none injured)	8:08 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Wet	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
4001858	BOSTON	01/16/2015	Non-fatal injury	5:09 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Not Reported
4018315	BOSTON	03/02/2015	Property damage only (none injured)	7:55 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
4019144	BOSTON	03/09/2015	Property damage only (none injured)	4:40 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
4044471	BOSTON	05/08/2015	Property damage only (none injured)	12:05 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4060290	BOSTON	06/09/2015	Property damage only (none injured)	6:40 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4086396	BOSTON	08/29/2015	Non-fatal injury	9:24 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning right / V2: Slowing or stopped in traffic	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at JFK Street (cont.)													
4108519	BOSTON	10/29/2015	Property damage only (none injured)	8:25 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4120943	BOSTON	12/10/2015	Property damage only (none injured)	9:46 AM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4176803	BOSTON	04/06/2016	Non-fatal injury	11:05 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Head-on	P1: Walking, running or cycling	Dry	V1: Turning left	Clear
4202728	BOSTON	04/27/2016	Property damage only (none injured)	12:27 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4204376	BOSTON	06/13/2016	Non-fatal injury	11:00 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4220912	BOSTON	07/02/2016	Property damage only (none injured)	8:43 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Not reported / V2: Not reported	Clear
4222899	BOSTON	06/30/2016	Property damage only (none injured)	9:25 AM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4226626	BOSTON	07/20/2016	Non-fatal injury	10:30 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P1: Entering or crossing specified	Dry	V1: Not reported	Clear
4238021	BOSTON	08/15/2016	Non-fatal injury	10:49 PM	2	State police	Collision with motor vehicle in traffic	Dark - roadway not lighted	Sideswipe, same direction		Dry	V1: Turning right / V2: Travelling straight ahead	Clear
4242584	BOSTON	08/15/2016	Non-fatal injury	8:40 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P1: Walking, running or cycling	Dry	V1: Turning left	Clear
4245882	BOSTON	09/02/2016	Property damage only (none injured)	12:18 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4246398	BOSTON	08/25/2016	Property damage only (none injured)	4:17 PM	1	State police	Not reported	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4270751	BOSTON	10/22/2016	Non-fatal injury	6:05 PM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Single vehicle crash	P2: Entering or crossing specified	Dry	V1: Turning left	Clear
4282140	BOSTON	10/27/2016	Non-fatal injury	10:30 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4327431	BOSTON	02/05/2017	Property damage only (none injured)	1:10 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4327740	BOSTON	01/18/2017	Property damage only (none injured)	9:18 PM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, opposite		Wet	V1: Turning left	Rain
4366836	BOSTON	05/06/2017	Property damage only (none injured)	9:25 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4409109	BOSTON	07/21/2017	Non-fatal injury	7:28 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4446797	BOSTON	09/21/2017	Property damage only (none injured)	8:39 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4446909	BOSTON	09/20/2017	Property damage only (none injured)	8:48 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
4449414	BOSTON	10/15/2017	Property damage only (none injured)	12:28 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P3: Entering or crossing specified	Dry	V1: Turning left	Clear
4511102	BOSTON	02/14/2018	Property damage only (none injured)	8:55 AM	1	State police	Collision with bridge	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4514528	BOSTON	12/23/2017	Property damage only (none injured)	2:11 AM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Snow	V1: Travelling straight ahead / V2: Not reported / V3: Travelling	Snow/Sleet, hail (freezing

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at JFK Street (cont.)													
4531465	BOSTON	04/24/2018	Property damage only (none injured)	2:46 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4558224	BOSTON	06/10/2018	Non-fatal injury	9:38 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4570078	BOSTON	07/10/2018	Property damage only (none injured)	2:01 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Slowing or stopped in traffic	Clear
4582575	BOSTON	08/07/2018	Property damage only (none injured)	10:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear/Cloudy
4596126	BOSTON	09/17/2018	Non-fatal injury	3:15 PM	1	State police	Not reported	Daylight	Sideswipe, opposite		Dry	V1: Turning left	Clear
4617656	BOSTON	10/31/2018	Non-fatal injury	12:26 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning left	Clear
4621600	BOSTON	11/10/2018	Property damage only (none injured)	2:28 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4630572	BOSTON	11/30/2018	Non-fatal injury	11:09 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning right	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
North Harvard Street at Soldiers Field Road													
3972044	BOSTON	11/06/2014	Property damage only (none injured)	3:09 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3972046	BOSTON	11/07/2014	Property damage only (none injured)	3:41 AM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4630572	BOSTON	11/30/2018	Non-fatal injury	11:09 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning right	Clear
4621600	BOSTON	11/10/2018	Property damage only (none injured)	2:28 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4617656	BOSTON	10/31/2018	Non-fatal injury	12:26 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning left	Clear
4596126	BOSTON	09/17/2018	Non-fatal injury	3:15 PM	1	State police	Not reported	Daylight	Sideswipe, opposite		Dry	V1: Turning left	Clear
4582575	BOSTON	08/07/2018	Property damage only (none injured)	10:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear/Cloudy
4570078	BOSTON	07/10/2018	Property damage only (none injured)	2:01 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Slowing or stopped in traffic	Clear
4558224	BOSTON	06/10/2018	Non-fatal injury	9:38 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4531465	BOSTON	04/24/2018	Property damage only (none injured)	2:46 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4514528	BOSTON	12/23/2017	Property damage only (none injured)	2:11 AM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Snow	V1: Travelling straight ahead / V2: Not reported / V3: Travelling	Snow/Sleet, hail (freezing
4511102	BOSTON	02/14/2018	Property damage only (none injured)	8:55 AM	1	State police	Collision with bridge	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4510011	BOSTON	03/02/2018	Property damage only (none injured)	2:30 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic /	Rain/Severe crosswinds
4449414	BOSTON	10/15/2017	Property damage only (none injured)	12:28 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P3: Entering or crossing specified	Dry	V1: Turning left	Clear
4446909	BOSTON	09/20/2017	Property damage only (none injured)	8:48 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
4446797	BOSTON	09/21/2017	Property damage only (none injured)	8:39 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4444309	BOSTON	09/11/2017	Property damage only (none injured)	7:24 PM	2	State police	Not reported	Dark - lighted roadway	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4409109	BOSTON	07/21/2017	Non-fatal injury	7:28 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4366836	BOSTON	05/06/2017	Property damage only (none injured)	9:25 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4327740	BOSTON	01/18/2017	Property damage only (none injured)	9:18 PM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, opposite		Wet	V1: Turning left	Rain
4327431	BOSTON	02/05/2017	Property damage only (none injured)	1:10 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4282140	BOSTON	10/27/2016	Non-fatal injury	10:30 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4270751	BOSTON	10/22/2016	Non-fatal injury	6:05 PM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Single vehicle crash	P2: Entering or crossing specified	Dry	V1: Turning left	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
North Harvard Street at Soldiers Field Road (cont.)													
4246398	BOSTON	08/25/2016	Property damage only (none injured)	4:17 PM	1	State police	Not reported	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4245882	BOSTON	09/02/2016	Property damage only (none injured)	12:18 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4242584	BOSTON	08/15/2016	Non-fatal injury	8:40 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P1: Walking, running or cycling	Dry	V1: Turning left	Clear
4238021	BOSTON	08/15/2016	Non-fatal injury	10:49 PM	2	State police	Collision with motor vehicle in traffic	Dark - roadway not lighted	Sideswipe, same direction		Dry	V1: Turning right / V2: Travelling straight ahead	Clear
4226626	BOSTON	07/20/2016	Non-fatal injury	10:30 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Dark - lighted roadway	Angle	P1: Entering or crossing specified	Dry	V1: Not reported	Clear
4222899	BOSTON	06/30/2016	Property damage only (none injured)	9:25 AM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4220912	BOSTON	07/02/2016	Property damage only (none injured)	8:43 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Not reported / V2: Not reported	Clear
4204376	BOSTON	06/13/2016	Non-fatal injury	11:00 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4202728	BOSTON	04/27/2016	Property damage only (none injured)	12:27 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4176803	BOSTON	04/06/2016	Non-fatal injury	11:05 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Head-on	P1: Walking, running or cycling	Dry	V1: Turning left	Clear
4120943	BOSTON	12/10/2015	Property damage only (none injured)	9:46 AM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4108519	BOSTON	10/29/2015	Property damage only (none injured)	8:25 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4086396	BOSTON	08/29/2015	Non-fatal injury	9:24 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning right / V2: Slowing or stopped in traffic	Clear
4060290	BOSTON	06/09/2015	Property damage only (none injured)	6:40 PM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Cloudy
4044471	BOSTON	05/08/2015	Property damage only (none injured)	12:05 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4019144	BOSTON	03/09/2015	Property damage only (none injured)	4:40 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
4018315	BOSTON	03/02/2015	Property damage only (none injured)	7:55 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
4001858	BOSTON	01/16/2015	Non-fatal injury	5:09 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Not Reported
3991774	BOSTON	12/24/2014	Property damage only (none injured)	8:08 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Wet	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
3988818	BOSTON	11/27/2014	Property damage only (none injured)	9:15 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Backing / V2: Travelling straight ahead	Clear
3988039	BOSTON	12/24/2014	Non-fatal injury	2:09 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3988037	BOSTON	12/17/2014	Property damage only (none injured)	10:35 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Changing lanes	Cloudy/Rain
3976302	BOSTON	11/06/2014	Property damage only (none injured)	2:08 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
North Harvard Street at Soldiers Field Road (cont.)													
3973615	BOSTON	10/16/2014	Property damage only (none injured)	10:05 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Turning right	Rain
3973021	BOSTON	10/02/2014	Property damage only (none injured)	6:40 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Turning left	Rain
3972030	BOSTON	10/29/2014	Property damage only (none injured)	7:24 PM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3972021	BOSTON	10/24/2014	Property damage only (none injured)	8:36 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3972020	BOSTON	10/24/2014	Property damage only (none injured)	7:01 AM	1	State police	Collision with guardrail	Dawn	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3971995	BOSTON	10/16/2014	Property damage only (none injured)	7:32 PM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3971985	BOSTON	10/11/2014	Property damage only (none injured)	8:56 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
3971980	BOSTON	10/02/2014	Property damage only (none injured)	8:36 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3962789	BOSTON	10/04/2014	Property damage only (none injured)	4:45 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3962786	BOSTON	10/01/2014	Property damage only (none injured)	4:58 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3962784	BOSTON	09/30/2014	Property damage only (none injured)	5:04 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Changing lanes	Cloudy/Rain
3962781	BOSTON	09/26/2014	Property damage only (none injured)	4:49 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3962300	BOSTON	10/04/2014	Property damage only (none injured)	10:25 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3909148	BOSTON	08/13/2014	Property damage only (none injured)	4:12 PM	1	State police	Collision with animal - other	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3901160	BOSTON	08/05/2014	Property damage only (none injured)	2:25 PM	4	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3882057	BOSTON	07/15/2014	Property damage only (none injured)	12:22 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3882046	BOSTON	07/16/2014	Non-fatal injury	12:05 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Turning left	Rain
3878656	BOSTON	07/05/2014	Property damage only (none injured)	6:48 AM	1	State police	Collision with guardrail	Dawn	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy
3871543	BOSTON	06/26/2014	Non-fatal injury	7:53 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3868080	BOSTON	06/23/2014	Non-fatal injury	3:35 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Angle	P2: Entering or crossing specified	Dry	V1: Turning left	Clear
3845635	BOSTON	06/05/2014	Property damage only (none injured)	11:13 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3845552	BOSTON	06/05/2014	Property damage only (none injured)	10:07 AM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3828018	BOSTON	06/07/2014	Property damage only (none injured)	6:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
North Harvard Street at Soldiers Field Road (cont.)													
3828017	BOSTON	06/05/2014	Property damage only (none injured)	8:11 AM	1	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3818431	BOSTON	05/03/2014	Property damage only (none injured)	6:01 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
3818265	BOSTON	04/19/2014	Property damage only (none injured)	2:35 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Not reported		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
3802093	BOSTON	04/28/2014	Non-fatal injury	1:57 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3799769	BOSTON	04/16/2014	Non-fatal injury	3:27 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Turning left	Not Reported
3797500	BOSTON	04/27/2014	Property damage only (none injured)	2:24 AM	2	State police	Collision with other movable object	Dark - lighted roadway	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Not Reported
3796069	BOSTON	04/22/2014	Property damage only (none injured)	1:30 PM	1	State police	Collision with other light pole or other post/support	Daylight	Single vehicle crash		Dry	V1: Making U-turn	Clear
3795752	BOSTON	04/27/2014	Property damage only (none injured)	6:50 AM	1	State police	Collision with median barrier	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Rain
3743356	BOSTON	02/11/2014	Property damage only (none injured)	1:25 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Head-on		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
3716883	BOSTON	01/12/2014	Property damage only (none injured)	11:20 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
North Harvard Street at Western Avenue													
4003079	BOSTON	11/06/2014	Not Reported	8:08 PM	3	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Wet	V1: Travelling straight ahead / V2: Not reported / V3: Not reported	Rain
4118326	BOSTON	08/16/2015	Non-fatal injury	4:59 PM	1	Local police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Entering or crossing specified	Dry	V1: Travelling straight ahead	Clear
Cambridge Street at North Harvard Street													
3826250	BOSTON	01/30/2014	Property damage only (none injured)	9:46 AM	1	Local police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Single vehicle crash	P2: Walking, running or cycling	Dry	V1: Turning left	Clear/Clear
3928352	BOSTON	08/19/2014	Property damage only (none injured)	9:10 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4341112	BOSTON	01/28/2017	Property damage only (none injured)	3:00 PM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Making U-turn	Clear
4436986	BOSTON	09/28/2017	Property damage only (none injured)	12:55 AM	1	State police	Collision with guardrail	Dark - roadway not lighted	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4454601	BOSTON	10/17/2017	Not Reported	10:15 PM	2	Local police	Collision with parked motor vehicle	Dark - lighted roadway	Sideswipe, opposite		Wet	V1: Turning right / V2: Parked	Clear
4554331	BOSTON	05/02/2018	Unknown	9:59 PM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Front to Front		Unknown	V1: Turning left / V2: Travelling straight ahead	Unknown
4649687	BOSTON	12/02/2018	Property damage only (none injured)	8:00 AM	2	Local police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
Cambridge Street at Windom Street													
4109648	BOSTON	08/21/2015	Non-fatal injury	10:00 AM	3	Local police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead / V3:	Clear
4628497	BOSTON	10/27/2018	Property damage only (none injured)	8:19 PM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Wet	V1: Changing lanes / V2: Travelling straight ahead	Rain/Rain
Cambridge Street at I-90 Ramps													
3718321	BOSTON	01/07/2014	Non-fatal injury	3:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
3723419	BOSTON	01/18/2014	Property damage only (none injured)	4:47 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
4139846	BOSTON	01/21/2016	Property damage only (none injured)	5:55 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Entering traffic lane / V2: Entering traffic lane	Clear
4224442	BOSTON	07/03/2016	Property damage only (none injured)	12:10 PM	2	Local police	Collision with other light pole or other post/support	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear/Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Cambridge Street at Soldiers Field Road													
3795740	BOSTON	04/10/2014	Property damage only (none injured)	7:39 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
3813108	BOSTON	05/25/2014	Property damage only (none injured)	2:30 AM	1	State police	Collision with guardrail	Dark - lighted roadway	Single vehicle crash		Dry	V1: Turning right	Clear
3828015	BOSTON	06/03/2014	Property damage only (none injured)	3:47 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear
3828019	BOSTON	06/08/2014	Not Reported	11:20 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Leaving traffic lane / V2: Turning left	Clear
3845590	BOSTON	06/12/2014	Property damage only (none injured)	7:52 AM	1	State police	Collision with bridge overhead structure	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3901161	BOSTON	08/07/2014	Property damage only (none injured)	3:03 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
3908973	BOSTON	08/13/2014	Property damage only (none injured)	12:25 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Turning left / V2: Turning left	Cloudy/Rain
3910034	BOSTON	07/31/2014	Property damage only (none injured)	8:00 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
3962293	BOSTON	09/27/2014	Property damage only (none injured)	12:15 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear
3962297	BOSTON	10/01/2014	Property damage only (none injured)	3:29 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Wet	V1: Travelling straight ahead	Cloudy/Rain
3962298	BOSTON	10/01/2014	Non-fatal injury	5:32 PM	2	State police	Collision with motor vehicle in traffic	Dusk	Angle		Wet	V1: Turning left / V2: Turning left	Cloudy/Rain
3971984	BOSTON	10/10/2014	Property damage only (none injured)	4:45 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
3972002	BOSTON	10/18/2014	Property damage only (none injured)	2:10 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
3976303	BOSTON	11/15/2014	Non-fatal injury	1:40 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4045034	BOSTON	05/13/2015	Property damage only (none injured)	10:49 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4098935	BOSTON	10/04/2015	Property damage only (none injured)	2:34 AM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead	Clear
4114906	BOSTON	11/27/2015	Property damage only (none injured)	5:10 PM	2	State police	Not reported	Dark - roadway not lighted	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4220906	BOSTON	06/24/2016	Property damage only (none injured)	2:45 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, opposite		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4221196	BOSTON	06/26/2016	Property damage only (none injured)	9:05 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4239121	BOSTON	08/18/2016	Property damage only (none injured)	1:15 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4241506	BOSTON	08/13/2016	Property damage only (none injured)	9:25 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4246793	BOSTON	08/31/2016	Property damage only (none injured)	7:52 AM	3	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left / V3: Not reported	Not Reported
4271182	BOSTON	10/02/2016	Property damage only (none injured)	6:40 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Cambridge Street at Soldiers Field Road (cont.)													
4326563	BOSTON	01/29/2017	Non-fatal injury	9:55 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4366377	BOSTON	05/17/2017	Property damage only (none injured)	10:38 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4437230	BOSTON	10/05/2017	Property damage only (none injured)	7:10 PM	2	State police	Collision with motor vehicle in traffic	Dusk	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Slowing or stopped in traffic	Clear
4497481	BOSTON	02/06/2018	Property damage only (none injured)	2:45 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4504715	BOSTON	02/09/2018	Property damage only (none injured)	7:35 PM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Entering traffic lane / V2: Travelling straight ahead / V3:	Clear
4531907	BOSTON	04/23/2018	Non-fatal injury	12:03 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Single vehicle crash	P2: Walking, running or cycling	Dry	V1: Turning right	Clear
4531908	BOSTON	04/25/2018	Non-fatal injury	7:35 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy/Rain
4541596	BOSTON	05/11/2018	Property damage only (none injured)	8:19 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
4542234	BOSTON	05/14/2018	Property damage only (none injured)	6:30 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Not Reported
4546430	BOSTON	05/15/2018	Property damage only (none injured)	10:35 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4546432	BOSTON	05/24/2018	Property damage only (none injured)	2:16 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4558261	BOSTON	06/18/2018	Property damage only (none injured)	11:47 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4571369	BOSTON	07/20/2018	Property damage only (none injured)	1:05 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4578240	BOSTON	07/17/2018	Property damage only (none injured)	3:08 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
4578556	BOSTON	08/04/2018	Property damage only (none injured)	2:00 AM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4587762	BOSTON	08/27/2018	Property damage only (none injured)	2:22 PM	1	State police	Other non-collision	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4593485	BOSTON	09/08/2018	Property damage only (none injured)	7:05 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4594353	BOSTON	09/16/2018	Property damage only (none injured)	2:50 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Backing / V2: Slowing or stopped in traffic	Clear
4599944	BOSTON	09/05/2018	Property damage only (none injured)	3:04 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4599976	BOSTON	08/09/2018	Property damage only (none injured)	5:20 PM	2	State police	Not reported	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Not reported	Clear
4611241	BOSTON	10/10/2018	Property damage only (none injured)	2:43 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear/Cloudy
4617562	BOSTON	10/23/2018	Property damage only (none injured)	7:11 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear/Rain
4617651	BOSTON	10/27/2018	Property damage only (none injured)	5:10 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Turning left / V2: Travelling straight ahead	Rain

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Cambridge Street at Soldiers Field Road (cont.)													
4626921	BOSTON	11/15/2018	Property damage only (none injured)	9:03 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear/Cloudy
4606139	BOSTON	10/02/2018	Property damage only (none injured)	8:52 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Wet	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4507591	BOSTON	01/23/2018	Non-fatal injury	3:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4473748	BOSTON	12/26/2017	Non-fatal injury	8:25 PM	2	State police	Collision with motor vehicle in traffic	Dark - roadway not lighted	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4470527	BOSTON	11/15/2017	Property damage only (none injured)	6:30 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4469963	BOSTON	12/13/2017	Property damage only (none injured)	1:30 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4438961	BOSTON	09/30/2017	Non-fatal injury	3:50 PM	2	State police	Not reported	Daylight	Sideswipe, same direction		Wet	V1: Turning left / V2: Turning left	Rain
4438959	BOSTON	09/25/2017	Property damage only (none injured)	9:50 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
4414209	BOSTON	08/25/2017	Non-fatal injury	6:25 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
4389830	BOSTON	07/14/2017	Property damage only (none injured)	9:15 PM	2	State police	Not reported	Dark - lighted roadway	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4387037	BOSTON	06/19/2017	Property damage only (none injured)	6:30 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear
4369117	BOSTON	05/19/2017	Property damage only (none injured)	8:50 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4365609	BOSTON	04/21/2017	Property damage only (none injured)	11:45 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4361914	BOSTON	05/06/2017	Property damage only (none injured)	11:51 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy/Rain
4359646	BOSTON	04/28/2017	Non-fatal injury	11:18 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4345849	BOSTON	03/31/2017	Property damage only (none injured)	6:50 PM	2	State police	Collision with motor vehicle in traffic	Dusk	Rear-end		Wet	V1: Turning left / V2: Travelling straight ahead	Rain
4331236	BOSTON	01/29/2017	Property damage only (none injured)	1:45 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4312697	BOSTON	12/05/2016	Property damage only (none injured)	3:50 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4293467	BOSTON	11/20/2016	Property damage only (none injured)	8:10 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
4276280	BOSTON	10/29/2016	Property damage only (none injured)	2:40 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4259958	BOSTON	10/09/2016	Non-fatal injury	4:40 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Rain
4258036	BOSTON	09/23/2016	Property damage only (none injured)	7:11 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4253537	BOSTON	08/29/2016	Non-fatal injury	1:12 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Entering traffic lane	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Cambridge Street at Soldiers Field Road (cont.)													
4205742	BOSTON	05/20/2016	Property damage only (none injured)	9:30 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
4180840	BOSTON	04/12/2016	Property damage only (none injured)	6:15 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Single vehicle crash		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4179406	BOSTON	04/09/2016	Property damage only (none injured)	2:45 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
4174407	BOSTON	04/04/2016	Property damage only (none injured)	12:20 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Snow	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow
4165135	BOSTON	03/04/2016	Property damage only (none injured)	8:25 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
4164654	BOSTON	02/17/2016	Property damage only (none injured)	2:37 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning right / V2: Travelling straight ahead	Clear
4162497	BOSTON	03/11/2016	Property damage only (none injured)	2:45 AM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahead / V3:	Rain
4125780	BOSTON	12/17/2015	Property damage only (none injured)	3:15 PM	2	State police	Collision with motor vehicle in traffic	Dusk	Angle		Wet	V1: Turning left / V2: Travelling straight ahead	Rain
4114302	BOSTON	11/13/2015	Property damage only (none injured)	12:01 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
4110802	BOSTON	11/07/2015	Property damage only (none injured)	2:31 PM	1	State police	Collision with other light pole or other post/support	Daylight	Single vehicle crash		Dry	V1: Changing lanes	Cloudy
4106821	BOSTON	10/30/2015	Property damage only (none injured)	2:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4106820	BOSTON	10/27/2015	Property damage only (none injured)	12:23 PM	1	State police	Collision with other light pole or other post/support	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead	Clear
4104886	BOSTON	10/23/2015	Non-fatal injury	2:20 AM	1	State police	Collision with median barrier	Dark - lighted roadway	Single vehicle crash		Dry	V1: Turning right	Clear
4102398	BOSTON	10/16/2015	Property damage only (none injured)	4:57 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3:	Clear
4090171	BOSTON	08/26/2015	Property damage only (none injured)	11:50 PM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Turning left / V3: Slowing or	Clear
4084246	BOSTON	08/22/2015	Property damage only (none injured)	9:23 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4070592	BOSTON	07/25/2015	Property damage only (none injured)	1:28 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Leaving traffic lane	Clear
4065874	BOSTON	07/21/2015	Property damage only (none injured)	4:20 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4049529	BOSTON	05/28/2015	Property damage only (none injured)	10:29 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4049042	BOSTON	05/31/2015	Property damage only (none injured)	10:45 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
4048079	BOSTON	05/20/2015	Property damage only (none injured)	10:40 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
4035895	BOSTON	04/17/2015	Property damage only (none injured)	9:45 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Turning left / V2: Travelling straight ahead	Rain
4029204	BOSTON	03/29/2015	Property damage only (none injured)	9:39 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Cambridge Street at Soldiers Field Road (cont.)													
4005282	BOSTON	01/16/2015	Non-fatal injury	7:45 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Ice	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow/Sleet, hail (freezing
3992654	BOSTON	01/07/2015	Property damage only (none injured)	7:03 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Ice	V1: Slowing or stopped in traffic / V2: Entering traffic lane	Cloudy
3984888	BOSTON	12/07/2014	Property damage only (none injured)	1:45 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Turning left	Clear
3980724	BOSTON	11/29/2014	Property damage only (none injured)	12:50 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
3980011	BOSTON	12/03/2014	Property damage only (none injured)	11:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Turning left	Rain
3977862	BOSTON	10/27/2014	Non-fatal injury	7:25 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
3933733	BOSTON	09/04/2014	Non-fatal injury	7:45 PM	2	State police	Collision with motor vehicle in traffic	Dusk	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3922607	BOSTON	08/21/2014	Non-fatal injury	10:36 PM	1	State police	Not reported	Dark - lighted roadway	Single vehicle crash		Dry	V1: Turning right	Clear
3876700	BOSTON	06/19/2014	Property damage only (none injured)	12:07 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
3783317	BOSTON	02/26/2014	Non-fatal injury	3:25 PM	4	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3:	Clear
3778783	BOSTON	02/26/2014	Property damage only (none injured)	3:15 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic /	Not Reported
3748808	BOSTON	02/26/2014	Non-fatal injury	3:17 PM	1	State police	Collision with guardrail	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3714091	BOSTON	01/02/2014	Non-fatal injury	10:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Snow	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Snow
4623574	BOSTON	11/11/2018	Property damage only (none injured)	8:22 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Entering traffic lane	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at River Street													
3714988	CAMBRIDGE	01/02/2014	Property damage only (none injured)	1:53 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Head-on		Snow	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow
3735105	CAMBRIDGE	01/21/2014	Property damage only (none injured)	12:30 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Changing lanes	Clear
3738718	CAMBRIDGE	02/09/2014	Property damage only (none injured)	1:48 PM	2	State police	Not reported	Daylight	Not reported		Snow	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy/Sleet, hail (freezing
3776244	CAMBRIDGE	02/18/2014	Non-fatal injury	2:49 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Snow	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Snow
3793929	CAMBRIDGE	04/25/2014	Non-fatal injury	1:02 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Rear-end	P2: Approaching or leaving vehicle	Dry	V1: Slowing or stopped in traffic	Clear
3912840	CAMBRIDGE	07/16/2014	Not Reported	10:28 PM	1	Local police	Not reported	Dark - lighted roadway	Angle	P2: Entering or crossing specified	Dry	V1: Turning left	Clear
3926192	CAMBRIDGE	09/03/2014	Property damage only (none injured)	12:29 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3928461	CAMBRIDGE	08/04/2014	Property damage only (none injured)	11:23 AM	2	Local police	Not reported	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
3962280	CAMBRIDGE	10/05/2014	Property damage only (none injured)	3:17 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3971963	CAMBRIDGE	10/30/2014	Property damage only (none injured)	6:26 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Turning right / V2: Turning right	Cloudy
3971992	CAMBRIDGE	10/15/2014	Property damage only (none injured)	12:41 PM	1	State police	Collision with bridge	Daylight	Single vehicle crash		Dry	V1: Slowing or stopped in traffic	Clear
3980006	CAMBRIDGE	11/25/2014	Property damage only (none injured)	9:10 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Overtaking/passing / V2: Travelling straight ahead	Clear
3993168	CAMBRIDGE	01/11/2015	Property damage only (none injured)	6:40 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Cloudy
4021249	CAMBRIDGE	03/13/2015	Property damage only (none injured)	12:31 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4022803	CAMBRIDGE	03/15/2015	Non-fatal injury	8:20 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4044480	CAMBRIDGE	05/19/2015	Property damage only (none injured)	11:00 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4045723	CAMBRIDGE	05/20/2015	Property damage only (none injured)	10:00 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
4060256	CAMBRIDGE	06/02/2015	Non-fatal injury	11:08 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, opposite		Dry	V1: Turning right / V2: Slowing or stopped in traffic	Clear
4060291	CAMBRIDGE	06/13/2015	Property damage only (none injured)	12:42 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4073578	CAMBRIDGE	08/07/2015	Non-fatal injury	4:43 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic /	Clear
4082999	CAMBRIDGE	09/09/2015	Non-fatal injury	9:58 PM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Slowing or stopped in traffic / V2: Turning right / V3: Turning	Clear
4084567	CAMBRIDGE	09/12/2015	Property damage only (none injured)	11:15 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Leaving traffic lane	Rain
4089424	CAMBRIDGE	08/28/2015	Property damage only (none injured)	2:45 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at River Street (cont.)													
4094892	CAMBRIDGE	10/06/2015	Non-fatal injury	6:36 PM	3	State police	Not reported	Dusk	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic /	Clear
4099212	CAMBRIDGE	07/04/2015	Property damage only (none injured)	11:38 PM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4102135	CAMBRIDGE	10/23/2015	Non-fatal injury	2:45 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
4104883	CAMBRIDGE	10/24/2015	Property damage only (none injured)	10:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Changing lanes / V2: Travelling straight ahead	Not Reported
4140635	CAMBRIDGE	01/02/2016	Property damage only (none injured)	12:33 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4157187	CAMBRIDGE	11/20/2015	Non-fatal injury	3:32 AM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain/Rain
4186719	CAMBRIDGE	05/03/2016	Unknown	6:40 PM	2	Local police	Not reported	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Rain
4200473	CAMBRIDGE	06/04/2016	Not Reported	12:19 PM	2	Local police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning right / V2: Other	Clear/Clear
4220889	CAMBRIDGE	05/26/2016	Non-fatal injury	1:10 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Not reported / V2: Not reported	Not Reported
4220899	CAMBRIDGE	06/13/2016	Non-fatal injury	12:53 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4222418	CAMBRIDGE	07/12/2016	Property damage only (none injured)	9:40 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4226728	CAMBRIDGE	07/21/2016	Property damage only (none injured)	2:50 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4262528	CAMBRIDGE	10/12/2016	Not Reported	10:06 PM	2	Local police	Not reported	Dusk	Sideswipe, opposite		Not reported	V1: Parked / V2: Travelling straight ahead	Clear
4266838	CAMBRIDGE	10/14/2016	Non-fatal injury	2:15 AM	1	State police	Collision with curb	Dark - lighted roadway	Single vehicle crash		Dry	V1: Turning left	Not Reported
4277464	CAMBRIDGE	11/02/2016	Unknown	10:47 PM	2	Local police	Not reported	Dusk	Angle		Dry	V1: Turning right / V2: Travelling straight ahead	Cloudy
4281527	CAMBRIDGE	11/07/2016	Non-fatal injury	12:50 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4290129	CAMBRIDGE	11/12/2016	Non-fatal injury	3:10 AM	2	State police	Collision with other movable object	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Not Reported
4291876	CAMBRIDGE	11/07/2016	Non-fatal injury	3:20 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4313028	CAMBRIDGE	12/29/2016	Property damage only (none injured)	1:15 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Wet	V1: Not reported / V2: Not reported	Rain
4317769	CAMBRIDGE	11/22/2016	Property damage only (none injured)	7:17 AM	3	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead / V3:	Cloudy
4335483	CAMBRIDGE	02/23/2017	Property damage only (none injured)	5:31 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4338452	CAMBRIDGE	03/05/2017	Property damage only (none injured)	12:01 PM	1	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead	Clear
4350017	CAMBRIDGE	04/08/2017	Property damage only (none injured)	9:35 AM	2	Local police	Unknown	Unknown	Sideswipe, same direction		Unknown	V1: Unknown / V2: Travelling straight ahead	Unknown/Unknown

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at River Street (cont.)													
4384979	CAMBRIDGE	05/28/2017	Property damage only (none injured)	7:05 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
4397830	CAMBRIDGE	07/24/2017	Property damage only (none injured)	4:30 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Rain
4423813	CAMBRIDGE	08/19/2017	Property damage only (none injured)	3:30 PM	2	State police	Not reported	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4426868	CAMBRIDGE	06/02/2017	Property damage only (none injured)	1:05 PM	1	State police	Collision with tree	Daylight	Rear-end		Dry	V1: Backing	Clear
4433614	CAMBRIDGE	10/01/2017	Property damage only (none injured)	10:43 PM	2	Local police	Collision with motor vehicle in traffic	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4452825	CAMBRIDGE	11/02/2017	Property damage only (none injured)	8:30 PM	2	Local police	Collision with motor vehicle in traffic	Daylight	Unknown		Dry	V1: Parked / V2: Unknown	Cloudy
4457273	CAMBRIDGE	11/21/2017	Non-fatal injury	9:10 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Entering or crossing specified	Dry	V1: Turning right	Clear
4492683	CAMBRIDGE	01/20/2018	Property damage only (none injured)	2:37 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4503770	CAMBRIDGE	02/01/2018	Property damage only (none injured)	8:29 PM	2	State police	Not reported	Dark - lighted roadway	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow
4571501	CAMBRIDGE	07/17/2018	Non-fatal injury	10:15 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4617645	CAMBRIDGE	10/23/2018	Non-fatal injury	4:25 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Sideswipe, same direction	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Cloudy
4626925	CAMBRIDGE	11/23/2018	Non-fatal injury	2:18 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4636237	CAMBRIDGE	12/10/2018	Property damage only (none injured)	3:10 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4639495	CAMBRIDGE	12/12/2018	Property damage only (none injured)	4:37 PM	2	State police	Collision with motor vehicle in traffic	Dark - roadway not lighted	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4641249	CAMBRIDGE	12/24/2018	Non-fatal injury	4:00 PM	7	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, opposite		Wet	V6: Slowing or stopped in traffic / V1: Travelling straight ahead / V2:	Clear/Snow
4644292	CAMBRIDGE	12/30/2018	Non-fatal injury	1:05 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at Western Avenue													
3714989	CAMBRIDGE	01/03/2014	Property damage only (none injured)	1:54 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Head-on		Ice	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Not Reported
3714990	CAMBRIDGE	01/07/2014	Property damage only (none injured)	9:18 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
3718322	CAMBRIDGE	01/17/2014	Property damage only (none injured)	11:43 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Cloudy
3772676	CAMBRIDGE	03/15/2014	Non-fatal injury	4:33 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3778782	CAMBRIDGE	02/15/2014	Property damage only (none injured)	11:17 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, opposite		Snow	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow
3793939	CAMBRIDGE	04/08/2014	Non-fatal injury	6:55 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Wet	V1: Travelling straight ahead / V2: Turning left	Cloudy/Rain
3799212	CAMBRIDGE	05/02/2014	Property damage only (none injured)	10:35 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Turning right	Clear
3802094	CAMBRIDGE	05/02/2014	Property damage only (none injured)	9:07 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear
3829999	CAMBRIDGE	06/09/2014	Non-fatal injury	1:21 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3899695	CAMBRIDGE	08/05/2014	Property damage only (none injured)	4:48 PM	4	State police	Collision with motor vehicle in traffic	Daylight	Rear-to-rear		Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic /	Clear
3926183	CAMBRIDGE	08/22/2014	Property damage only (none injured)	1:00 PM	3	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
3926191	CAMBRIDGE	08/29/2014	Non-fatal injury	11:21 AM	1	State police	Collision with embankment	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
3935854	CAMBRIDGE	09/11/2014	Property damage only (none injured)	3:35 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
3971999	CAMBRIDGE	10/17/2014	Property damage only (none injured)	9:08 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Cloudy
3973618	CAMBRIDGE	10/21/2014	Property damage only (none injured)	4:41 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Changing lanes	Not Reported
3989841	CAMBRIDGE	11/29/2014	Non-fatal injury	4:48 PM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3:	Clear
3991993	CAMBRIDGE	12/16/2014	Property damage only (none injured)	11:40 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Cloudy
4016326	CAMBRIDGE	02/04/2015	Property damage only (none injured)	11:10 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
4029353	CAMBRIDGE	04/06/2015	Non-fatal injury	3:15 AM	1	State police	Collision with other	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4066067	CAMBRIDGE	07/08/2015	Non-fatal injury	11:38 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4076583	CAMBRIDGE	08/10/2015	Property damage only (none injured)	12:55 AM	2	State police	Not reported	Dark - lighted roadway	Head-on		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4081573	CAMBRIDGE	09/01/2015	Property damage only (none injured)	6:58 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4083938	CAMBRIDGE	09/12/2015	Non-fatal injury	12:51 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Head-on		Dry	V1: Turning left / V2: Travelling straight ahead	Clear

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at Western Avenue (cont.)													
4093594	CAMBRIDGE	09/10/2015	Non-fatal injury	11:22 AM	1	State police	Collision with utility pole	Daylight	Single vehicle crash		Dry	V1: Travelling straight ahead	Not Reported
4135199	CAMBRIDGE	09/28/2015	Property damage only (none injured)	6:21 PM	2	Local police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning right	Clear
4135521	CAMBRIDGE	12/25/2015	Non-fatal injury	6:35 PM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Angle	P2: Walking, running or cycling	Dry	V1: Travelling straight ahead	Clear
4148293	CAMBRIDGE	01/16/2016	Property damage only (none injured)	2:30 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
4168876	CAMBRIDGE	12/16/2015	Property damage only (none injured)	2:06 PM	2	Local police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Slowing or stopped in traffic / V2: Changing lanes	Clear
4170116	CAMBRIDGE	03/31/2016	Property damage only (none injured)	10:50 PM	1	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Single vehicle crash		Dry	V1: Travelling straight ahead	Clear
4176743	CAMBRIDGE	04/12/2016	Property damage only (none injured)	3:30 PM	3	Local police	Collision with motor vehicle in traffic	Daylight	Rear-end		Wet	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Rain
4202741	CAMBRIDGE	05/30/2016	Property damage only (none injured)	4:36 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4204904	CAMBRIDGE	05/27/2016	Non-fatal injury	5:43 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4220895	CAMBRIDGE	06/09/2016	Property damage only (none injured)	7:16 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Not Reported
4222420	CAMBRIDGE	07/15/2016	Non-fatal injury	3:10 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4229010	CAMBRIDGE	07/25/2016	Property damage only (none injured)	8:55 AM	1	State police	Collision with pedalcycle (bicycle, tricycle, unicycle,	Daylight	Single vehicle crash	P2: Walking, running or cycling	Dry	V1: Turning right	Clear
4239124	CAMBRIDGE	08/22/2016	Property damage only (none injured)	3:30 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4245562	CAMBRIDGE	09/07/2016	Non-fatal injury	8:30 PM	1	State police	Collision with pedestrian	Dark - lighted roadway	Single vehicle crash	P2: Entering or crossing specified	Dry	V1: Turning left	Clear
4249257	CAMBRIDGE	09/13/2016	Non-fatal injury	1:37 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4255742	CAMBRIDGE	09/29/2016	Non-fatal injury	12:32 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Not Reported
4262314	CAMBRIDGE	09/21/2016	Property damage only (none injured)	1:15 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4268992	CAMBRIDGE	10/23/2016	Property damage only (none injured)	1:30 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Not reported / V2: Not reported	Clear
4281056	CAMBRIDGE	11/07/2016	Property damage only (none injured)	10:38 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Turning left / V2: Turning left	Clear
4313009	CAMBRIDGE	11/17/2016	Property damage only (none injured)	8:30 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
4331239	CAMBRIDGE	02/25/2017	Non-fatal injury	11:48 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Wet	V1: Leaving traffic lane / V2: Turning left	Cloudy
4333515	CAMBRIDGE	02/25/2017	Non-fatal injury	8:36 PM	2	Local police	Not reported	Dark - lighted roadway	Sideswipe, same direction		Wet	V1: Travelling straight ahead / V2: Turning left	Rain
4335486	CAMBRIDGE	02/28/2017	Non-fatal injury	1:58 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Memorial Drive at Western Avenue (cont.)													
4338831	CAMBRIDGE	03/14/2017	Property damage only (none injured)	1:39 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Snow	V1: Travelling straight ahead / V2: Travelling straight ahead	Snow
4370780	CAMBRIDGE	02/08/2017	Not Reported	3:39 PM	2	Local police	Collision with motor vehicle in traffic	Dawn	Rear-end		Ice	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
4373077	CAMBRIDGE	05/19/2017	Non-fatal injury	2:15 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4416269	CAMBRIDGE	08/26/2017	Property damage only (none injured)	9:15 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
4449413	CAMBRIDGE	09/24/2017	Non-fatal injury	1:50 AM	2	State police	Collision with other movable object	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4453771	CAMBRIDGE	11/09/2017	Property damage only (none injured)	12:15 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4486879	CAMBRIDGE	12/29/2017	Property damage only (none injured)	12:35 AM	3	State police	Collision with other movable object	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Not Reported
4492682	CAMBRIDGE	01/19/2018	Property damage only (none injured)	9:47 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Head-on		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4522877	CAMBRIDGE	02/23/2018	Property damage only (none injured)	9:04 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4524041	CAMBRIDGE	03/28/2018	Property damage only (none injured)	2:01 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
4551521	CAMBRIDGE	06/04/2018	Non-fatal injury	12:06 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4559124	CAMBRIDGE	06/30/2018	Non-fatal injury	10:16 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Not Reported
4560578	CAMBRIDGE	06/25/2018	Property damage only (none injured)	12:49 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Turning left / V2: Travelling straight ahead	Clear
4586591	CAMBRIDGE	07/12/2018	Property damage only (none injured)	6:10 AM	1	State police	Collision with motor vehicle in traffic	Dawn	Angle	P2: Walking, running or cycling	Dry	V1: Turning right	Not Reported
4602101	CAMBRIDGE	09/17/2018	Non-fatal injury	1:50 AM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Cloudy
4638396	CAMBRIDGE	12/07/2018	Property damage only (none injured)	8:08 AM	3	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Slowing or stopped in traffic / V2: Changing lanes / V3:	Clear
4648652	CAMBRIDGE	12/21/2018	Non-fatal injury	1:24 AM	2	State police	Collision with other movable object	Dark - lighted roadway	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy

Allston ERC Crash Data

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	# of Vehicles	Police Agency Type	First Harmful Event	Light Conditions	Manner of Collision	Non-Motorist Action (All Persons)	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Western Avenue at Soldiers Field Road													
3784005	BOSTON	03/05/2014	Property damage only (none injured)	7:00 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
3793932	BOSTON	04/01/2014	Property damage only (none injured)	9:43 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
3871545	BOSTON	07/03/2014	Property damage only (none injured)	2:19 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
3949497	BOSTON	09/17/2014	Property damage only (none injured)	6:44 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning right	Clear
3963745	BOSTON	09/12/2014	Property damage only (none injured)	6:00 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Turning left	Clear
3972029	BOSTON	10/29/2014	Property damage only (none injured)	11:30 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
3973125	BOSTON	11/08/2014	Property damage only (none injured)	6:32 PM	3	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear
4004457	BOSTON	02/06/2015	Property damage only (none injured)	8:13 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
4025387	BOSTON	03/17/2015	Property damage only (none injured)	5:59 PM	2	State police	Collision with motor vehicle in traffic	Daylight	Sideswipe, same direction		Dry	V1: Changing lanes / V2: Changing lanes	Clear
4031127	BOSTON	03/24/2015	Property damage only (none injured)	11:16 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Not Reported
4445703	BOSTON	10/03/2017	Property damage only (none injured)	8:59 AM	2	State police	Collision with motor vehicle in traffic	Daylight	Angle		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
4503774	BOSTON	02/10/2018	Property damage only (none injured)	6:16 PM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Angle		Dry	V1: Turning right / V2: Travelling straight ahead	Cloudy
4614967	BOSTON	10/13/2018	Non-fatal injury	4:15 AM	2	State police	Collision with motor vehicle in traffic	Dark - lighted roadway	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
Western Avenue at Batten Way / Hague Street													
3791068	BOSTON	04/06/2014	Non-fatal injury	6:36 AM	5	Local police	Collision with parked motor vehicle	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Parked / V3: Parked / V4: Slowing	Clear
4344813	BOSTON	03/12/2017	Non-fatal injury	10:10 AM	2	Local police	Collision with motor vehicle in traffic	Daylight	Rear-end		Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : May 2018

DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

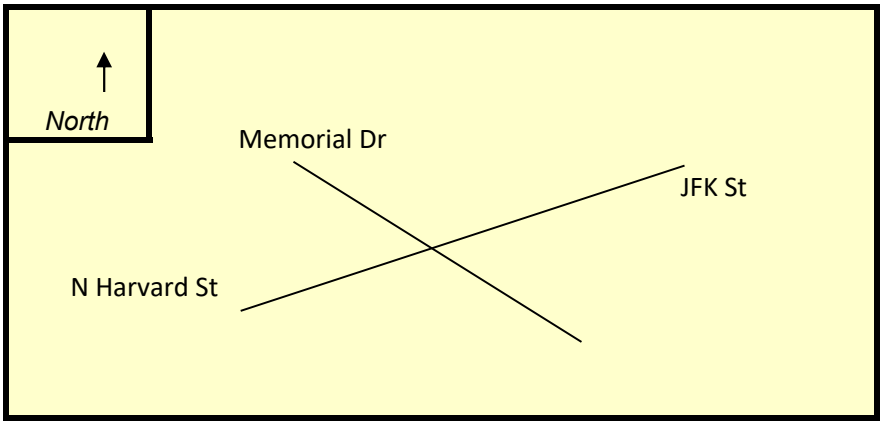
~ INTERSECTION DATA ~

MAJOR STREET : N Harvard Street

MINOR STREET(S) : Memorial Drive

JFK Street

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	960	285	1010	1005		

" K " FACTOR : 0.09 | APPROACH ADT : 36222.222 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES :	# OF YEARS :	AVERAGE # OF CRASHES (**A**) :
77	5	15.40

CRASH RATE CALCULATION : 1.16 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

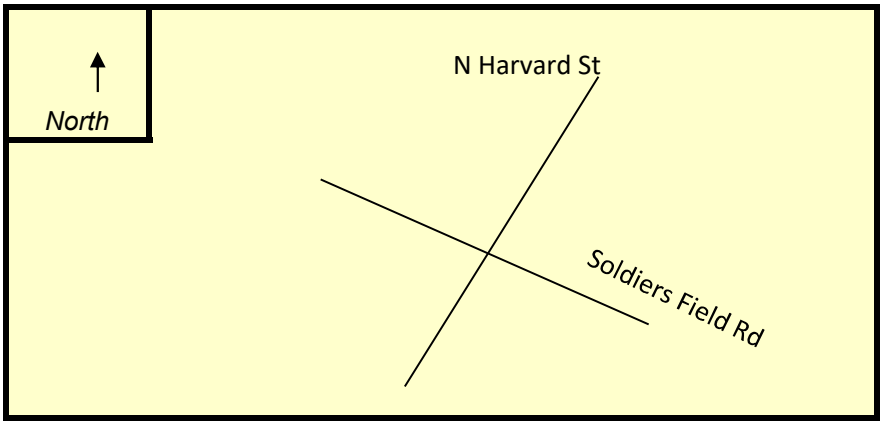
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : North Harvard Street

MINOR STREET(S) : Soldiers Field Road

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	470	565	441	457		

" K " FACTOR : 0.09 | APPROACH ADT : 21477.778 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 79 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 15.80

CRASH RATE CALCULATION : 2.02

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(ADT * 365)}$$

Source (optional):

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

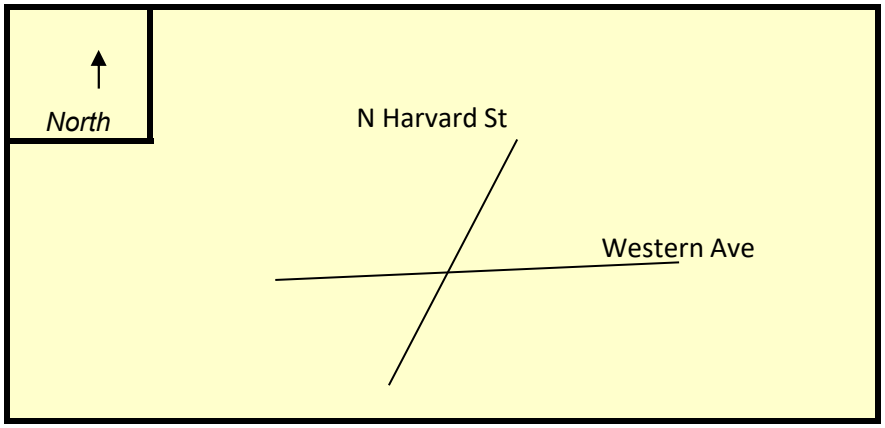
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : N Harvard Street

MINOR STREET(S) : Western Avenue

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB	Total	
VOLUMES (PM) :	380	485	285	640		

" K " FACTOR : 0.09 | APPROACH ADT : 19888.889 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 0.40

CRASH RATE CALCULATION : 0.06 | RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

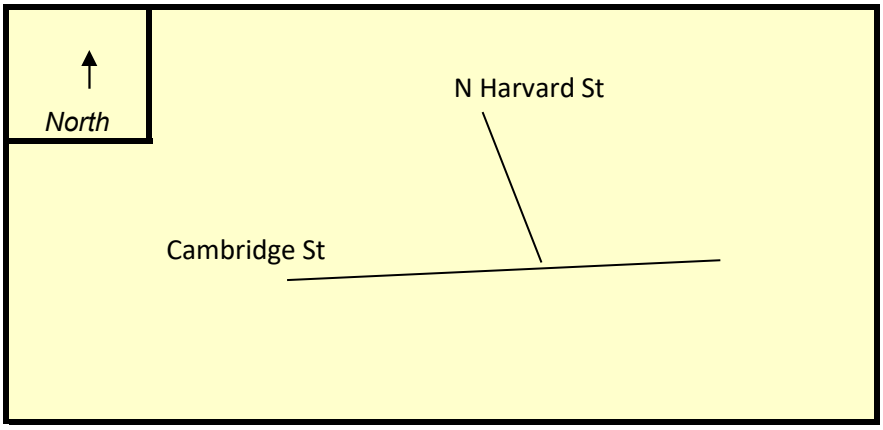
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : N Harvard Street

MINOR STREET(S) : Cambridge Street

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :		SB	EB	WB	Total	
VOLUMES (PM) :		565	1337	1497		

" K " FACTOR : 0.09 | APPROACH ADT : 37766.667 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 7 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 1.40

CRASH RATE CALCULATION : 0.10 | RATE = (A * 1,000,000) / (ADT * 365)

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

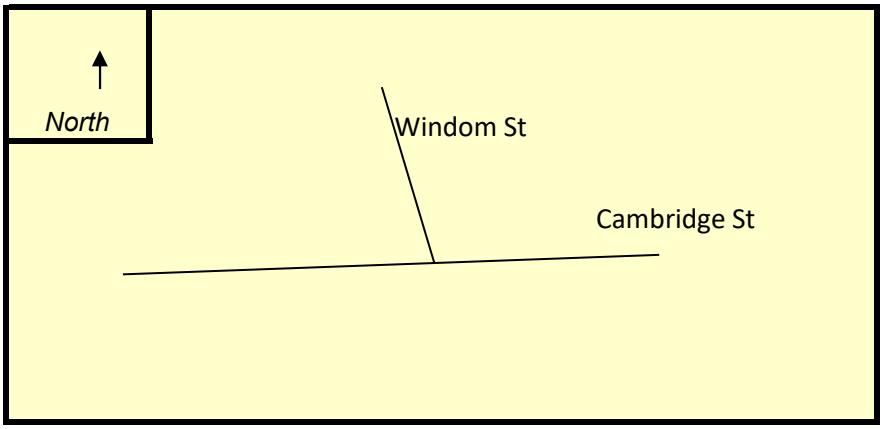
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Windsom Street

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :		SB	EB	WB		
VOLUMES (PM) :		160	701	1845		

" K " FACTOR : 0.09 | APPROACH ADT : 30066.667 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 0.40

CRASH RATE CALCULATION : 0.04 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

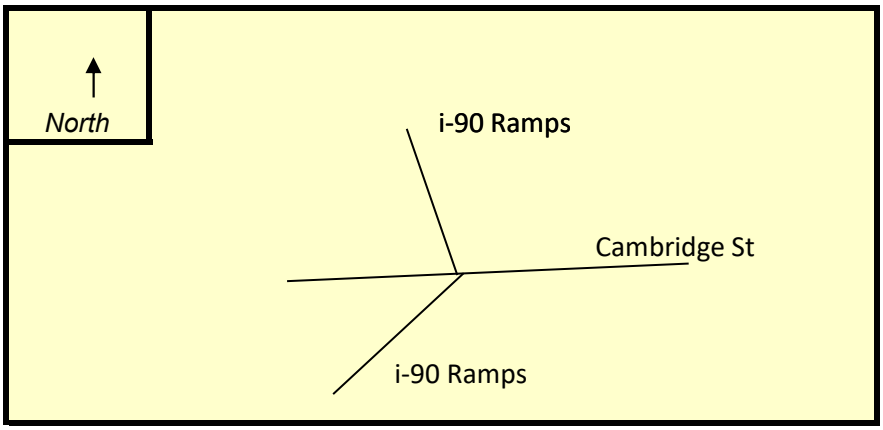
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : I-90 Rampps

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB	NEB	
VOLUMES (PM) :	85	1595	780	416	942	

" K " FACTOR : 0.09 | APPROACH ADT : 42422.623 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 4 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 0.80

CRASH RATE CALCULATION : 0.05 | RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston

COUNT DATE : April 2017

DISTRICT : 6

UNSIGNALIZED :

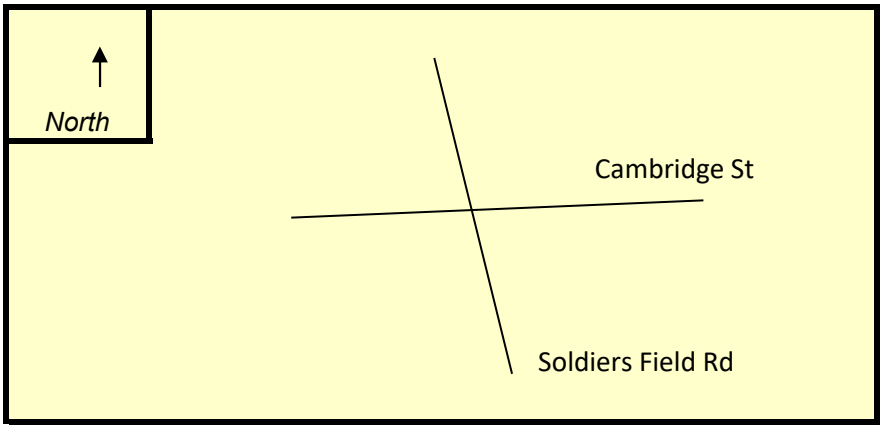
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Soldiers Field Road

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB			
VOLUMES (PM) :	455	745	1770			

" K " FACTOR : 0.09

APPROACH ADT : 33000

ADT = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 106

OF YEARS : 5

AVERAGE # OF CRASHES (**A**) : 21.20

CRASH RATE CALCULATION : 1.76

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(ADT * 365)}$$

Source (optional):

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Boston

COUNT DATE : April 2018

DISTRICT : 6

UNSIGNALIZED :

SIGNALIZED : X

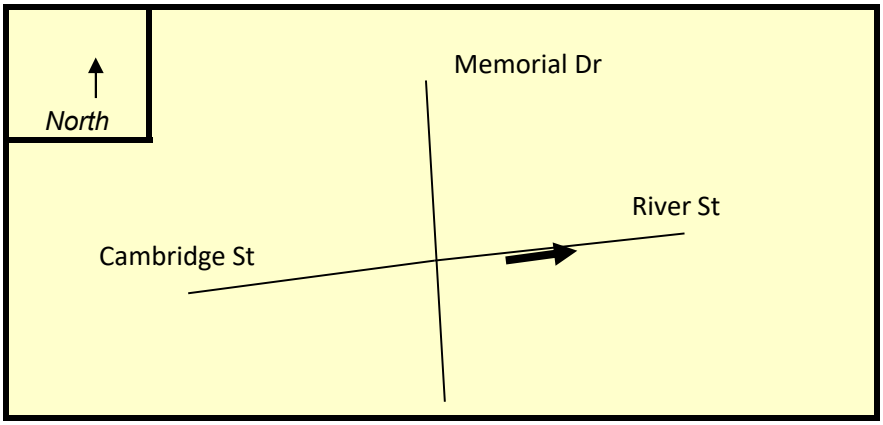
~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Memorial Drive

River Street

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB			
VOLUMES (PM) :	455	745	1770			

" K " FACTOR : 0.09

APPROACH ADT : 33000

ADT = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 62

OF YEARS : 5

AVERAGE # OF CRASHES (**A**) : 12.40

CRASH RATE CALCULATION : 1.03

RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston

COUNT DATE : April 2018

DISTRICT : 6

UNSIGNALIZED :

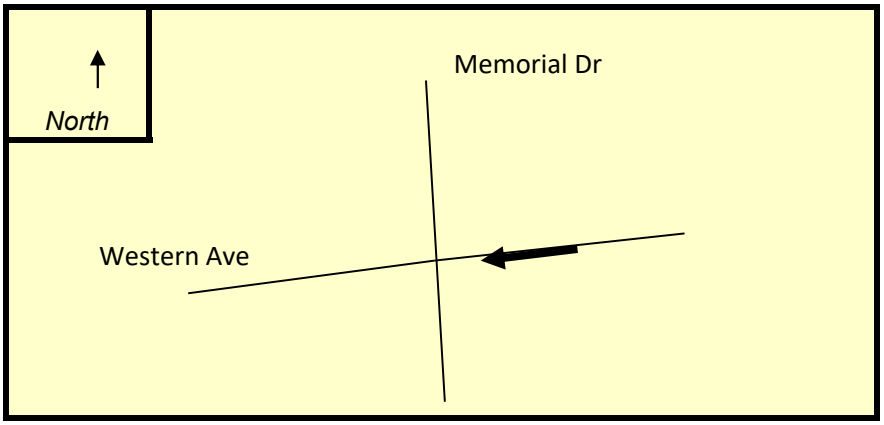
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Western Avenue

MINOR STREET(S) : Memorial Drive

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB		WB		
VOLUMES (PM) :	1145	1040		1255		

" K " FACTOR : 0.09

APPROACH ADT : 38222.222

ADT = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES :	# OF YEARS :	AVERAGE # OF CRASHES (**A**) :
63	5	12.60

CRASH RATE CALCULATION : 0.90

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(ADT * 365)}$$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston

COUNT DATE : April 2017

DISTRICT : 6

UNSIGNALIZED :

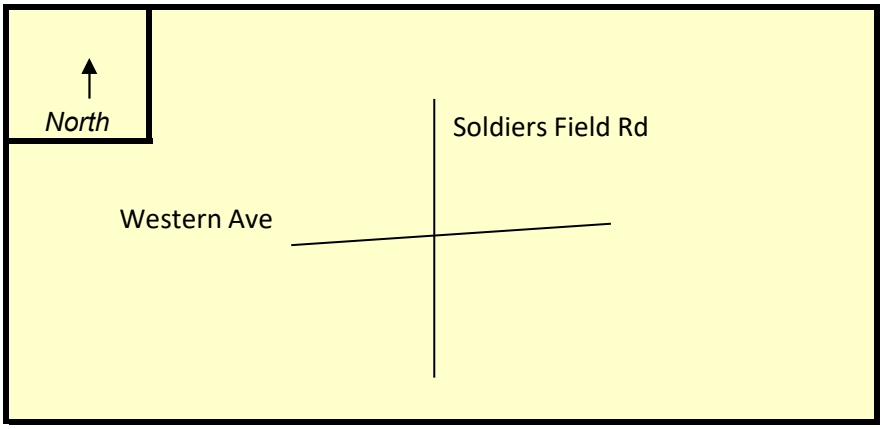
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Western Avenue

MINOR STREET(S) : Soldiers Field Road

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	375	660	470	1860		

" K " FACTOR : 0.09

APPROACH ADT : 37388.889 **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 13

OF YEARS : 5

AVERAGE # OF CRASHES (**A**) : 2.60

CRASH RATE CALCULATION : 0.19

RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

last updated: 11/06/01

CRASH RATE WORKSHEET

CITY/TOWN : Boston | COUNT DATE : April 2017

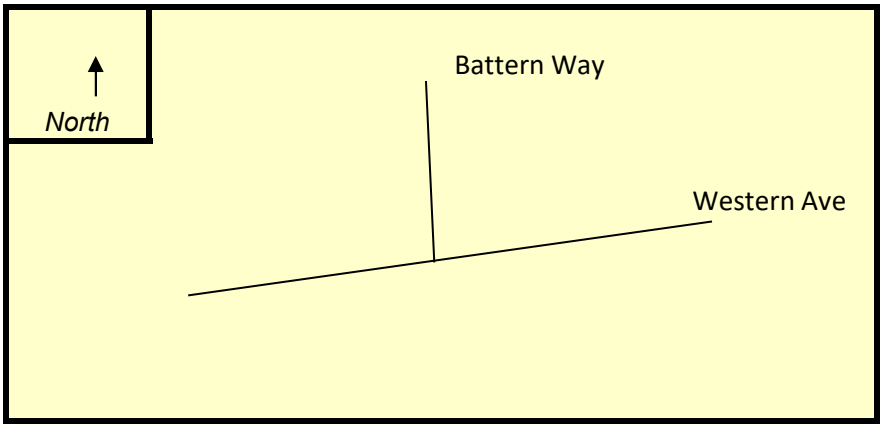
DISTRICT : 6 | UNSIGNALIZED : | SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Western Avenue

MINOR STREET(S) : Batten Way

INTERSECTION DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	165	101	360	530		

" K " FACTOR : 0.09 | APPROACH ADT : 12844.444 | **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 2 | # OF YEARS : 5 | AVERAGE # OF CRASHES (**A**) : 0.40

CRASH RATE CALCULATION : 0.09 | RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Source (optional):

Comments:

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1:: Memorial Drive at JFK Street/Anderson Bridge													
Memorial Drive	EB T												
	EB R												
Memorial Drive	WB T												
	WB R												
Anderson Bridge	NB T												
	NB R												
JFK Street	SB T												
	SB R												
2:: Anderson Bridge/N. Harvard St at SFR													
SFR	EB U												
	EB L												
	EB T												
	EB R												
SFR	WB U												
	WB L												
	WB T												
	WB R												
North Harvard St	NB L												
	NB T												
	NB R												
Anderson Bridge	SB L												
	SB T												
	SB R												
3:: N. Harvard St at Western Ave													
Western Ave	EB L												
	EB T												
	EB R												
Western Ave	WB L												
	WB T							-15	-30	15	30		
	WB R	-75	-65										
North Harvard St	NB L							15	30	-15	-30		
	NB T							5	15	-5	-15		
	NB R							55	20	-55	-20		
North Harvard St	SB L	-15	-15										
	SB T												
	SB R												

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
4:: N. Harvard St at Franklin St/Kingsley St													
Franklin St	EB L												
	EB R												
Kingsley St	WB L												
	WB T												
	WB R												
North Harvard St	NB L												
	NB T							75	65	-75	-65		
North Harvard St	SB T												
	SB R												
5:: N. Harvard St at Cambridge St													
Cambridge St	EB U												
	EB L												
	EB T												
Cambridge St	WB U												
	WB T												
	WB R							180	120	-75	-65		
N. Harvard St	SB L												
	SB R												
6A:: Cambridge Street EB at I-90 On-Ramp													
Cambridge St	EB T												
	EB R												
6:: Windom St at Cambridge St													
Cambridge St	EB U												
	EB L												
	EB T												
Cambridge St	WB U												
	WB T							205	135	-75	-65		
	WB R							-490	-315	130	85		
Windom St	SB L							-155	-55				
	SB R												

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
7:: I-90 ramps/Double Tree Driveway at Cambridge St													
Cambridge St	EB L												
	EB T							-155	-55				
	EB R												
Cambridge St	WB U												
	WB T												
	WB R												
Double Tree Driveway	NB L												
	NB T												
	NB R												
I-90 Ramps	SB R							-285	-180	55	20		
I-90 Off Ramp	NEB HL												
	NEB BL												
	NEB BR							285	180	-55	-20		
8:: SFR at River St/Cambridge St													
Cambridge St	EB U												
	EB L							55	20	-55	-20		
	EB T							50	70				
	EB R							25	35				
SFR	NB U												
	NB L												
	NB T												
	NB R												
SFR	SB U												
	SB L							-50	-70				
	SB T							-25	-35				
	SB R												
9:: Memorial Drive at River Street													
River Street Bridge	EB L												
	EB T												
	EB R												
Memorial Drive	NB T												
	NB R												
Memorial Drive	SB L												
	SB T												

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
10:: Memorial Drive at Western Ave													
Western Ave	WB L												
	WB T												
	WB R												
Memorial Drive	NB L												
	NB T												
Memorial Drive	SB T												
	SB R												
11:: SFR at Western Ave													
Western Ave	EB R							-75	-50				
Western Ave Bridge	WB L												
	WB T												
	WB R												
SFR	NB U												
	NB L							55	20	-55	-20		
	NB T												
SFR	SB T												
	SB R												
12:: Western Ave at Kresge Way / East Dr / Genzyme Driveway													
Western Ave	EB L							-30	-10	15	5		
	EB T							-75	-50				
	EB R												
Western Ave	WB L									5	6		
	WB T							25	10	-30	-16		
	WB R							30	10	-30	-10		
East Dr / Genzyme Driveway	NB L												
	NB T									15	5		
	NB R												

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
13:: Western Ave at Batten Way/ Hague St													
Western Ave	EB L							30	10	-30	-10		
	EB T							25	10	-20	-8	14	6
	EB R			-15	-8							-5	-3
Western Ave	WB L			-8	-9	6	6			-15	-18	-14	-15
	WB T			8	9	-6	-6			20	45	-20	-45
	WB R							25	10	41	14	4	1
Hague St	NB L							-20	-45			-5	-10
	NB T							-55	-20	-11	-4	-4	-1
	NB R							-130	-70			-35	-15
Batten Way	SB L									4	1	1	
	SB T									-4	-1	-1	
	SB R												
14:: Western Ave at Academic Way													
Western Ave	EB L												
	EB T	-15	-15					55	20	-55	-20		
	EB R												
Western Ave	WB L												
	WB T	-75	-65					-15	-30	15	30		
	WB R	75	65			6	6	-5	-15	5	15		
Academic Way	NB L												
	NB T												
	NB R												
Academic Way	SB L	15	15										
	SB T					6	6						
	SB R												
15:: Western Ave at Stadium Road													
Western Ave	EB T			-15	-8			55	20	-50	-18	-5	-3
	EB R			15	8					-5	-3	5	3
Western Ave	WB L			8	9								
	WB T					-6	-6	-20	-45	20	45	-25	-55
Stadium Road	NB L					12	12					25	55
	NB R											14	6

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
16:: N Harvard St at Academic Way													
N Harvard St	NB L												
	NB T	-75	-65					5	15	-5	-15		
	NB R												
N Harvard Street	SB L	15	15			6	6						
	SB T	-15	-15										
	SB R												
Driveway	EB L												
	EB T												
	EB R												
Academic Way	WB L												
	WB T												
	WB R	75	65			6	6	-5	-15	5	15		
17:: Western Ave at Cattle Dr													
Western Ave	EB T							-105	-60	-25	-10	-21	-9
	EB R									9	4	1	
Western Ave	WB L									10	12	14	15
	WB T							25	10	-40	-28	-14	-15
Cattle Dr	NB L									86	69	-16	-44
	NB R									40	15	21	9
18:: Cattle Dr at DEF Drive													
DEF Drive	WB L									5	6		
	WB R												
Cattle Drive	NB T									126	84		
	NB R									15	5		
Cattle Drive	SB L												
	SB T									19	15		

TRANSPORTATION INFRASTRUCTURE PROJECT VOLUME REDISTRIBUTION

		No Build Conditions (2025 and 2030)								2025 Build Conditions (Phase A)		2030 Build Conditions (Full Build)	
		Academic Way [1]		Stadium Road [2]		Harvard Shuttle Re-Routing [3]		Windom Street One-Way SB [4] / Restriction of Windom St U-Turn [5]		Cattle Drive Connection [6]		Hague Street Closure / Science Drive Extension [7]	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
19:: Windom St at Almy St													
Almy St	WB L									24	21		
	WB R												
Windom St	NB T							-490	-315	-11	-4		
	NB R									141	89		
Windom St	SB L												
	SB T							-155	-55	-24	-21		

1 - Existing volumes redistributed due to opening of Academic Way between North Harvard Street and Western Avenue.
2 - Existing volumes redistributed due to opening of Stadium Road between Western Avenue and Windom Street (assume 75% of left-turning traffic and 25% of right-turning traffic from Western Avenue to Hague Street rerouted to Stadium Road
3 - Additional trip generated by rerouting of Harvard shuttles to serve mobility hub on Stadium Road (assume 6 trips per hour per route).
4 - Existing volumes redistributed due to Windom St being converted to one-way SB. Assume approx. 1/3 of NB trips rerouted to North Harvard St, 1/3 rerouted to Soldiers Field Road Service Road, and 1/3 remain to access local neighborhood.
5 - Existing volumes redistributed due to U-turn movement being prohibited at Windom St. Assume approx. 60% of existing SB left movements at Windom St at Cambridge St are U-turn movements that will be rerouted to I-90 Cambridge Street I
6 - No Build volumes redistributed due to opening of Cattle Dr between Cambridge Str and Western Ave. Assume existing NB traffic rerouted from Windom Street due to one-way SB conversion will route back to Cattle Drive. Assume approx. 50%
Hague Street / Windom Street traffic will reroute to Cattle Drive.
7 - 2030 No Build volumes redistrubted due to closure of Hague Street and opening of Science Drive. Assume all Hauge Street traffic rerouted to Stadium Road or Science Drive/Cattle Drive.

Project Mode Shares by Use

Residential Mode Shares																
	BTD Zone 17 (Allston) [1]				Allston Census Data [2]				2025 Expected Mode Shares [3]				2030 Expected Mode Shares [4]			
	Auto	Transit	Walk [5]	Bike [5]	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike
Daily																
	47%	22%	*23%*	*8%*	34.2%	35.6%	23.5%	6.7%	30.8%	37.5%	24.7%	7.0%	27.8%	39.1%	25.8%	7.3%
AM Peak																
IN	37%	30%	*25%*	*8%*	*26.9%*	*48.6%*	*19.1%*	*5.4%*	24.2%	50.4%	19.8%	5.6%	21.9%	51.9%	20.4%	5.8%
OUT	**43%**	**21%**	***27%***	***9%***	***31.3%***	***34.0%***	***27.0%***	***7.7%***	**28.1%**	**35.6%**	**28.3%**	**8.1%**	**25.4%**	**36.9%**	**29.3%**	**8.4%**
PM Peak																
IN	**43%**	**21%**	***27%***	***9%***	***31.3%***	***34.0%***	***27.0%***	***7.7%***	**28.1%**	**35.6%**	**28.3%**	**8.1%**	**25.4%**	**36.9%**	**29.3%**	**8.4%**
OUT	37%	30%	*25%*	*8%*	*26.9%*	*48.6%*	*19.1%*	*5.4%*	24.2%	50.4%	19.8%	5.6%	21.9%	51.9%	20.4%	5.8%

Note: Rows in **BOLD** represent peak direction mode shares.

1 - Based on Access Boston mode share data for Zone 17 (Allston) for Home based trips

2 - Based on American Community Survey (ACS) 2012-2016 five-year estimates for Census Tracts 1, 8.02, and 8.03 (auto mode share includes carpools). Peak hour mode shares adjusted proportionally based on Access Boston data.

3 - 2025 Expected mode shares with 10% reduction in auto share from ACS census data to account for aspirational GoBoston 2030 mode share goals (transit, walk, and bike mode shares increased proportionally).

4 - 2030 expected mode shares with a 2% annual reduction in vehicle mode shares between 2025 and 2030 to account for continued shifts in travel modes (transit, walk, and bike mode shares increased proportionally).

5 - Access Boston mode shares do not separate walk and bike. Based on assumed split of 75% walk/25% bike.

Office / R&D Mode Shares																
	BTD Zone 17 (Allston) [1]				Allston Census Data [2]				2025 Expected Mode Shares [3]				2030 Expected Mode Shares [4]			
	Auto	Transit	Walk [5]	Bike [5]	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike
Daily																
	69%	**12%**	***14%***	***5%***	**61.7%**	**20.0%**	**15.7%**	**2.7%**	**55.5%**	**23.2%**	**18.3%**	**3.1%**	**50.2%**	**25.9%**	**20.5%**	**3.5%**
AM Peak																
IN	**59%**	**18%**	***17%***	***6%***	***52.7%***	***29.9%***	***14.9%***	***2.5%***	**47.4%**	**33.3%**	**16.5%**	**2.8%**	**42.9%**	**36.1%**	**17.9%**	**3.0%**
OUT	65%	12%	*17%*	*6%*	*58.1%*	*20.0%*	*18.8%*	*3.2%*	52.3%	22.7%	21.4%	3.6%	47.2%	25.1%	23.7%	4.0%
PM Peak																
IN	65%	12%	*17%*	*6%*	*58.1%*	*20.0%*	*18.8%*	*3.2%*	52.3%	22.7%	21.4%	3.6%	47.2%	25.1%	23.7%	4.0%
OUT	**59%**	**18%**	***17%***	***6%***	***52.7%***	***29.9%***	***14.9%***	***2.5%***	**47.4%**	**33.3%**	**16.5%**	**2.8%**	**42.9%**	**36.1%**	**17.9%**	**3.0%**

Note: Rows in **BOLD** represent peak direction mode shares.

1 - Based on Access Boston mode share data for Zone 17 (Allston) for Work based trips.

2 - Based on American Community Survey (ACS) 2012-2016 five-year estimates for Census Tracts 1, 8.02, and 8.03 (auto mode share includes carpools). Peak hour mode shares adjusted proportionally based on Access Boston data.

3 - 2025 Expected mode shares with 10% reduction in auto share from ACS census data to account for aspirational GoBoston 2030 mode share goals (transit, walk, and bike mode shares increased proportionally).

4 - 2030 expected mode shares with a 2% annual reduction in vehicle mode shares between 2025 and 2030 to account for continued shifts in travel modes (transit, walk, and bike mode shares increased proportionally).

5 - Access Boston mode shares do not separate walk and bike. Based on assumed split of 75% walk/25% bike.

Hotel / Restaurant / Retail Mode Shares																
	BTD Zone 17 (Allston) [1]				Allston Census Data [2]				2025 Expected Mode Shares [3]				2030 Expected Mode Shares [4]			
	Auto	Transit	Walk [5]	Bike [5]	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike	Auto	Transit	Walk	Bike
Daily																
	52%	**8%**	**30%**	**10%**	**n/a**	**n/a**	**n/a**	**n/a**	**46.8%**	**8.9%**	**33.3%**	**11.1%**	**42.3%**	**9.6%**	**36.1%**	**12.0%**
AM Peak																
IN	**43%**	**11%**	**35%**	**11%**	**n/a**	**n/a**	**n/a**	**n/a**	**38.7%**	**12.2%**	**42.0%**	**7.1%**	**35.0%**	**12.9%**	**44.6%**	**7.5%**
OUT	47%	7%	35%	11%	n/a	n/a	n/a	n/a	42.3%	7.8%	42.7%	7.2%	38.2%	8.3%	45.7%	7.7%
PM Peak																
IN	47%	7%	35%	11%	n/a	n/a	n/a	n/a	42.3%	7.8%	42.7%	7.2%	38.2%	8.3%	45.7%	7.7%
OUT	**43%**	**11%**	**35%**	**11%**	**n/a**	**n/a**	**n/a**	**n/a**	**38.7%**	**12.2%**	**42.0%**	**7.1%**	**35.0%**	**12.9%**	**44.6%**	**7.5%**

Note: Rows in **BOLD** represent peak direction mode shares.

1 - Based on Access Boston mode share data for Zone 17 (Allston) for Other based trips.

2 - American Community Survey (ACS) 2012-2016 five-year estimates mode shares not provided for hotel, restaurant, or retail land uses.

3 - 2025 Expected mode shares with 10% reduction in auto share from Access Boston data to account for aspirational GoBoston 2030 mode share goals (transit, walk, and bike mode shares increased proportionally).

4 - 2030 expected mode shares with a 2% annual reduction in vehicle mode shares between 2025 and 2030 to account for continued shifts in travel modes (transit, walk, and bike mode shares increased proportionally).

5 - Access Boston mode shares do not separate walk and bike. Based on assumed split of 75% walk/25% bike.

Trip Generation Data – Phase A (2025)

Unadjusted ITE Worksheets

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: Multifamily Housing - Mid-Rise Residential (3-10 levels/floors)
LANDUSE CODE: 221 Independent Variable --- Number of Units
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC** 115 units
JOB NUMBER: **15021.00**

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	27	0.77	5.44	1.27	12.50	205	21	494	50%	50%
AM PEAK OF GENERATOR	48	0.69	0.32	0.06	0.77	225	21	1,168	27%	73%
PM PEAK OF GENERATOR	47	0.66	0.41	0.09	1.26	211	21	1,168	60%	40%
AM PEAK (ADJACENT ST)	53	0.67	0.36	0.06	1.61	207	26	703	26%	74%
PM PEAK (ADJACENT ST)	60	0.72	0.44	0.15	1.11	208	26	703	61%	39%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	626	313	313	625	313	313
AM PEAK OF GENERATOR	37	10	27	39	11	29
PM PEAK OF GENERATOR	47	28	19	49	29	20
AM PEAK (ADJACENT ST)	41	11	31	**39**	**10**	**29**
PM PEAK (ADJACENT ST)	51	31	20	**51**	**31**	**20**

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	6	0.73	4.91	4.03	8.51	224	111	336	50%	50%
PEAK OF GENERATOR	8	0.89	0.44	0.34	0.73	264	111	462	49%	51%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	565	282	282	767	383	383
PEAK OF GENERATOR	51	25	26	55	27	28

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	6	--	4.09	3.06	8.41	224	111	336	50%	50%
PEAK OF GENERATOR	6	--	0.39	0.26	1.07	224	111	336	62%	38%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	470	235	235	N/A	N/A	N/A
PEAK OF GENERATOR	45	28	17	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: Multifamily Housing - High-Rise Residential (10+ levels/floors)
LANDUSE CODE: 222 Independent Variable --- Number of Units
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC** 230 units
JOB NUMBER: **15021.00**

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	11	0.96	4.45	2.77	6.45	414	128	1,456	50%	50%
AM PEAK OF GENERATOR	24	0.93	0.34	0.21	0.55	405	54	1,456	21%	79%
PM PEAK OF GENERATOR	26	0.96	0.39	0.29	0.59	385	54	1,456	62%	38%
AM PEAK (ADJACENT ST)	25	0.90	0.31	0.18	0.48	372	54	1,456	24%	76%
PM PEAK (ADJACENT ST)	25	0.96	0.36	0.23	0.53	372	54	1,456	61%	39%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,024	512	512	1,118	559	559
AM PEAK OF GENERATOR	78	16	62	84	18	67
PM PEAK OF GENERATOR	90	56	34	96	59	36
AM PEAK (ADJACENT ST)	71	17	54	**77**	**19**	**59**
PM PEAK (ADJACENT ST)	83	51	32	**87**	**53**	**34**

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	9	0.96	4.53	2.84	6.00	411	128	1,456	50%	50%
PEAK OF GENERATOR	9	0.98	0.36	0.32	0.46	411	128	1,456	55%	45%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,042	521	521	1,124	562	562
PEAK OF GENERATOR	83	46	37	95	52	43

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	9	0.96	3.59	2.70	5.40	411	128	1,456	50%	50%
PEAK OF GENERATOR	9	0.98	0.31	0.27	0.45	411	128	1,456	51%	49%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	826	413	413	895	448	448
PEAK OF GENERATOR	71	36	35	80	41	39

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: Hotel
LANDUSE CODE: 310
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- Number of Rooms

250 rooms

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	6	0.92	8.36	5.31	9.53	146	100	260	50%	50%
AM PEAK OF GENERATOR	30	0.64	0.54	0.25	1.42	288	86	575	54%	46%
PM PEAK OF GENERATOR	29	0.71	0.61	0.22	0.97	292	86	575	58%	42%
AM PEAK (ADJACENT ST)	25	0.85	0.47	0.20	0.84	178	74	426	59%	41%
PM PEAK (ADJACENT ST)	28	0.8	0.60	0.26	1.06	183	74	426	51%	49%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	2,090	1,045	1,045	2,396	1,198	1,198
AM PEAK OF GENERATOR	135	73	62	133	72	61
PM PEAK OF GENERATOR	153	88	64	148	86	62
AM PEAK (ADJACENT ST)	118	69	48	120	71	49
PM PEAK (ADJACENT ST)	150	77	74	161	82	79

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	8	0.93	8.19	6.35	9.79	206	100	355	50%	50%
PEAK OF GENERATOR	9	0.8	0.72	0.49	1.23	194	100	355	56%	44%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	2,048	1,024	1,024	2,110	1,055	1,055
PEAK OF GENERATOR	180	101	79	177	99	78

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	8	0.9	5.95	4.01	8.48	206	100	355	50%	50%
PEAK OF GENERATOR	8	0.87	0.56	0.39	0.72	206	100	355	46%	54%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,488	744	744	1602	801	801
PEAK OF GENERATOR	140	64	76	145	67	78

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: General Office Building
LANDUSE CODE: 710
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 168

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	66	0.83	9.74	2.71	27.56	171	6	1,300	50%	50%
AM PEAK OF GENERATOR	228	0.84	1.47	0.57	4.93	209	6	2,408	88%	12%
PM PEAK OF GENERATOR	243	0.82	1.42	0.49	6.20	205	6	2,408	18%	82%
AM PEAK (ADJACENT ST)	35	0.85	1.16	0.37	4.23	117	5	511	86%	14%
PM PEAK (ADJACENT ST)	32	0.88	1.15	0.47	3.23	114	6	511	16%	84%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,636	818	818	1,755	878	878
AM PEAK OF GENERATOR	247	217	30	262	231	31
PM PEAK OF GENERATOR	239	43	196	250	45	205
AM PEAK (ADJACENT ST)	195	168	27	184	159	26
PM PEAK (ADJACENT ST)	193	31	162	186	30	157

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	5	--	2.21	1.24	7.46	94	28	183	50%	50%
PEAK OF GENERATOR	3	--	0.53	0.30	1.57	82	28	183	54%	46%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	371	186	186	N/A	N/A	N/A
PEAK OF GENERATOR	89	48	41	N/A	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	5	--	0.70	0.19	3.05	94	28	183	50%	50%
PEAK OF GENERATOR	3	--	0.21	0.11	0.68	82	28	183	58%	42%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	118	59	59	N/A	N/A	N/A
PEAK OF GENERATOR	35	20	15	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: Research & Development Center
LANDUSE CODE: 760
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- Employees

EMPLOYEES: 630
Floor Area (sf) = *252.00*
**Assume 2.5 employees per sf*

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	21	0.87	3.29	1.60	10.63	658	0	2,500	50%	50%
AM PEAK OF GENERATOR	31	0.90	0.41	0.20	0.88	518	0	2,500	85%	15%
PM PEAK OF GENERATOR	31	0.91	0.38	0.18	1.11	518	0	2,500	11%	89%
AM PEAK (ADJACENT ST)	9	0.58	0.51	0.28	0.88	92	25	200	72%	28%
PM PEAK (ADJACENT ST)	3	--	0.52	0.36	1.07	122	0	200	14%	86%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	2,073	1,036	1,036	2,084	1,042	1,042
AM PEAK OF GENERATOR	258	220	39	272	231	41
PM PEAK OF GENERATOR	239	26	213	246	27	219
AM PEAK (ADJACENT ST)	321	231	90	177	128	50
PM PEAK (ADJACENT ST) #	328	46	282	N/A	N/A	N/A

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	19	0.55	0.56	0.03	2.97	600	0	2,500	50%	50%
PEAK OF GENERATOR	12	0.55	0.06	0.01	0.30	558	0	2,500	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	353	176	176	347	174	174
PEAK OF GENERATOR	38	N/A	N/A	39	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	19	--	0.33	0.02	1.78	600	0	2,500	50%	50%
PEAK OF GENERATOR	12	--	0.04	0.01	0.23	558	0	2,100	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	208	104	104	N/A	N/A	N/A
PEAK OF GENERATOR	N/A	N/A	N/A	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: Shopping Center
LANDUSE CODE: 820
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 23.0

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	147	0.76	37.75	7.42	207.98	453	9	1,510	50%	50%
AM PEAK OF GENERATOR	47	0.71	3.00	0.70	23.74	323	8	1,320	54%	46%
PM PEAK OF GENERATOR	53	0.76	4.21	0.78	27.27	298	7	1,320	50%	50%
AM PEAK (ADJACENT ST)	84	0.9	0.94	0.18	23.74	351	9	1,510	62%	38%
PM PEAK (ADJACENT ST)	261	0.82	3.81	0.74	18.69	327	2	2,200	48%	52%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	868	434	434	2,213	1,107	1,107
AM PEAK OF GENERATOR	69	37	32	141	76	65
PM PEAK OF GENERATOR	97	48	48	196	98	98
AM PEAK (ADJACENT ST)	22	13	8	163	101	62
PM PEAK (ADJACENT ST)	88	42	46	183	88	95

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	58	0.71	46.12	13.07	167.89	602	56	1,510	50%	50%
PEAK OF GENERATOR	119	0.87	4.50	1.42	15.10	416	4	1,510	52%	48%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,061	530	530	3,583	1,792	1,792
PEAK OF GENERATOR	104	54	50	194	101	93

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	30	--	21.10	4.15	148.15	509	47	1,510	50%	50%
PEAK OF GENERATOR	24	--	2.79	0.39	12.40	382	47	1,268	49%	51%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	485	243	243	N/A	N/A	N/A
PEAK OF GENERATOR	64	31	33	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Phase A (2025)

LANDUSE: High-Turnover (Sit-Down) Restaurant
LANDUSE CODE: 932
SETTING/LOCATION: General Urban/Suburban
JOB NAME: Allston ERC
JOB NUMBER: 15021.00

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 23.0

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	50	--	112.18	13.04	742.41	5	2	13	50%	50%
AM PEAK OF GENERATOR	60	--	14.04	1.74	112.49	6	2	13	57%	43%
PM PEAK OF GENERATOR	61	--	17.41	3.04	89.99	5	2	13	52%	48%
AM PEAK (ADJACENT ST)	39	--	9.94	0.76	102.39	5	2	13	55%	45%
PM PEAK (ADJACENT ST)	107	--	9.77	0.92	62.00	6	2	14	62%	38%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,580	1,290	1,290	N/A	N/A	N/A
AM PEAK OF GENERATOR	323	184	139	N/A	N/A	N/A
PM PEAK OF GENERATOR	400	208	192	N/A	N/A	N/A
AM PEAK (ADJACENT ST)	229	126	103	N/A	N/A	N/A
PM PEAK (ADJACENT ST)	225	139	85	N/A	N/A	N/A

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	3	--	122.40	101.99	173.07	6	5	9	50%	50%
PEAK OF GENERATOR	22	--	11.19	1.63	50.40	5	2	13	51%	49%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,815	1,408	1,408	N/A	N/A	N/A
PEAK OF GENERATOR	257	131	126	N/A	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	2	--	142.64	119.62	164.43	5	4.8	5.1	50%	50%
PEAK OF GENERATOR	3	--	25.83	9.81	43.20	4	2.5	5.1	55%	45%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	3,281	1,640	1,640	N/A	N/A	N/A
PEAK OF GENERATOR	594	327	267	N/A	N/A	N/A

Trip Generation Data – Phase A (2025)

Internal Capture Worksheets

Phase A (2025) Trip Generation
Shared Trip Calculations [1]

RETAIL - OFFICE

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	790	**24**	2,266	15%	-> ENTER
ENTER <-	4%	790	**32**	2,266	22%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	29%	15	**4**	461	4%	-> ENTER
ENTER <-	32%	24	**8**	137	28%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	2%	84	**2**	89	31%	-> ENTER
ENTER <-	8%	76	**6**	518	20%	<- EXIT

RETAIL - HOTEL

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	11%	790	**87**	2,001	33%	-> ENTER
ENTER <-	9%	790	**71**	2,001	38%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	15	**0**	119	0%	-> ENTER
ENTER <-	4%	24	**1**	82	14%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	5%	84	**4**	137	17%	-> ENTER
ENTER <-	2%	76	**2**	132	16%	<- EXIT

RETAIL - RESIDENTIAL

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	11%	790	**87**	1,029	33%	-> ENTER
ENTER <-	9%	790	**71**	1,029	38%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	14%	15	**1**	34	2%	-> ENTER
ENTER <-	17%	24	**1**	104	1%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	26%	84	**22**	99	46%	-> ENTER
ENTER <-	10%	76	**8**	64	42%	<- EXIT

OFFICE - HOTEL

WEEKDAY DAILY

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	2%	2,266	**45**	2,001	3%	-> ENTER
ENTER <-	0%	2,266	**0**	2,001	0%	<- EXIT

WEEKDAY MORNING

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	137	**0**	119	0%	-> ENTER
ENTER <-	3%	461	**14**	82	75%	<- EXIT

WEEKDAY EVENING

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	518	**0**	137	0%	-> ENTER
ENTER <-	0%	89	**0**	132	0%	<- EXIT

OFFICE - RESIDENTIAL

WEEKDAY DAILY

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	2,266	**31**	1,029	3%	-> ENTER
ENTER <-	0%	2,266	**0**	1,029	0%	<- EXIT

WEEKDAY MORNING

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	1%	137	**0**	34	0%	-> ENTER
ENTER <-	3%	461	**2**	104	2%	<- EXIT

WEEKDAY EVENING

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	518	**4**	99	4%	-> ENTER
ENTER <-	57%	89	**3**	64	4%	<- EXIT

HOTEL - RESIDENTIAL

WEEKDAY DAILY

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	0%	2,001	**0**	1,029	0%	-> ENTER
ENTER <-	0%	2,001	**0**	1,029	0%	<- EXIT

WEEKDAY MORNING

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	0%	82	**0**	34	0%	-> ENTER
ENTER <-	0%	119	**0**	104	0%	<- EXIT

WEEKDAY EVENING

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	132	**0**	99	0%	-> ENTER
ENTER <-	12%	137	**2**	64	3%	<- EXIT

RESTAURANT - RETAIL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	30%	2,348	**221**	790	28%	-> ENTER
ENTER <-	28%	2,348	**237**	790	30%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	14%	187	**2**	24	8%	-> ENTER
ENTER <-	50%	229	**2**	15	13%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	41%	155	**38**	76	50%	-> ENTER
ENTER <-	29%	253	**24**	84	29%	<- EXIT

Phase A (2025) Trip Generation
Shared Trip Calculations [1]

RESTAURANT - OFFICE

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	2,348	**70**	2,266	15%	-> ENTER
ENTER <-	4%	2,348	**94**	2,266	22%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	31%	187	**58**	461	14%	-> ENTER
ENTER <-	23%	229	**53**	137	63%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	155	**5**	89	30%	-> ENTER
ENTER <-	2%	253	**5**	518	4%	<- EXIT

RESTAURANT - HOTEL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	11%	2,348	**258**	2,001	33%	-> ENTER
ENTER <-	9%	2,348	**211**	2,001	38%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	3%	187	**5**	119	4%	-> ENTER
ENTER <-	6%	229	**7**	82	9%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	7%	155	**11**	137	71%	-> ENTER
ENTER <-	5%	253	**13**	132	68%	<- EXIT

RESTAURANT - RESIDENTIAL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	11%	2,348	**258**	1,029	33%	-> ENTER
ENTER <-	9%	2,348	**211**	1,029	38%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	4%	187	**2**	34	5%	-> ENTER
ENTER <-	20%	229	**21**	104	20%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	18%	155	**16**	99	16%	-> ENTER
ENTER <-	14%	253	**13**	64	21%	<- EXIT

TOTAL SHARED TRIPS - WEEKDAY DAILY

	ENTER	EXIT	TOTAL
RETAIL	395	435	830
OFFICE	43	92	135
R&D	51	110	161
HOTEL	390	282	672
RESID.	376	282	658
RESTAUR.	753	807	1560
TOTAL	2,008	2,008	4016

TOTAL SHARED TRIPS - WEEKDAY MORNING

	ENTER	EXIT	TOTAL
RETAIL	12	7	19
OFFICE	9	12	21
R&D	69	49	118
HOTEL	5	22	27
RESID.	3	24	27
RESTAUR.	83	67	150
TOTAL	181	181	362

TOTAL SHARED TRIPS - WEEKDAY EVENING

	ENTER	EXIT	TOTAL
RETAIL	54	52	106
OFFICE	1	2	3
R&D	9	13	22
HOTEL	17	15	32
RESID.	42	26	68
RESTAUR.	55	70	125
TOTAL	178	178	356

1 Weekday morning and evening internal capture rates based on NCHRP Report 684. Weekday daily internal capture rates based on ITE Trip Generation Handbook, 2nd Edition.

Trip Generation Data – Phase A (2025)

TNC Trip Generation Calculations

Allston ERC
15021.00

2025 Phase A Condition
TNC Trip Calculations

	Residential							Office						
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips
			19%	1.27	81%	1.27				5%	1.19	95%	1.19	
Weekday Morning Peak Hour														
Enter	31	8	1	1	6	5	6	179	85	4	4	81	68	72
Exit	80	23	4	3	18	14	17	19	10	0	-	9	8	8
Total	111	30	6	4	24	19	23	198	95	5	4	90	76	80
Weekday Evening Peak Hour														
Enter	57	16	3	2	13	10	12	34	18	1	1	17	14	15
Exit	38	9	2	1	7	6	7	183	87	4	4	82	69	73
Total	95	25	5	3	20	16	19	217	105	5	5	99	83	88

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

Allston ERC
15021.00

2025 Phase A Condition
TNC Trip Calculations

	R&D							Hotel						
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips
			5%	1.19	95%	1.19				19%	1.67	81%	1.67	
Weekday Morning Peak Hour														
Enter	204	97	5	4	92	77	81	114	44	8	5	36	21	26
Exit	57	30	1	1	28	24	25	60	25	5	3	21	12	15
Total	261	127	6	5	120	101	106	174	69	13	8	56	33	41
Weekday Evening Peak Hour														
Enter	45	24	1	1	22	19	20	120	51	10	6	41	25	31
Exit	320	152	8	6	144	121	127	117	45	9	5	37	22	27
Total	365	175	9	7	167	140	147	237	96	18	11	78	47	58

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

Allston ERC
15021.00

2025 Phase A Condition
TNC Trip Calculations

	Retail								
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	Pass-By [6]	New Prvt. Vehicle Trips	All New Vehicle Trips
			12%	1.82	88%	1.82			
Weekday Morning Peak Hour							25%		
Enter	12	5	1	1	4	2	1	1	2
Exit	8	3	0	-	3	2	1	1	1
Total	20	8	1	1	7	4	2	2	3
Weekday Evening Peak Hour							34%		
Enter	22	9	1	1	8	4	2	2	3
Exit	32	12	1	1	11	6	2	4	5
Total	54	22	3	2	19	10	4	6	8

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

Allston ERC
15021.00

2025 Phase A Condition
TNC Trip Calculations

	Restaurant								
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	Pass-By [7]	New Prvt. Vehicle Trips	All New Vehicle Trips
			12%	1.82	88%	1.82			
Weekday Morning Peak Hour							25%		
Enter	146	57	7	4	50	27	7	20	24
Exit	120	51	6	3	45	25	7	18	21
Total	266	107	13	7	94	52	14	38	45
Weekday Evening Peak Hour							34%		
Enter	198	84	10	6	74	40	10	30	36
Exit	85	33	4	2	29	16	10	6	8
Total	283	117	14	8	103	56	20	36	44

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

Allston ERC
15021.00

2025 Phase A Condition
TNC Trip Calculations

	Total Site					
	TNC Passenger Trips	TNC Deadhead Trips [8]	Total TNC Trips	Private Vehicle Trips	Total Vehicle Trips	Total Pass-By Trips
Weekday Morning Peak Hour						
Enter	19	-	19	192	211	8
Exit	10	9	19	77	96	8
Total	29	9	38	269	307	16
Weekday Evening Peak Hour						
Enter	17	2	19	100	119	12
Exit	19	-	19	228	247	12
Total	36	2	38	328	366	24

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

Trip Generation Data – Full Build (2030)

Unadjusted ITE Worksheets

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: Multifamily Housing - Mid-Rise Residential (3-10 levels/floors)
LANDUSE CODE: 221 Independent Variable --- Number of Units
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC** 115 units
JOB NUMBER: **15021.00**

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	27	0.77	5.44	1.27	12.50	205	21	494	50%	50%
AM PEAK OF GENERATOR	48	0.69	0.32	0.06	0.77	225	21	1,168	27%	73%
PM PEAK OF GENERATOR	47	0.66	0.41	0.09	1.26	211	21	1,168	60%	40%
AM PEAK (ADJACENT ST)	53	0.67	0.36	0.06	1.61	207	26	703	26%	74%
PM PEAK (ADJACENT ST)	60	0.72	0.44	0.15	1.11	208	26	703	61%	39%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	626	313	313	625	313	313
AM PEAK OF GENERATOR	37	10	27	39	11	29
PM PEAK OF GENERATOR	47	28	19	49	29	20
AM PEAK (ADJACENT ST)	41	11	31	39	10	29
PM PEAK (ADJACENT ST)	51	31	20	51	31	20

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	6	0.73	4.91	4.03	8.51	224	111	336	50%	50%
PEAK OF GENERATOR	8	0.89	0.44	0.34	0.73	264	111	462	49%	51%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	565	282	282	767	383	383
PEAK OF GENERATOR	51	25	26	55	27	28

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	6	--	4.09	3.06	8.41	224	111	336	50%	50%
PEAK OF GENERATOR	6	--	0.39	0.26	1.07	224	111	336	62%	38%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	470	235	235	N/A	N/A	N/A
PEAK OF GENERATOR	45	28	17	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: Multifamily Housing - High-Rise Residential (10+ levels/floors)
LANDUSE CODE: 222 Independent Variable --- Number of Units
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC** 650 units
JOB NUMBER: **15021.00**

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	11	0.96	4.45	2.77	6.45	414	128	1,456	50%	50%
AM PEAK OF GENERATOR	24	0.93	0.34	0.21	0.55	405	54	1,456	21%	79%
PM PEAK OF GENERATOR	26	0.96	0.39	0.29	0.59	385	54	1,456	62%	38%
AM PEAK (ADJACENT ST)	25	0.90	0.31	0.18	0.48	372	54	1,456	24%	76%
PM PEAK (ADJACENT ST)	25	0.96	0.36	0.23	0.53	372	54	1,456	61%	39%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,893	1,446	1,446	2,773	1,386	1,386
AM PEAK OF GENERATOR	221	46	175	214	45	169
PM PEAK OF GENERATOR	254	157	96	243	151	92
AM PEAK (ADJACENT ST)	202	48	153	195	47	148
PM PEAK (ADJACENT ST)	234	143	91	230	140	90

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	9	0.96	4.53	2.84	6.00	411	128	1,456	50%	50%
PEAK OF GENERATOR	9	0.98	0.36	0.32	0.46	411	128	1,456	55%	45%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,945	1,472	1,472	2,838	1,419	1,419
PEAK OF GENERATOR	234	129	105	226	124	101

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	9	0.96	3.59	2.70	5.40	411	128	1,456	50%	50%
PEAK OF GENERATOR	9	0.98	0.31	0.27	0.45	411	128	1,456	51%	49%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,334	1,167	1,167	2,243	1,122	1,122
PEAK OF GENERATOR	202	103	99	198	101	97

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: Hotel
LANDUSE CODE: 310
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- Number of Rooms

250 rooms

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	6	0.92	8.36	5.31	9.53	146	100	260	50%	50%
AM PEAK OF GENERATOR	30	0.64	0.54	0.25	1.42	288	86	575	54%	46%
PM PEAK OF GENERATOR	29	0.71	0.61	0.22	0.97	292	86	575	58%	42%
AM PEAK (ADJACENT ST)	25	0.85	0.47	0.20	0.84	178	74	426	59%	41%
PM PEAK (ADJACENT ST)	28	0.8	0.60	0.26	1.06	183	74	426	51%	49%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	2,090	1,045	1,045	2,396	1,198	1,198
AM PEAK OF GENERATOR	135	73	62	133	72	61
PM PEAK OF GENERATOR	153	88	64	148	86	62
AM PEAK (ADJACENT ST)	118	69	48	120	71	49
PM PEAK (ADJACENT ST)	150	77	74	161	82	79

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	8	0.93	8.19	6.35	9.79	206	100	355	50%	50%
PEAK OF GENERATOR	9	0.8	0.72	0.49	1.23	194	100	355	56%	44%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	2,048	1,024	1,024	2,110	1,055	1,055
PEAK OF GENERATOR	180	101	79	177	99	78

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Total Trip Ends Low	Total Trip Ends High	Independent Variable Range Average	Independent Variable Range Low	Independent Variable Range High	Directional Distribution Enter	Directional Distribution Exit
DAILY	8	0.9	5.95	4.01	8.48	206	100	355	50%	50%
PEAK OF GENERATOR	8	0.87	0.56	0.39	0.72	206	100	355	46%	54%

TRIPS:

	BY AVERAGE Total	BY AVERAGE Enter	BY AVERAGE Exit	BY REGRESSION Total	BY REGRESSION Enter	BY REGRESSION Exit
DAILY	1,488	744	744	1602	801	801
PEAK OF GENERATOR	140	64	76	145	67	78

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: General Office Building
LANDUSE CODE: 710
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 422

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	66	0.83	9.74	2.71	27.56	171	6	1,300	50%	50%
AM PEAK OF GENERATOR	228	0.84	1.47	0.57	4.93	209	6	2,408	88%	12%
PM PEAK OF GENERATOR	243	0.82	1.42	0.49	6.20	205	6	2,408	18%	82%
AM PEAK (ADJACENT ST)	35	0.85	1.16	0.37	4.23	117	5	511	86%	14%
PM PEAK (ADJACENT ST)	32	0.88	1.15	0.47	3.23	114	6	511	16%	84%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	4,106	2,053	2,053	4,284	2,142	2,142
AM PEAK OF GENERATOR	620	545	74	589	518	71
PM PEAK OF GENERATOR	599	108	491	529	95	434
AM PEAK (ADJACENT ST)	489	421	68	423	364	59
PM PEAK (ADJACENT ST)	485	78	407	447	71	375

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	5	--	2.21	1.24	7.46	94	28	183	50%	50%
PEAK OF GENERATOR	3	--	0.53	0.30	1.57	82	28	183	54%	46%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	932	466	466	N/A	N/A	N/A
PEAK OF GENERATOR	223	121	103	N/A	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	5	--	0.70	0.19	3.05	94	28	183	50%	50%
PEAK OF GENERATOR	3	--	0.21	0.11	0.68	82	28	183	58%	42%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	295	148	148	N/A	N/A	N/A
PEAK OF GENERATOR	89	51	37	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: Research & Development Center
LANDUSE CODE: 760
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- Employees

EMPLOYEES: 1581
Floor Area (sf) = *632.40*
**Assume 2.5 employees per sf*

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends: Average	Low	High	Independent Variable Range: Average	Low	High	Directional Distribution: Enter	Exit
DAILY	21	0.87	3.29	1.60	10.63	658	0	2,500	50%	50%
AM PEAK OF GENERATOR	31	0.90	0.41	0.20	0.88	518	0	2,500	85%	15%
PM PEAK OF GENERATOR	31	0.91	0.38	0.18	1.11	518	0	2,500	11%	89%
AM PEAK (ADJACENT ST)	9	0.58	0.51	0.28	0.88	92	25	200	72%	28%
PM PEAK (ADJACENT ST)	3	--	0.52	0.36	1.07	122	0	200	14%	86%

TRIPS:

	BY AVERAGE: Total	Enter	Exit	BY REGRESSION: Total	Enter	Exit
DAILY	5,201	2,601	2,601	4,708	2,354	2,354
AM PEAK OF GENERATOR	648	551	97	588	500	88
PM PEAK OF GENERATOR	601	66	535	532	59	474
AM PEAK (ADJACENT ST)	806	581	226	334	241	94
PM PEAK (ADJACENT ST)	822	115	707	N/A	N/A	N/A

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends: Average	Low	High	Independent Variable Range: Average	Low	High	Directional Distribution: Enter	Exit
DAILY	19	0.55	0.56	0.03	2.97	600	0	2,500	50%	50%
PEAK OF GENERATOR	12	0.55	0.06	0.01	0.30	558	0	2,500	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE: Total	Enter	Exit	BY REGRESSION: Total	Enter	Exit
DAILY	885	443	443	642	321	321
PEAK OF GENERATOR	95	N/A	N/A	77	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends: Average	Low	High	Independent Variable Range: Average	Low	High	Directional Distribution: Enter	Exit
DAILY	19	--	0.33	0.02	1.78	600	0	2,500	50%	50%
PEAK OF GENERATOR	12	--	0.04	0.01	0.23	558	0	2,100	*Peak Distribution Not Availble*	

TRIPS:

	BY AVERAGE: Total	Enter	Exit	BY REGRESSION: Total	Enter	Exit
DAILY	522	261	261	N/A	N/A	N/A
PEAK OF GENERATOR	N/A	N/A	N/A	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: Shopping Center
LANDUSE CODE: 820
SETTING/LOCATION: General Urban/Suburban
JOB NAME: **Allston ERC**
JOB NUMBER: **15021.00**

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 57.9

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	147	0.76	37.75	7.42	207.98	453	9	1,510	50%	50%
AM PEAK OF GENERATOR	47	0.71	3.00	0.70	23.74	323	8	1,320	54%	46%
PM PEAK OF GENERATOR	53	0.76	4.21	0.78	27.27	298	7	1,320	50%	50%
AM PEAK (ADJACENT ST)	84	0.9	0.94	0.18	23.74	351	9	1,510	62%	38%
PM PEAK (ADJACENT ST)	261	0.82	3.81	0.74	18.69	327	2	2,200	48%	52%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,184	1,092	1,092	4,144	2,072	2,072
AM PEAK OF GENERATOR	174	94	80	237	128	109
PM PEAK OF GENERATOR	244	122	122	381	190	190
AM PEAK (ADJACENT ST)	54	34	21	181	112	69
PM PEAK (ADJACENT ST)	220	106	115	362	174	188

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	58	0.71	46.12	13.07	167.89	602	56	1,510	50%	50%
PEAK OF GENERATOR	119	0.87	4.50	1.42	15.10	416	4	1,510	52%	48%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	2,668	1,334	1,334	6,348	3,174	3,174
PEAK OF GENERATOR	260	135	125	402	209	193

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	30	--	21.10	4.15	148.15	509	47	1,510	50%	50%
PEAK OF GENERATOR	24	--	2.79	0.39	12.40	382	47	1,268	49%	51%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	1,221	610	610	N/A	N/A	N/A
PEAK OF GENERATOR	161	79	82	N/A	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(10th Edition, Updated 2017)

Full Build (2030) Trip Generation

LANDUSE: High-Turnover (Sit-Down) Restaurant
LANDUSE CODE: 932 — Independent Variable --- 1,000 Sq. Feet Gross Floor Area
SETTING/LOCATION: General Urban/Suburban
JOB NAME: Allston ERC — **FLOOR AREA (KSF):** 57.9
JOB NUMBER: 15021.00

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	50	--	112.18	13.04	742.41	5	2	13	50%	50%
AM PEAK OF GENERATOR	60	--	14.04	1.74	112.49	6	2	13	57%	43%
PM PEAK OF GENERATOR	61	--	17.41	3.04	89.99	5	2	13	52%	48%
AM PEAK (ADJACENT ST)	39	--	9.94	0.76	102.39	5	2	13	55%	45%
PM PEAK (ADJACENT ST)	107	--	9.77	0.92	62.00	6	2	14	62%	38%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	6,490	3,245	3,245	N/A	N/A	N/A
AM PEAK OF GENERATOR	812	463	349	N/A	N/A	N/A
PM PEAK OF GENERATOR	1,007	524	483	N/A	N/A	N/A
AM PEAK (ADJACENT ST)	575	316	259	N/A	N/A	N/A
PM PEAK (ADJACENT ST)	565	350	215	N/A	N/A	N/A

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	3	--	122.40	101.99	173.07	6	5	9	50%	50%
PEAK OF GENERATOR	22	--	11.19	1.63	50.40	5	2	13	51%	49%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	7,081	3,540	3,540	N/A	N/A	N/A
PEAK OF GENERATOR	647	330	317	N/A	N/A	N/A

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends Average	Low	High	Independent Variable Range Average	Low	High	Directional Distribution Enter	Exit
DAILY	2	--	142.64	119.62	164.43	5	4.8	5.1	50%	50%
PEAK OF GENERATOR	3	--	25.83	9.81	43.20	4	2.5	5.1	55%	45%

TRIPS:

	BY AVERAGE Total	Enter	Exit	BY REGRESSION Total	Enter	Exit
DAILY	8,252	4,126	4,126	N/A	N/A	N/A
PEAK OF GENERATOR	1,494	822	672	N/A	N/A	N/A

Trip Generation Data – Full Build (2030)

Internal Capture Worksheets

Full Build (2030) Trip Generation

Shared Trip Calculations [1]

RETAIL - OFFICE

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	1,987	**60**	5,306	15%	-> ENTER
ENTER <-	4%	1,987	**79**	5,306	22%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	29%	38	**11**	1,116	4%	-> ENTER
ENTER <-	32%	62	**20**	337	28%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	OFFICE
EXIT ->	2%	209	**4**	220	31%	-> ENTER
ENTER <-	8%	193	**15**	1,277	20%	<- EXIT

RETAIL - HOTEL

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	11%	1,987	**219**	2,001	33%	-> ENTER
ENTER <-	9%	1,987	**179**	2,001	38%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	38	**0**	119	0%	-> ENTER
ENTER <-	4%	62	**2**	82	14%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	HOTEL
EXIT ->	5%	209	**10**	137	17%	-> ENTER
ENTER <-	2%	193	**4**	132	16%	<- EXIT

RETAIL - RESIDENTIAL

WEEKDAY DAILY

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	11%	1,987	**219**	2,005	33%	-> ENTER
ENTER <-	9%	1,987	**179**	2,005	38%	<- EXIT

WEEKDAY MORNING

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	14%	38	**1**	67	2%	-> ENTER
ENTER <-	17%	62	**2**	209	1%	<- EXIT

WEEKDAY EVENING

RETAIL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	26%	209	**54**	202	46%	-> ENTER
ENTER <-	10%	193	**19**	129	42%	<- EXIT

OFFICE - HOTEL

WEEKDAY DAILY

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	2%	5,306	**60**	2,001	3%	-> ENTER
ENTER <-	0%	5,306	**0**	2,001	0%	<- EXIT

WEEKDAY MORNING

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	337	**0**	119	0%	-> ENTER
ENTER <-	3%	1,116	**33**	82	75%	<- EXIT

WEEKDAY EVENING

OFFICE	%	#	BALANCED	#	%	HOTEL
EXIT ->	0%	1,277	**0**	137	0%	-> ENTER
ENTER <-	0%	220	**0**	132	0%	<- EXIT

OFFICE - RESIDENTIAL

WEEKDAY DAILY

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	5,306	**60**	2,005	3%	-> ENTER
ENTER <-	0%	5,306	**0**	2,005	0%	<- EXIT

WEEKDAY MORNING

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	1%	337	**0**	67	0%	-> ENTER
ENTER <-	3%	1,116	**4**	209	2%	<- EXIT

WEEKDAY EVENING

OFFICE	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	1,277	**8**	202	4%	-> ENTER
ENTER <-	57%	220	**5**	129	4%	<- EXIT

HOTEL - RESIDENTIAL

WEEKDAY DAILY

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	0%	2,001	**0**	2,005	0%	-> ENTER
ENTER <-	0%	2,001	**0**	2,005	0%	<- EXIT

WEEKDAY MORNING

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	0%	82	**0**	67	0%	-> ENTER
ENTER <-	0%	119	**0**	209	0%	<- EXIT

WEEKDAY EVENING

HOTEL	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	2%	132	**0**	202	0%	-> ENTER
ENTER <-	12%	137	**4**	129	3%	<- EXIT

RESTAURANT - RETAIL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	30%	5,906	**556**	1,987	28%	-> ENTER
ENTER <-	28%	5,906	**596**	1,987	30%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	14%	471	**5**	62	8%	-> ENTER
ENTER <-	50%	575	**5**	38	13%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	RETAIL
EXIT ->	41%	391	**97**	193	50%	-> ENTER
ENTER <-	29%	637	**61**	209	29%	<- EXIT

Full Build (2030) Trip Generation

Shared Trip Calculations [1]

RESTAURANT - OFFICE

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	5,906	**177**	5,306	15%	-> ENTER
ENTER <-	4%	5,906	**236**	5,306	22%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	31%	471	**146**	1,116	14%	-> ENTER
ENTER <-	23%	575	**132**	337	63%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	OFFICE
EXIT ->	3%	391	**12**	220	30%	-> ENTER
ENTER <-	2%	637	**13**	1,277	4%	<- EXIT

RESTAURANT - HOTEL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	11%	5,906	**650**	2,001	33%	-> ENTER
ENTER <-	9%	5,906	**532**	2,001	38%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	3%	471	**5**	119	4%	-> ENTER
ENTER <-	6%	575	**7**	82	9%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	HOTEL
EXIT ->	7%	391	**27**	137	71%	-> ENTER
ENTER <-	5%	637	**32**	132	68%	<- EXIT

RESTAURANT - RESIDENTIAL

WEEKDAY DAILY

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	11%	5,906	**650**	2,005	33%	-> ENTER
ENTER <-	9%	5,906	**532**	2,005	38%	<- EXIT

WEEKDAY MORNING

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	4%	471	**3**	67	5%	-> ENTER
ENTER <-	20%	575	**42**	209	20%	<- EXIT

WEEKDAY EVENING

RESTAURANT	%	#	BALANCED	#	%	RESIDENTIAL
EXIT ->	18%	391	**32**	202	16%	-> ENTER
ENTER <-	14%	637	**27**	129	21%	<- EXIT

TOTAL SHARED TRIPS - WEEKDAY DAILY

	ENTER	EXIT	TOTAL
RETAIL	993	1,094	2087
OFFICE	113	207	320
R&D	124	228	352
HOTEL	929	711	1640
RESID.	929	711	1640
RESTAUR.	1,896	2,033	3929
TOTAL	4,984	4,984	9968

TOTAL SHARED TRIPS - WEEKDAY MORNING

	ENTER	EXIT	TOTAL
RETAIL	29	17	46
OFFICE	22	26	48
R&D	172	126	298
HOTEL	5	42	47
RESID.	4	48	52
RESTAUR.	186	159	345
TOTAL	418	418	836

TOTAL SHARED TRIPS - WEEKDAY EVENING

	ENTER	EXIT	TOTAL
RETAIL	135	129	264
OFFICE	3	5	8
R&D	18	31	49
HOTEL	41	36	77
RESID.	94	55	149
RESTAUR.	133	168	301
TOTAL	424	424	848

1 Weekday morning and evening internal capture rates based on NCHRP Report 684. Weekday daily internal capture rates based on ITE Trip Generation Handbook, 2nd Edition.

Trip Generation Data – Full Build (2030)

TNC Trip Generation Calculations

2030 Full Build Conditions
TNC Trip Calculations

	Residential							Office						
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips
			28%	1.27	72%	1.27				6%	1.19	94%	1.19	
Weekday Morning Peak Hour														
Enter	63	14	4	3	10	8	11	408	175	10	9	164	138	147
Exit	161	41	11	9	29	23	32	44	21	1	1	20	16	17
Total	224	55	15	12	39	31	43	452	196	12	10	184	154	164
Weekday Evening Peak Hour														
Enter	108	27	8	6	20	16	22	81	38	2	2	36	30	32
Exit	74	16	5	4	12	9	13	438	188	11	9	177	148	157
Total	182	44	12	10	31	25	35	519	226	14	11	213	178	189

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

2030 Full Build Conditions
TNC Trip Calculations

	R&D							Hotel						
	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	People in Private Vehicles [5]	Private Vehicle Trips [4]	All Vehicle Trips
			6%	1.19	94%	1.19				28%	1.67	72%	1.67	
Weekday Morning Peak Hour														
Enter	514	220	13	11	207	174	185	114	40	11	7	29	17	24
Exit	141	67	4	3	63	53	56	40	15	4	3	11	7	10
Total	655	287	17	14	270	227	241	154	55	15	10	40	24	34
Weekday Evening Peak Hour														
Enter	118	56	3	3	52	44	47	96	37	10	6	26	16	22
Exit	803	344	21	17	324	272	289	96	34	9	6	24	14	20
Total	921	400	24	20	376	316	336	192	70	20	12	51	30	42

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

2030 Full Build Conditions
TNC Trip Calculations

	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	Retail People in Private Vehicles [5]	Private Vehicle Trips [4]	Pass-By [6]	New Prvt. Vehicle Trips	All New Vehicle Trips
			17%	1.82	83%	1.82			
Weekday Morning Peak Hour							25%		
Enter	33	12	2	1	10	5	1	4	5
Exit	21	8	1	1	7	4	1	3	4
Total	54	20	3	2	16	9	2	7	9
Weekday Evening Peak Hour							34%		
Enter	58	22	4	2	18	10	4	6	8
Exit	80	28	5	3	23	13	4	9	12
Total	138	50	9	5	42	23	8	15	20

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

2030 Full Build Conditions
TNC Trip Calculations

	Net Person Trips [1]	All People in Vehicles [2]	People in TNCs [3]	TNC Passenger Trips [4]	Restaurant People in Private Vehicles [5]	Private Vehicle Trips [4]	Pass-By [7]	New Prvt. Vehicle Trips	All New Vehicle Trips
			17%	1.82	83%	1.82			
Weekday Morning Peak Hour							25%		
Enter	389	136	23	13	113	62	15	47	60
Exit	312	119	20	11	99	54	15	39	50
Total	701	255	43	24	212	116	30	86	110
Weekday Evening Peak Hour							34%		
Enter	504	193	33	18	160	88	21	67	85
Exit	223	78	13	7	65	36	21	15	22
Total	727	271	46	25	225	124	42	82	107

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

2030 Full Build Conditions
TNC Trip Calculations

	Total Site					
	TNC Passenger Trips	TNC Deadhead Trips [8]	Total TNC Trips	Private Vehicle Trips	Total Vehicle Trips	Total Pass-By Trips
Weekday Morning Peak Hour						
Enter	44	-	44	388	432	16
Exit	28	16	44	141	185	16
Total	72	16	88	529	617	32
Weekday Evening Peak Hour						
Enter	37	9	46	179	225	25
Exit	46	-	46	467	513	25
Total	83	9	92	646	738	50

1 Net Person Trips based on ITE for each land use converted to person trips and with internal capture trips removed
2 All People in Vehicles based on Vehicular Mode Shares approved by the City of Boston
3 TNC shares based on proportion of total arriving and departing TNC rides in the City of Boston in 2019 (as documented by Mass. Department of Public Utilities), total number of residents and employees within the City of Boston from 2019 ACS 5-Year Census Data, and TNC Trip Purpose from MAPC survey. Assume Hotel uses to follow residential patterns, Retail uses to follow patterns averaged between Residential and Office.
4 VOR based on 2010 Census data, 2009 NHTS rates assumed for Hotel and Retail uses
5 Assume all non-TNC vehicle trips are by private vehicle
6 Pass-by rates based on ITE LUC 820 (Shopping Center), 25-percent pass-by rate assumed for time periods with no available data
7 Pass-by rates based on ITE LUC 932 (High-Turnover Sit Down Restaurant), 25-percent pass-by rate assumed for time periods with no available data
8 Assume that difference in TNC in/out trips equates to the deadhead trips.

John F. Kennedy Street at Memorial Drive

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 200 400 Feet

Enterprise Research Campus Project
Boston, MA

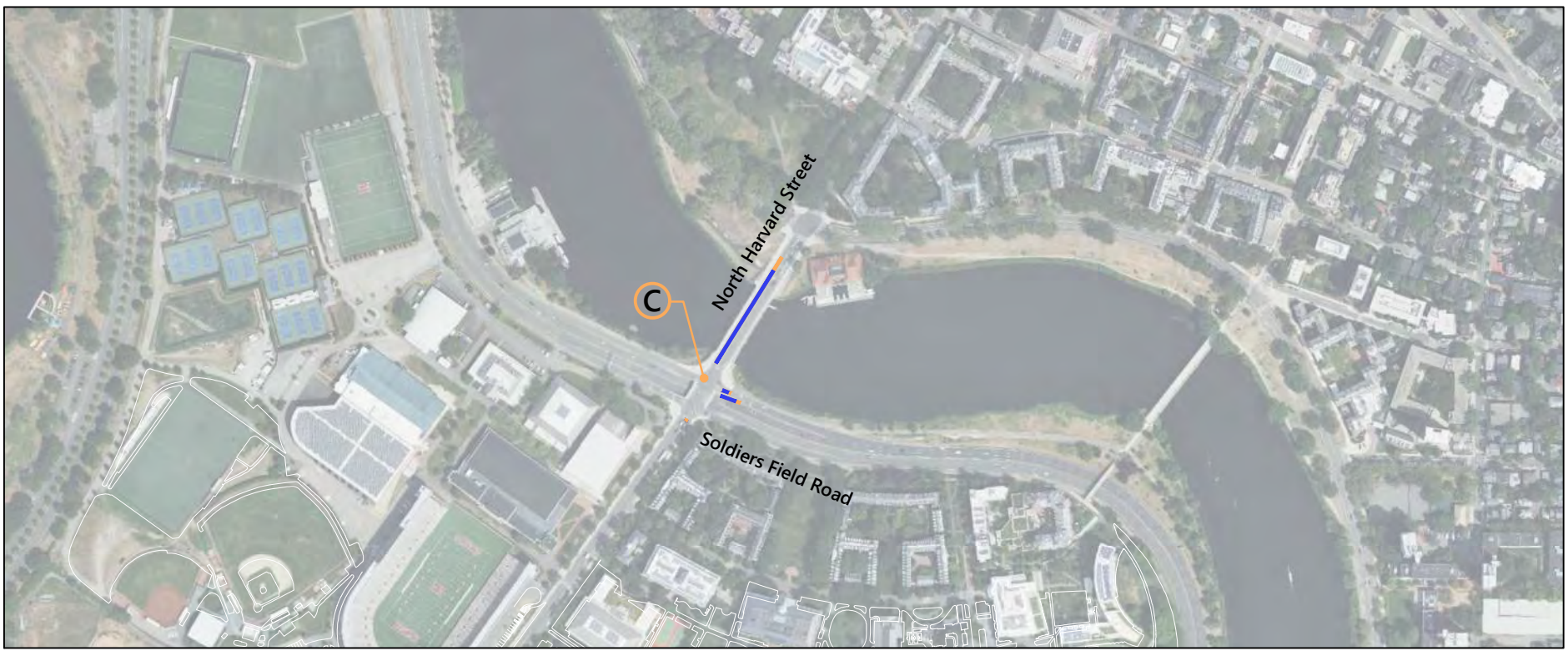
\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2025 Conditions - AM.dwg

North Harvard Street at Soldiers Field Road WB

X Overall Intersection Level of Service

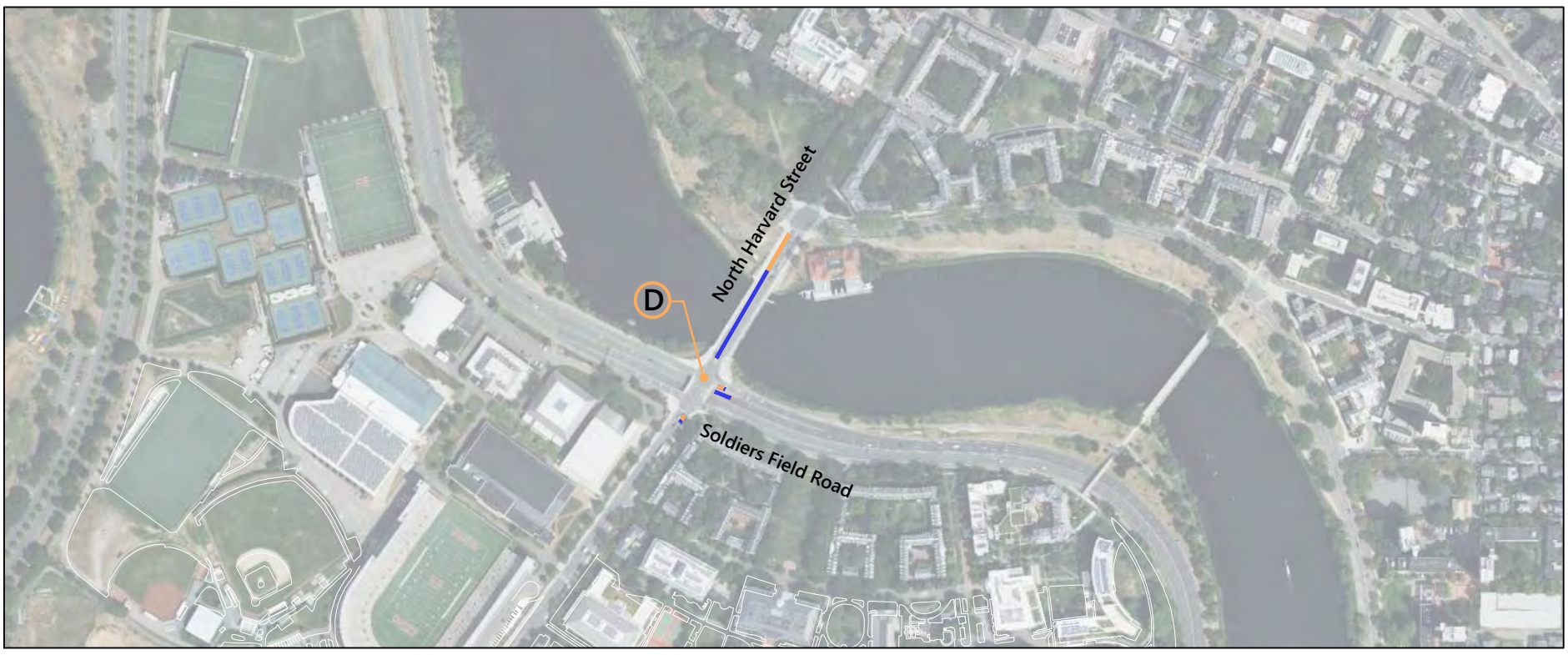
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road EB

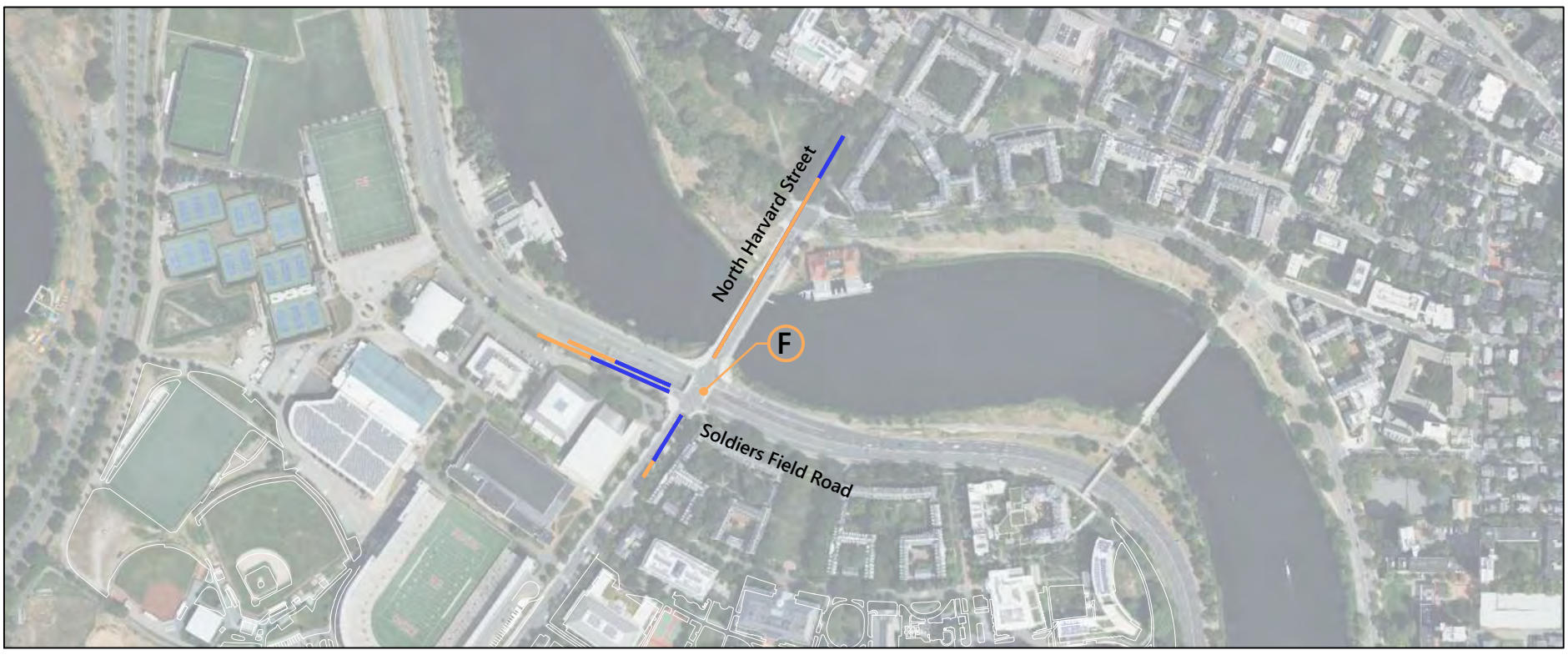
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

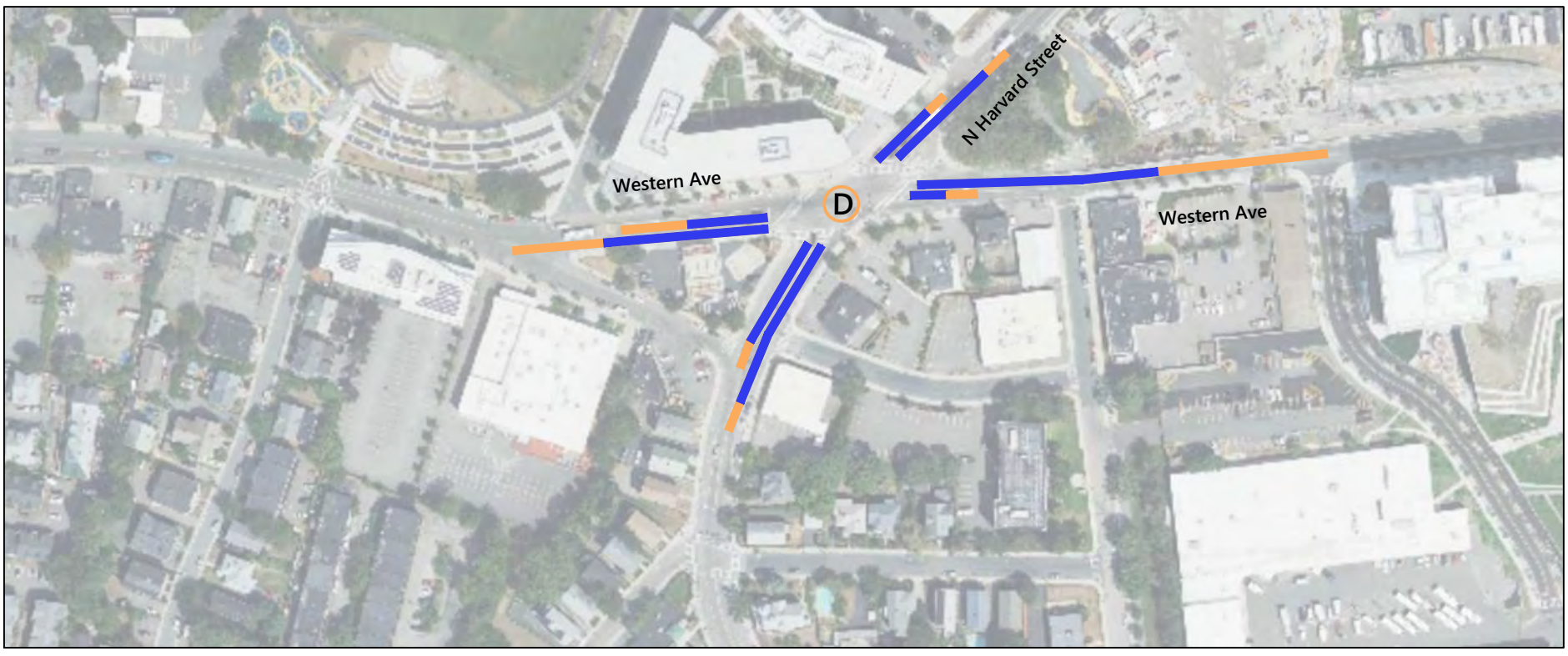
Enterprise Research Campus Project
Boston, MA

North Harvard Street at Western Ave

X Overall Intersection Level of Service

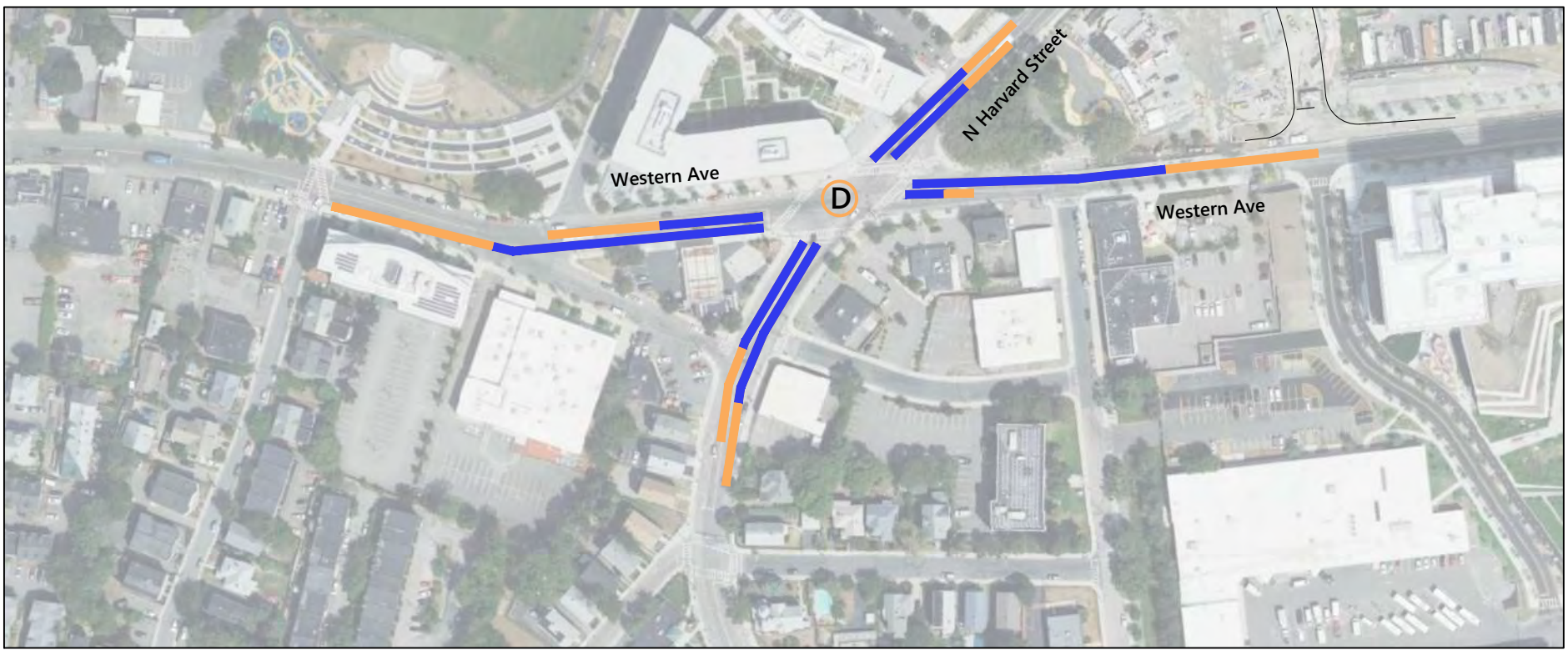
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus
Boston, Massachusetts

\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2025 Conditions - AM.dwg

North Harvard Street at Franklin St/ Kingsley St

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at North Harvard Street

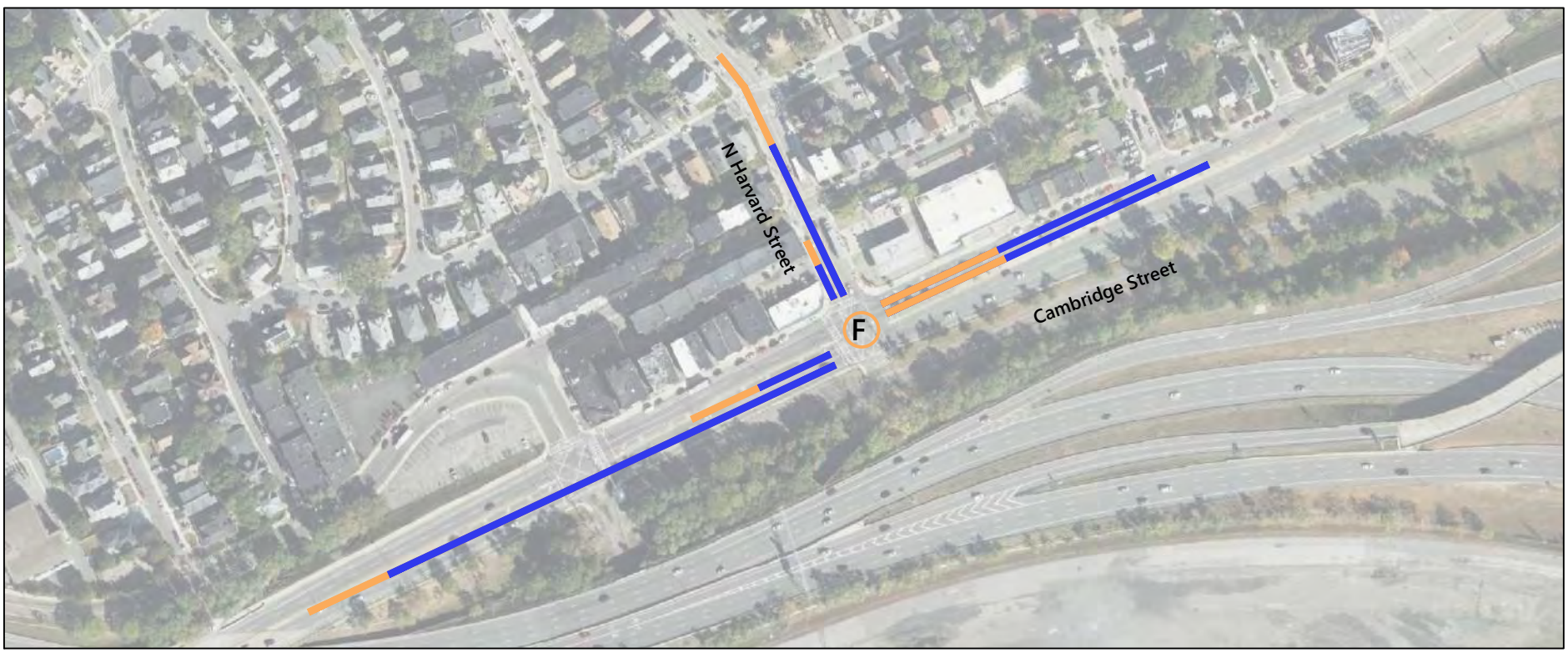
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

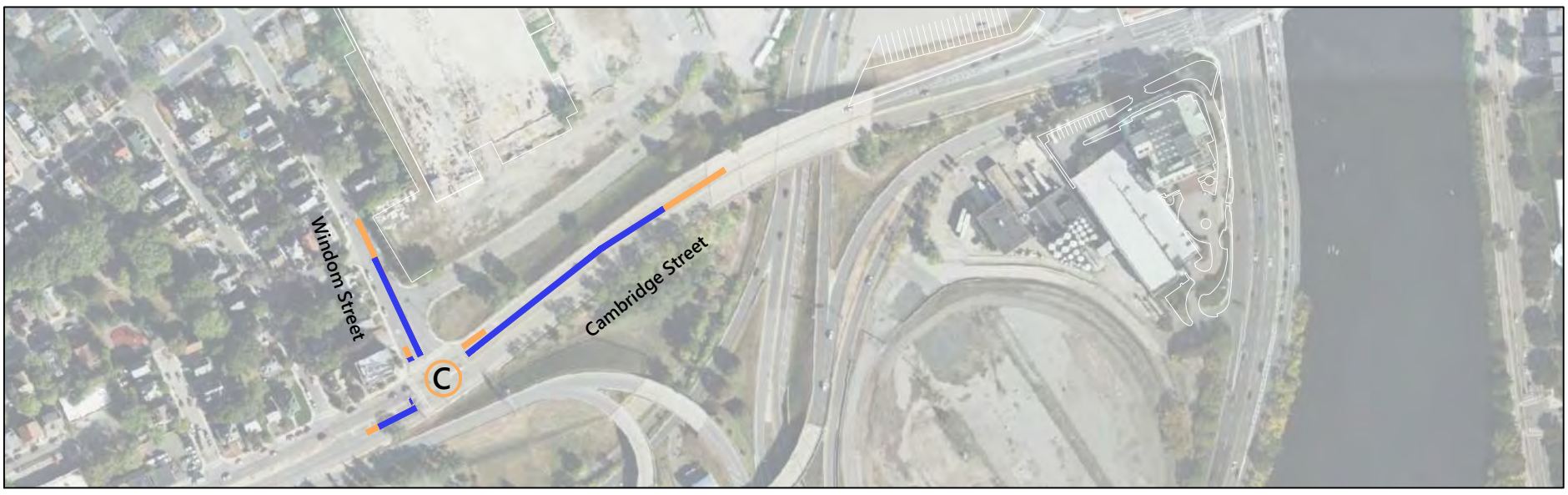
Enterprise Research Campus Project
Boston, MA

Cambridge Street at Windom Street

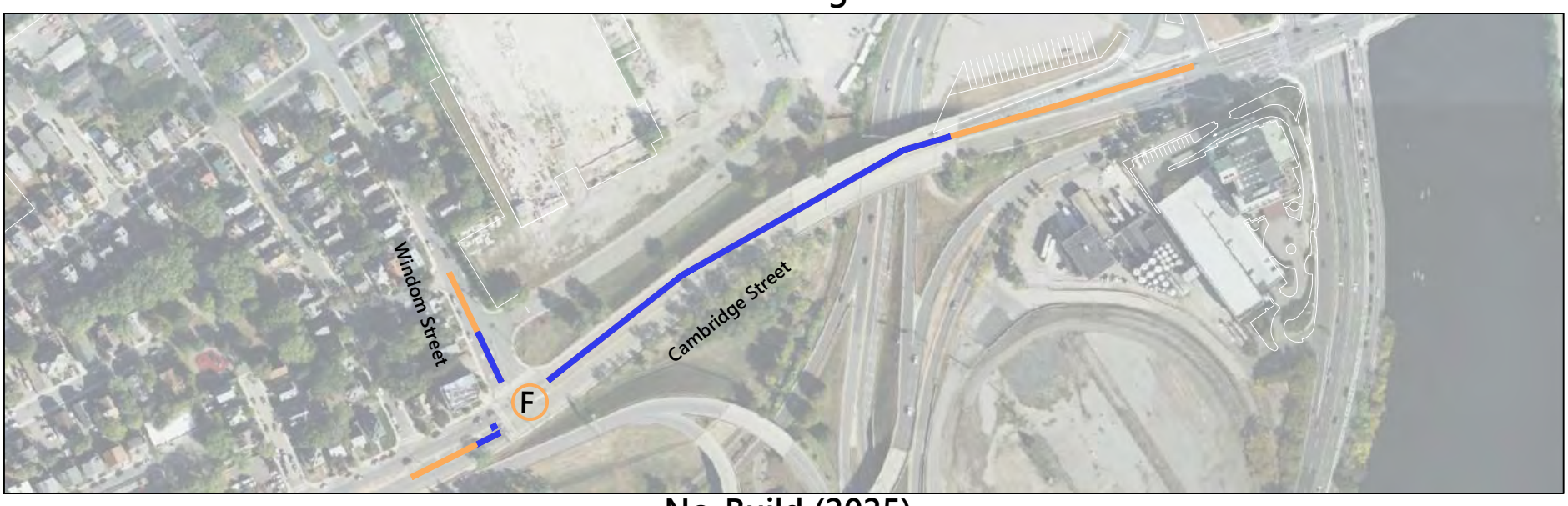
X Overall Intersection Level of Service

50th Percentile Queue

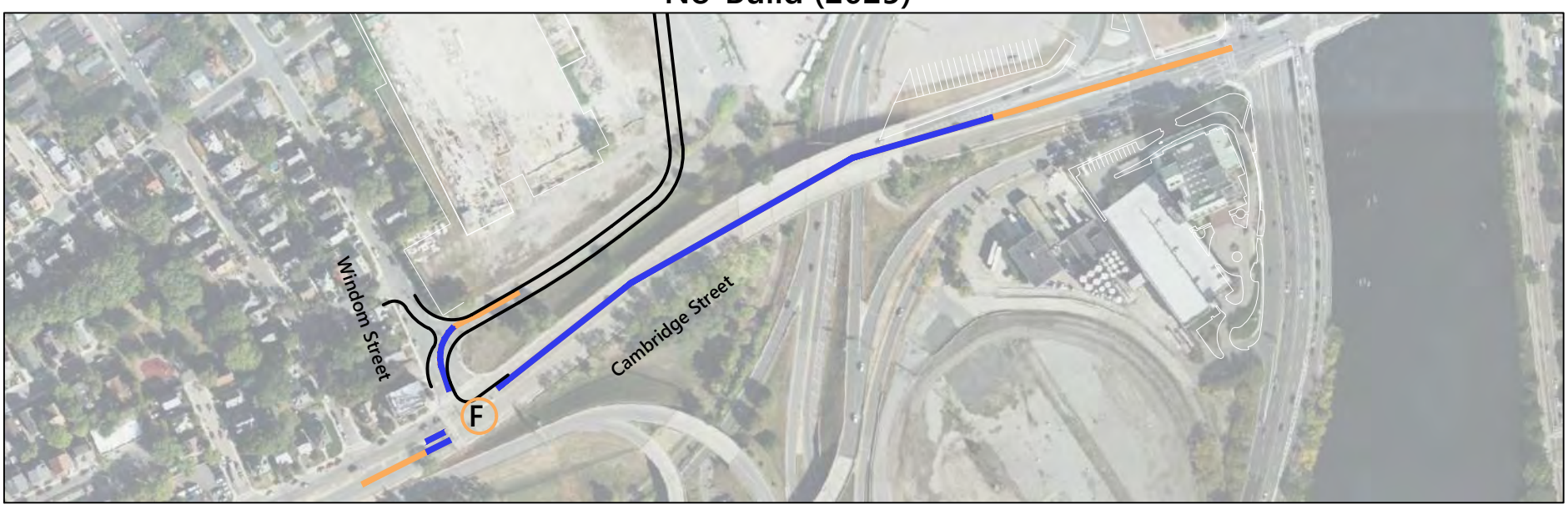
95th Percentile Queue



Existing



No-Build (2025)



Build (2025) - No Mitigation

Build (2025) - With Mitigation

2025 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

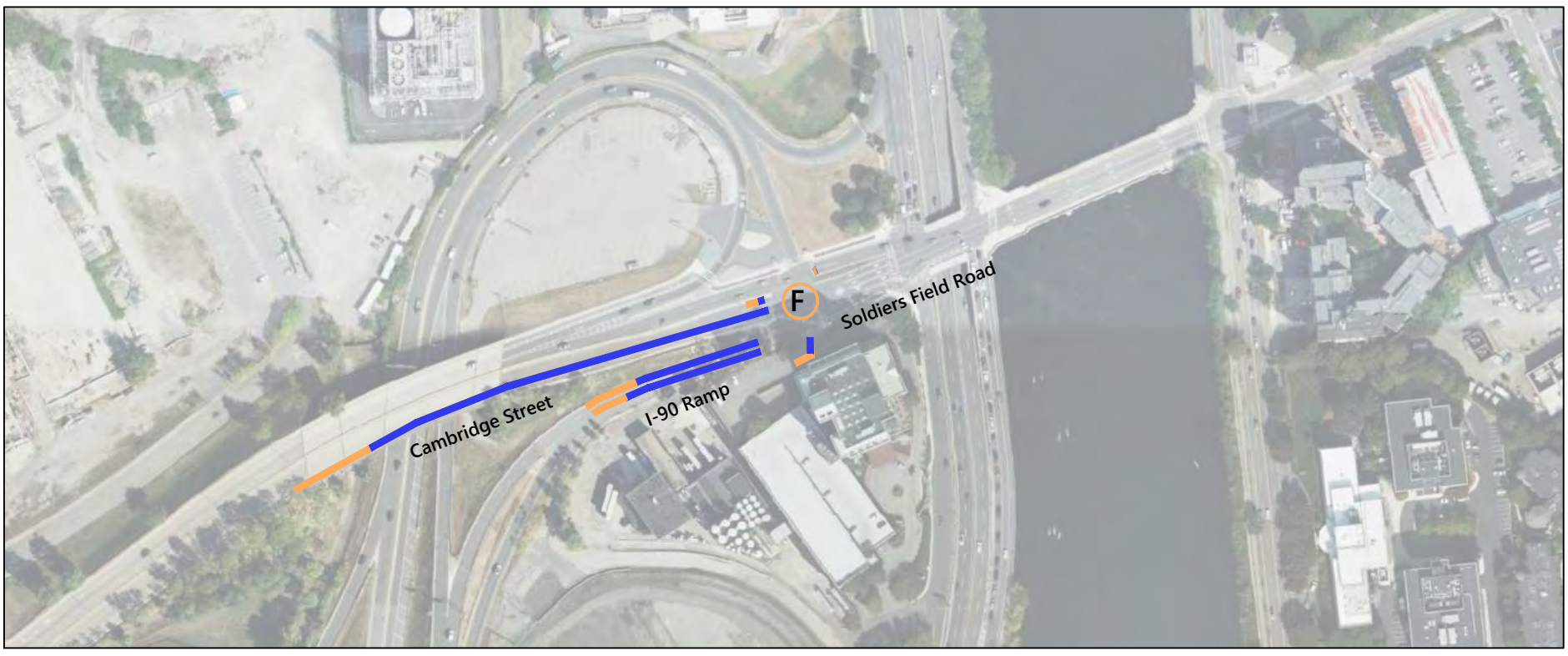
Enterprise Research Campus Project
Boston, MA

Cambridge Street at I-90 Ramps/ Double Tree Hotel

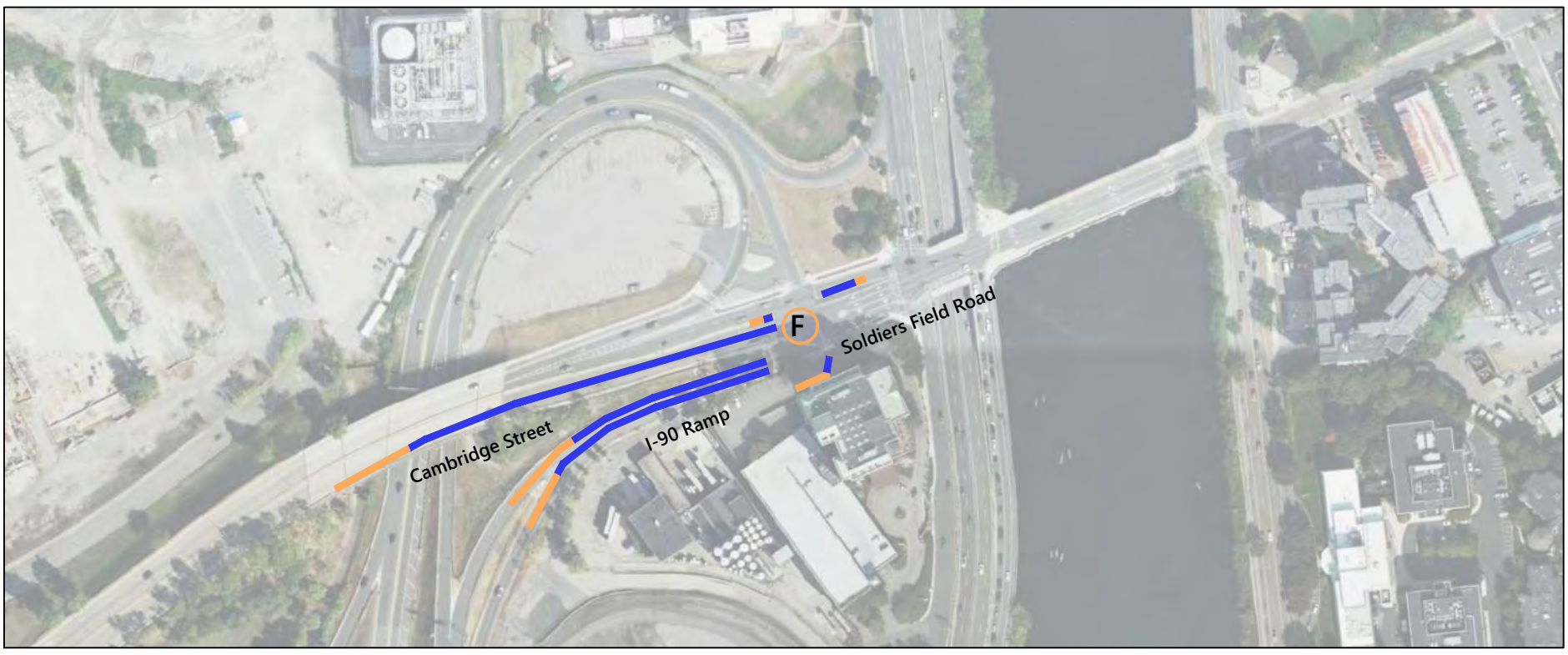
X Overall Intersection Level of Service

50th Percentile Queue

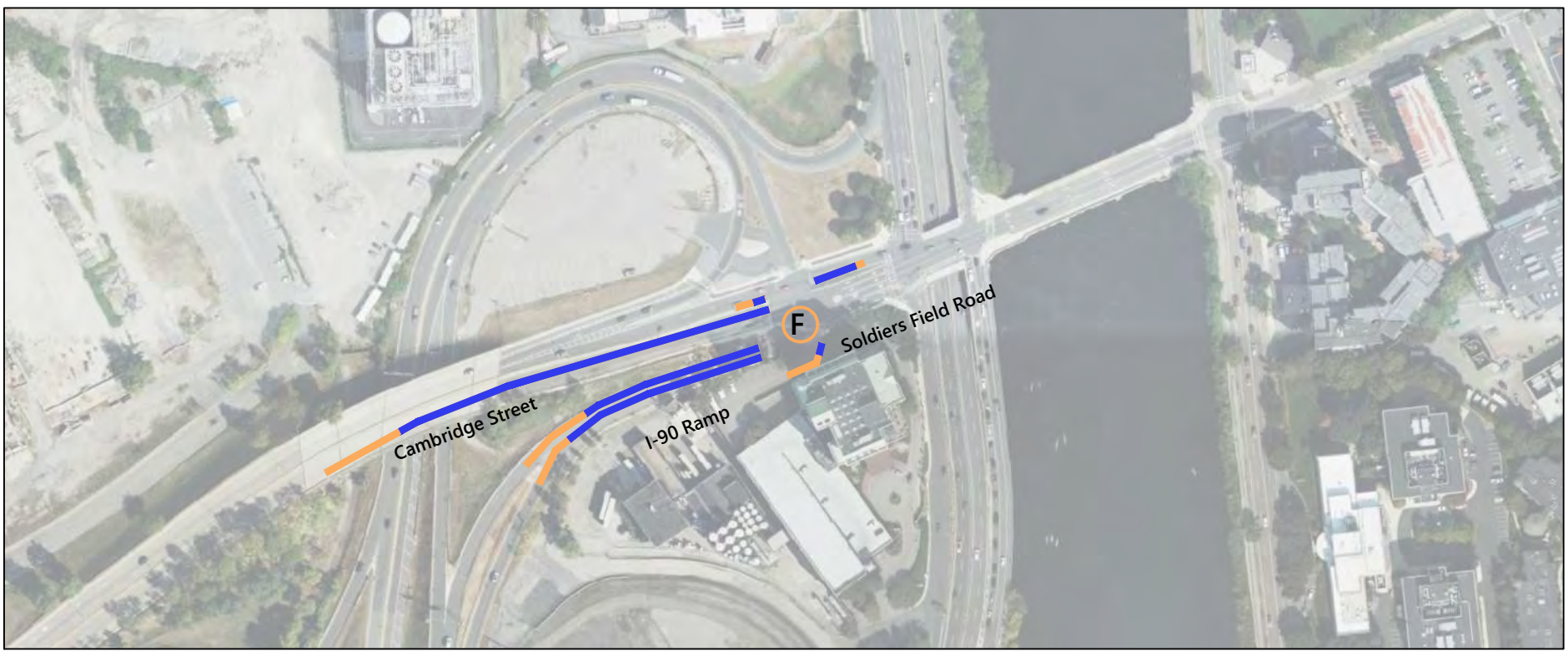
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at Soldiers Field Road

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 200 400 Feet

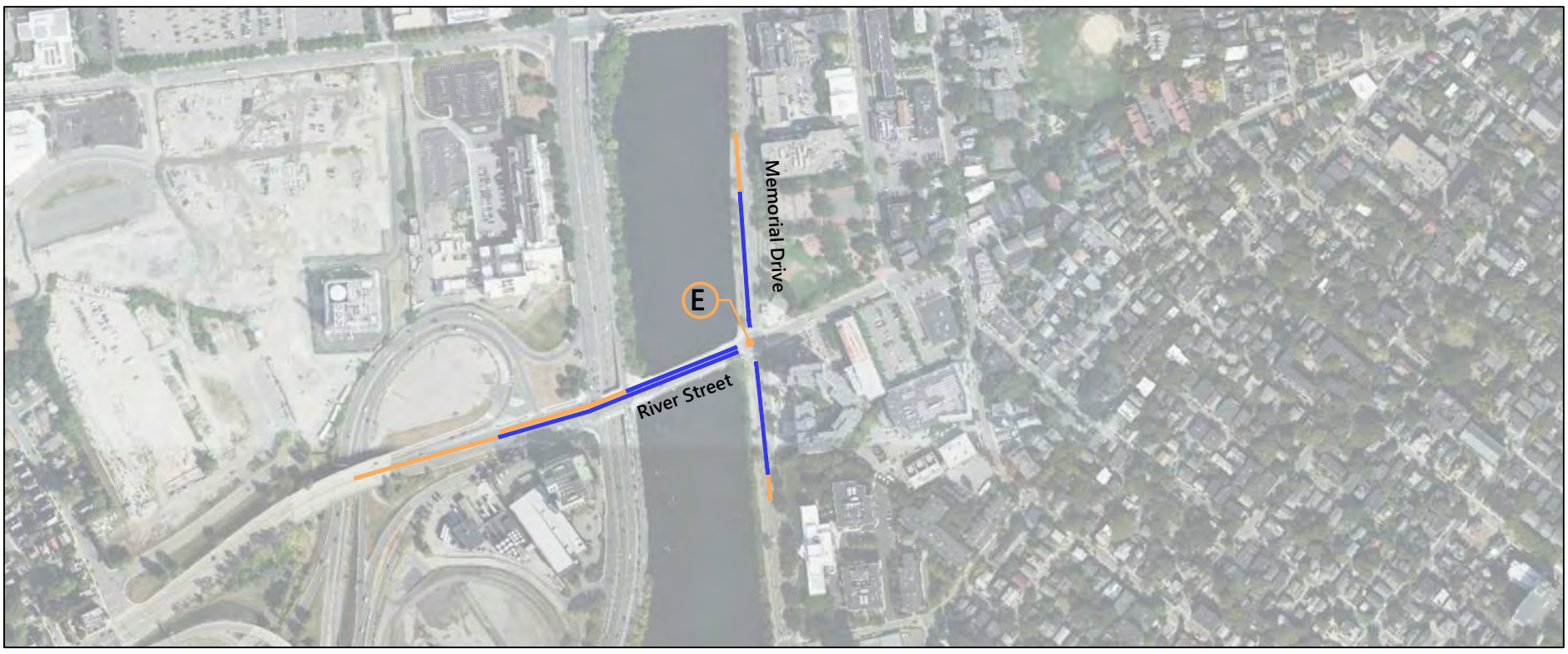
Enterprise Research Campus Project
Boston, MA

Memorial Drive at River Street

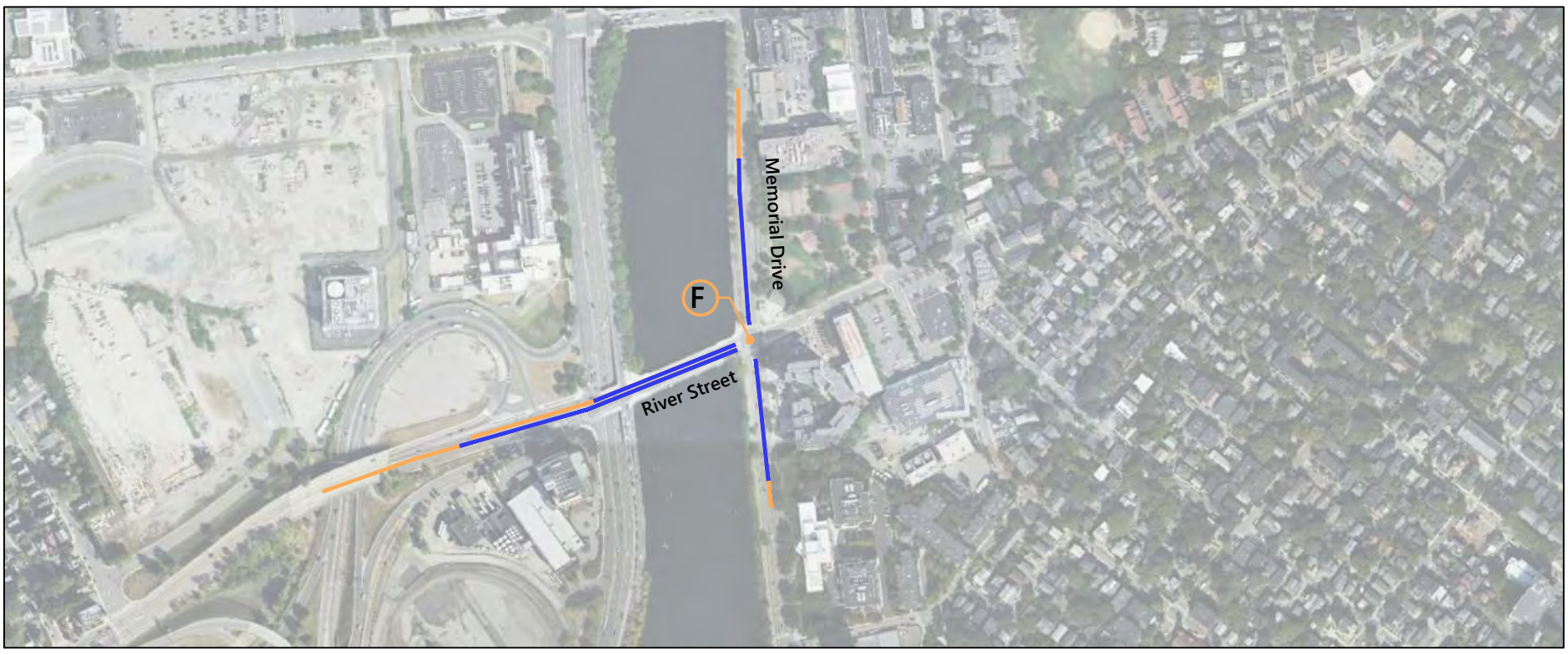
X Overall Intersection Level of Service

50th Percentile Queue

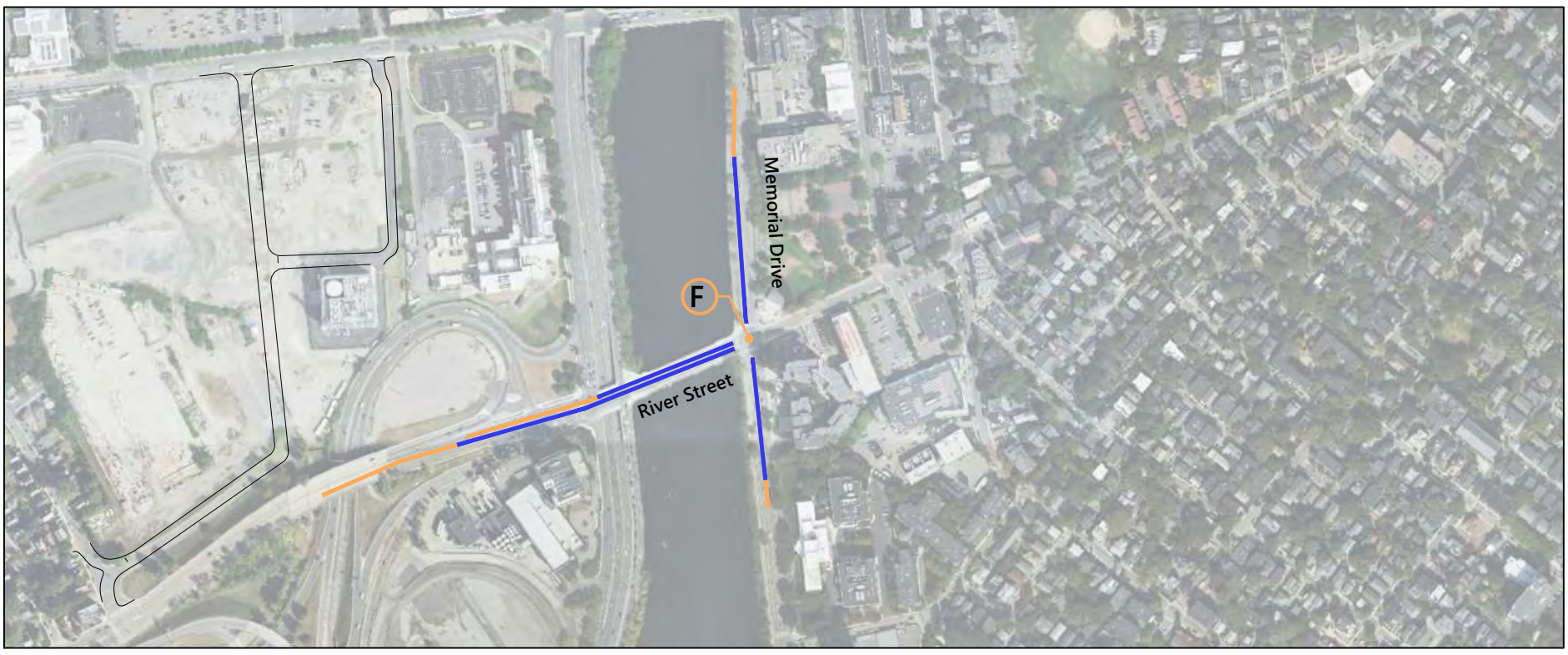
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

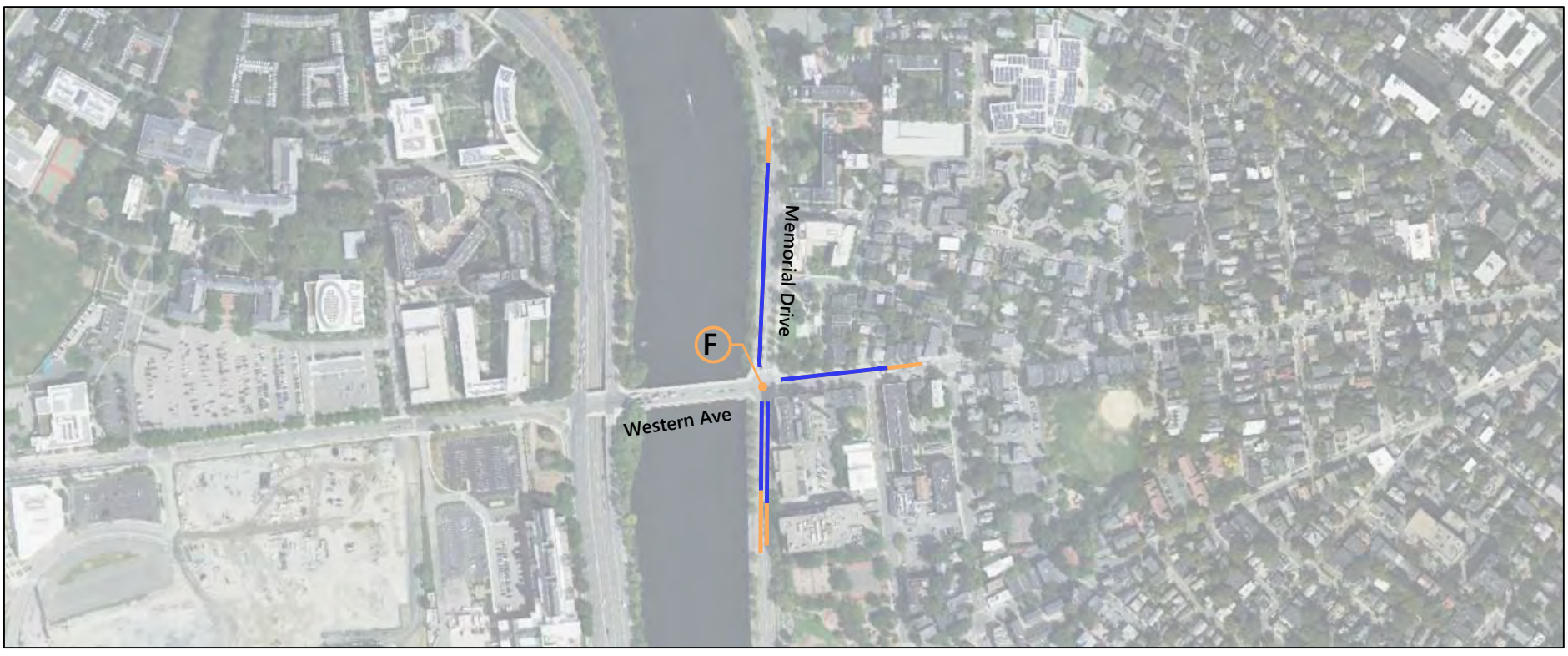
Enterprise Research Campus Project
Boston, MA

Western Ave at Memorial Drive

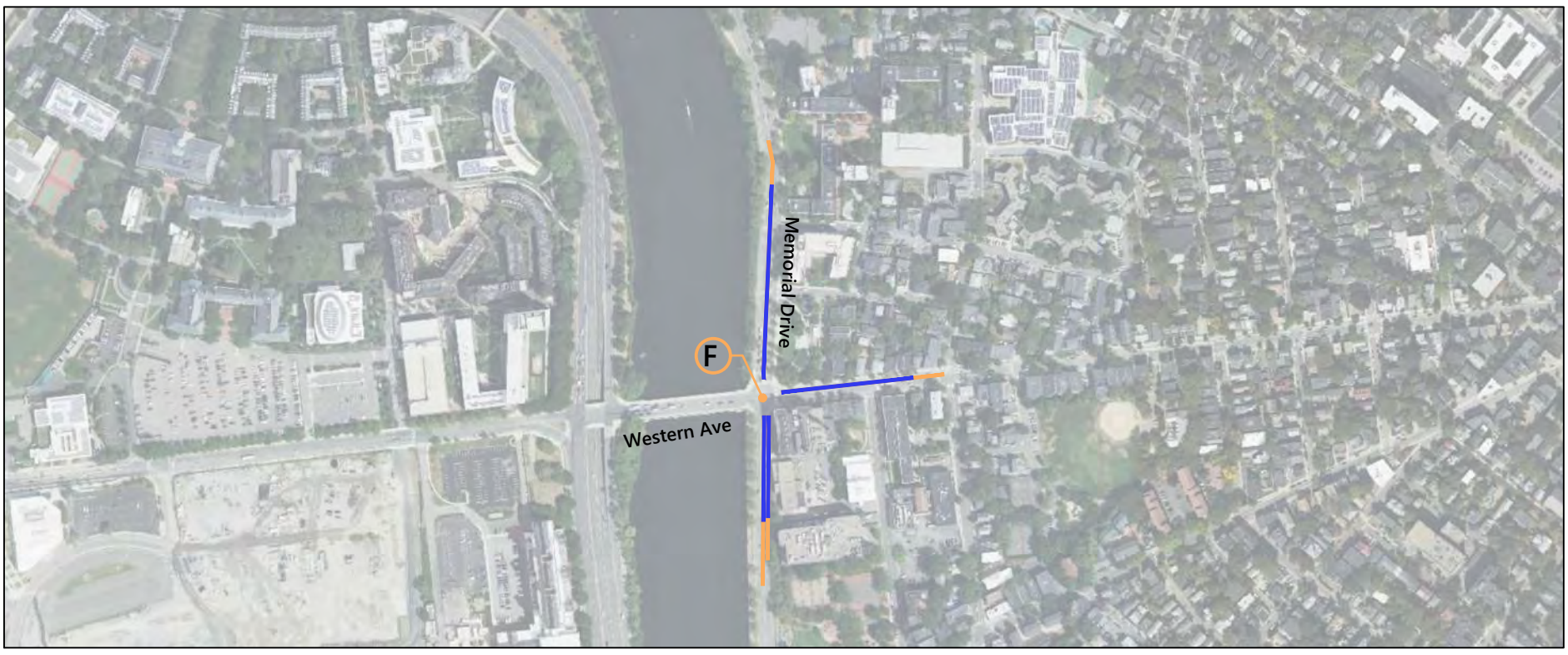
X Overall Intersection Level of Service

50th Percentile Queue

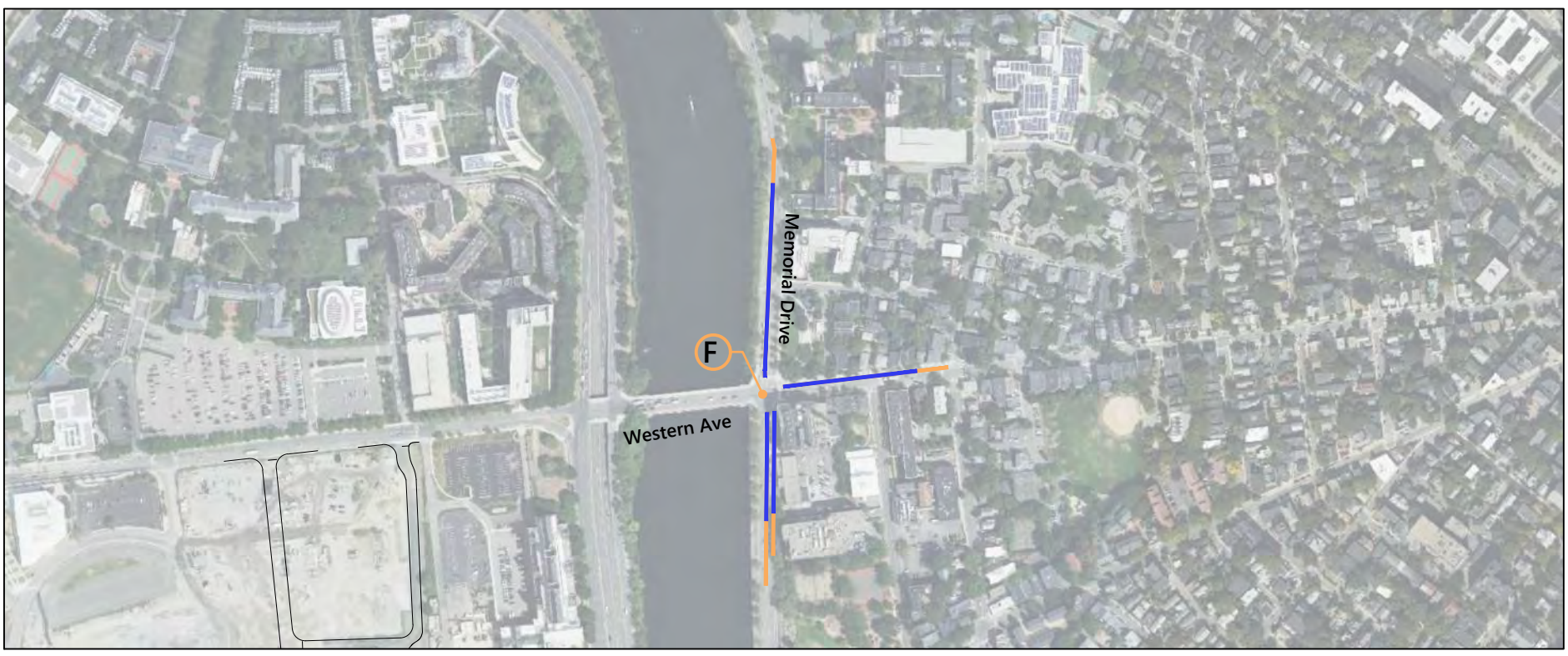
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

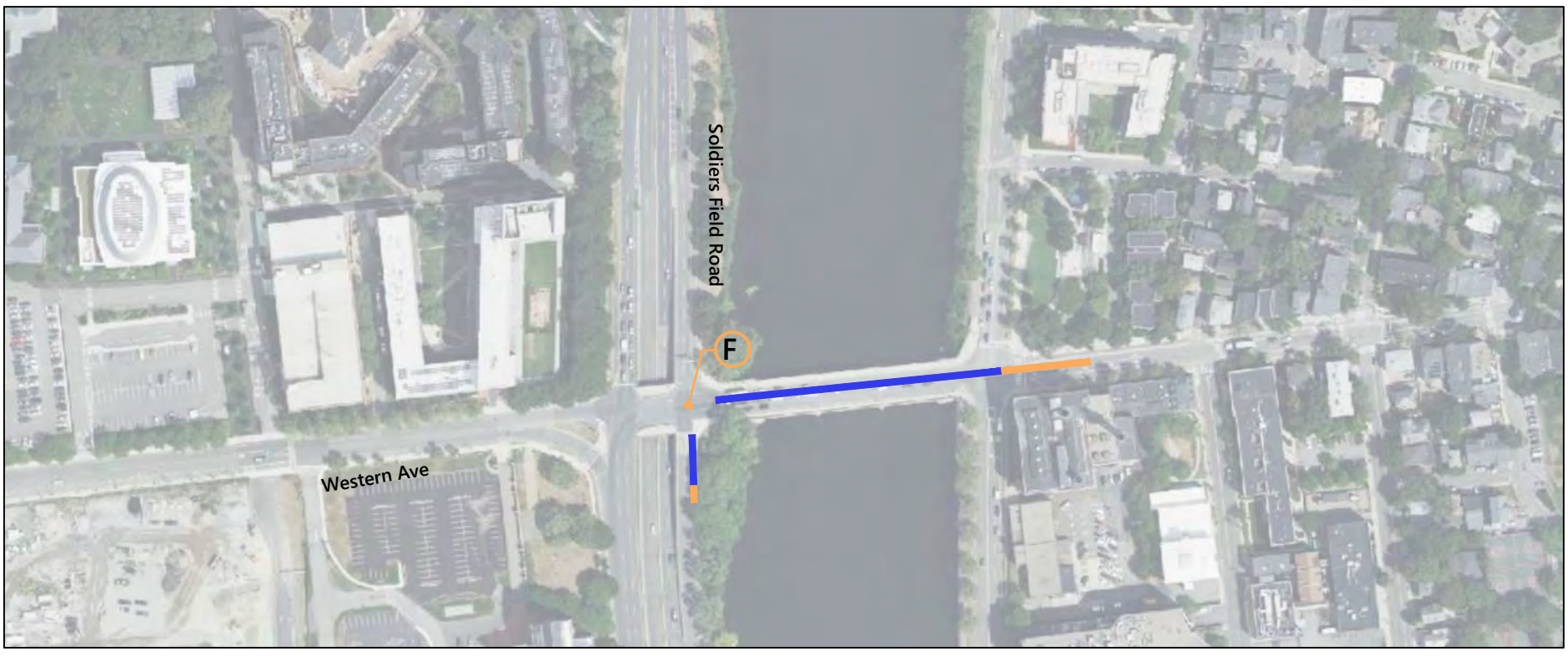
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road WB

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

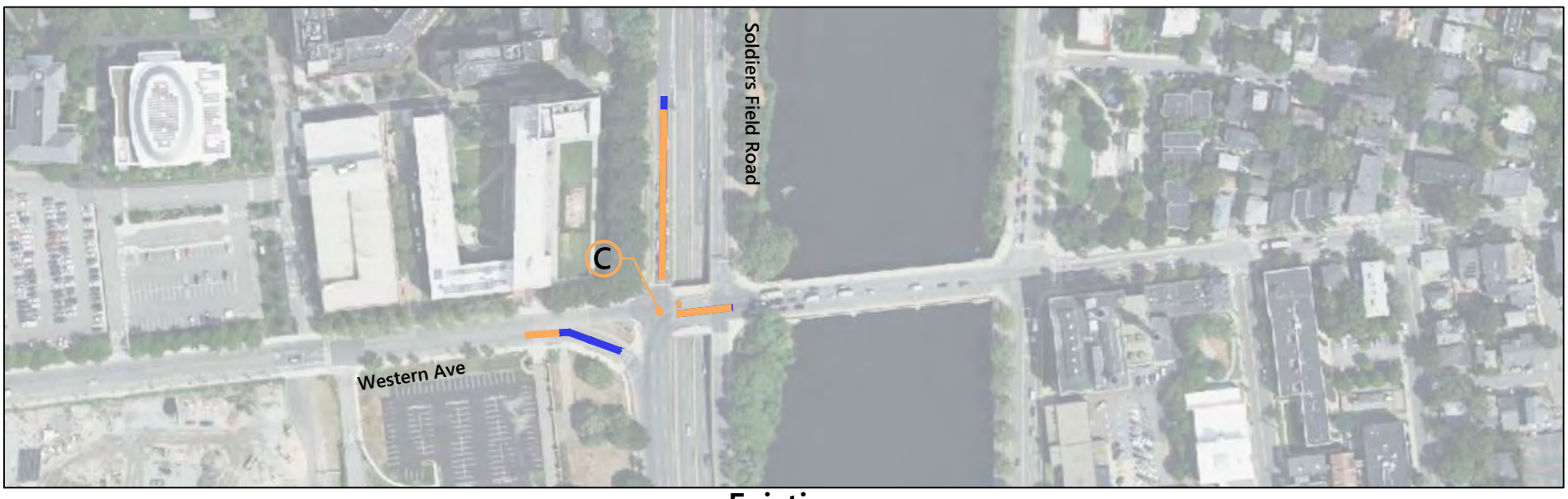
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road EB

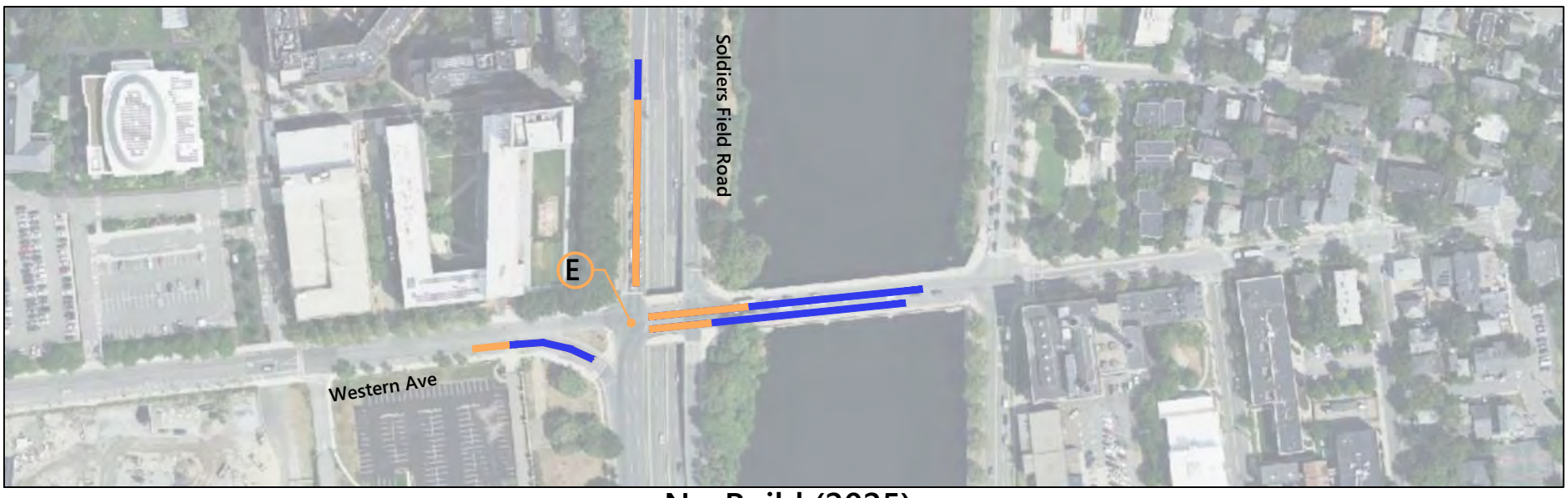
X Overall Intersection Level of Service

50th Percentile Queue

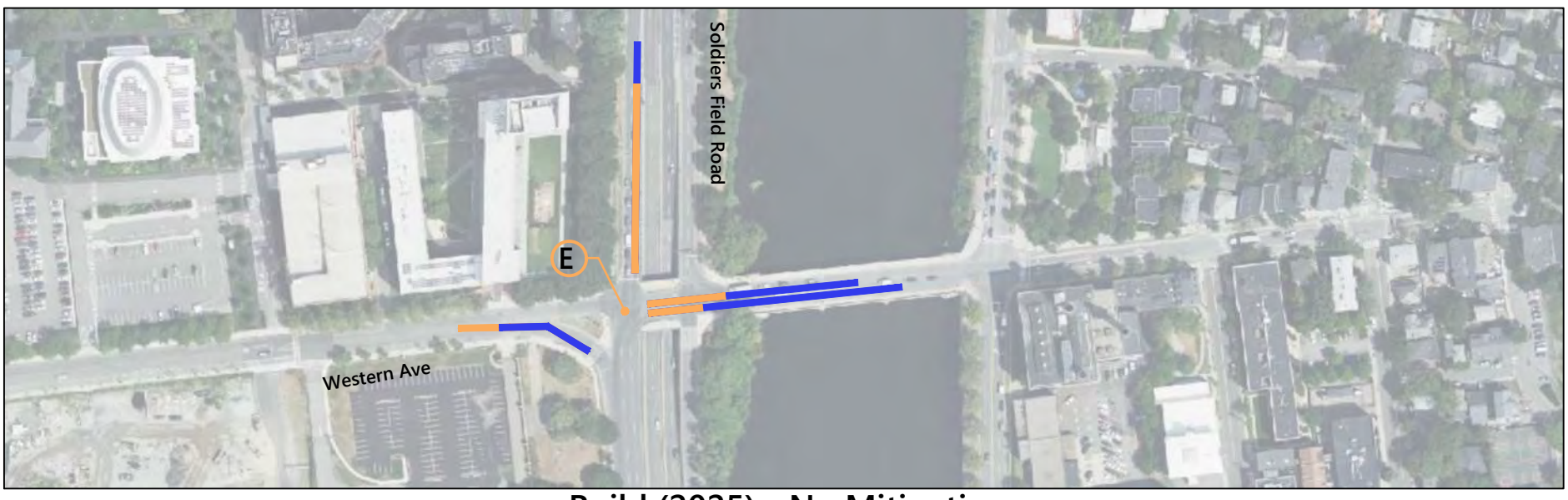
95th Percentile Queue



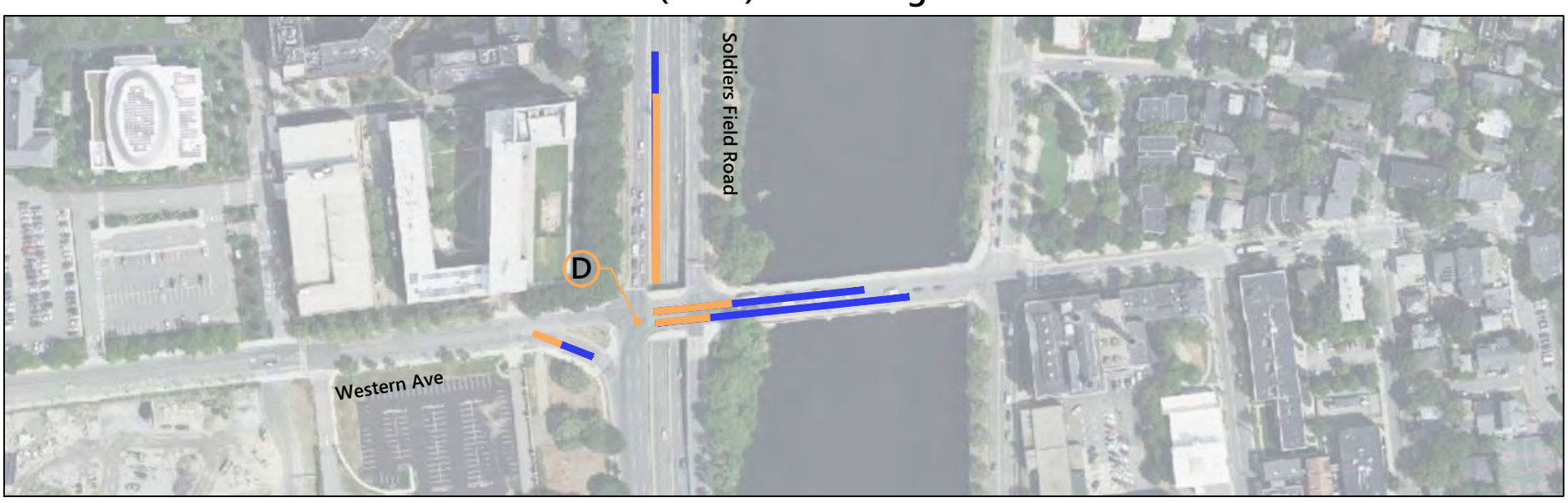
Existing



No-Build (2025)



Build (2025) - No Mitigation



Build (2025) - With Mitigation

2025 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

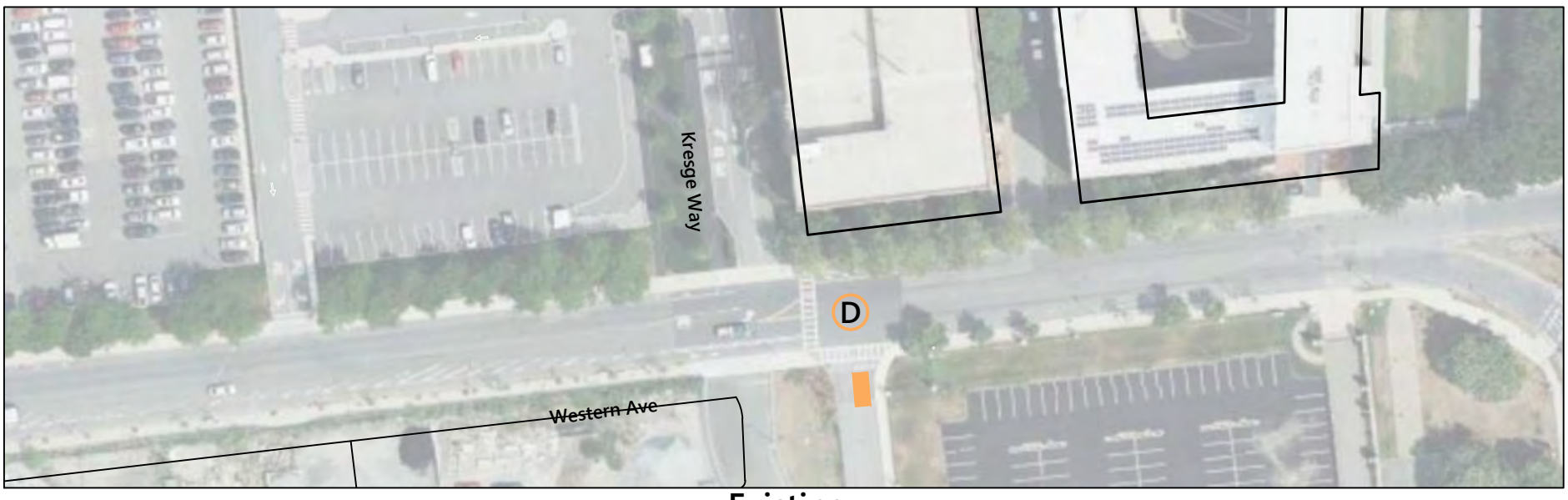
Enterprise Research Campus Project
Boston, MA

Western Ave at Kresge Way/ East Drive

X Overall Intersection Level of Service

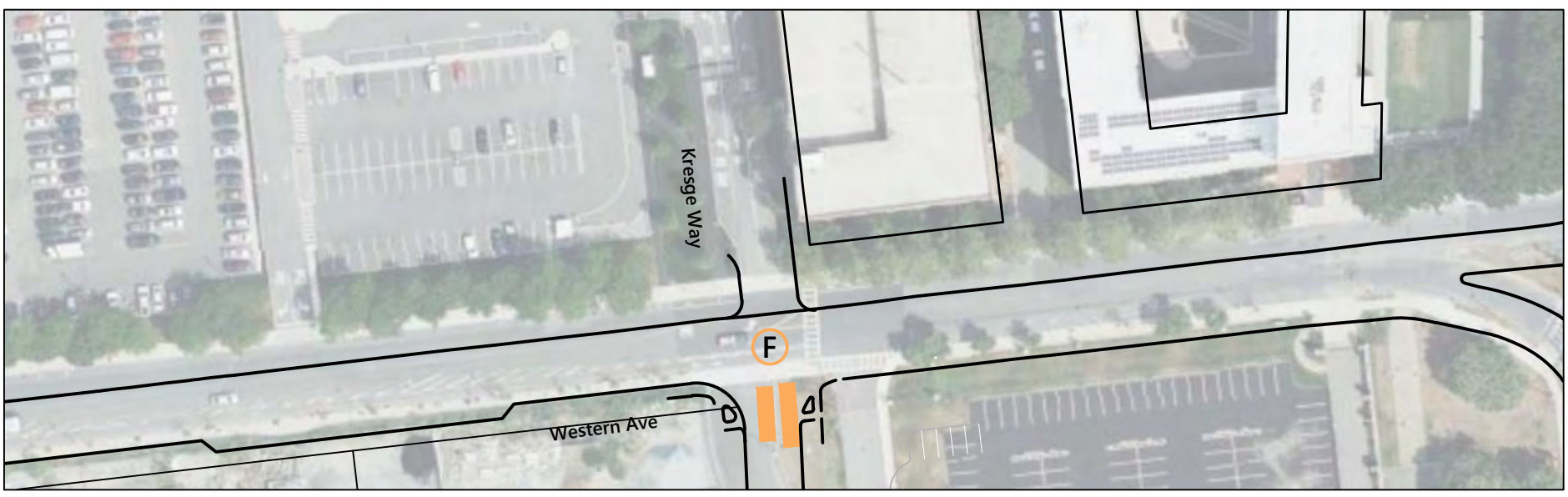
50th Percentile Queue

95th Percentile Queue

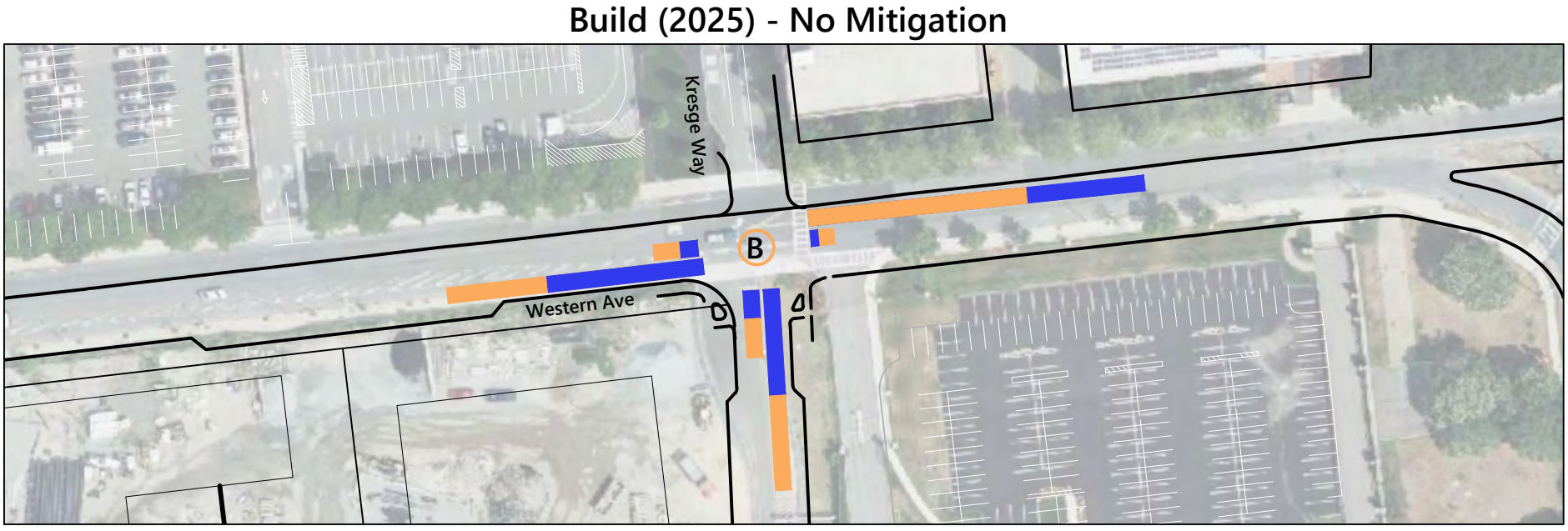


Existing

No-Build (2025)



Build (2025) - No Mitigation



Build (2025) - With Mitigation

2025 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive at Western Ave

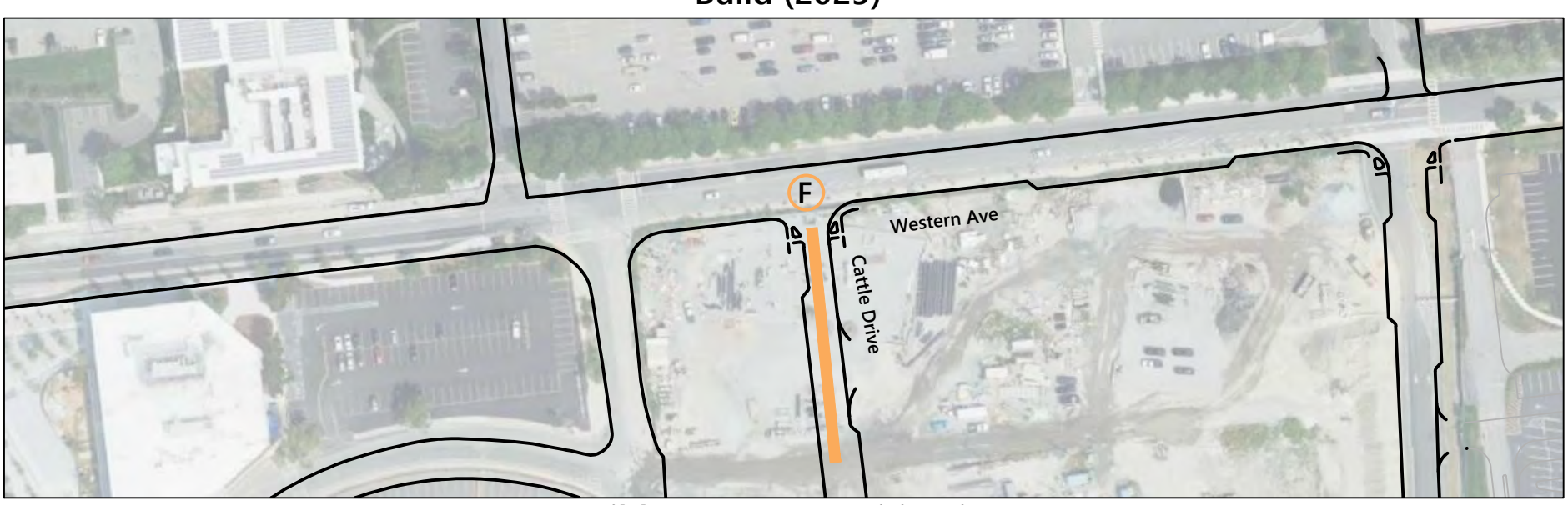
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

Build (2025)



Build (2025) - No Mitigation

Build (2025) - With Mitigation

Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

2025 Conditions: Morning Peak Hour Queue Diagrams

0 75 150 Feet

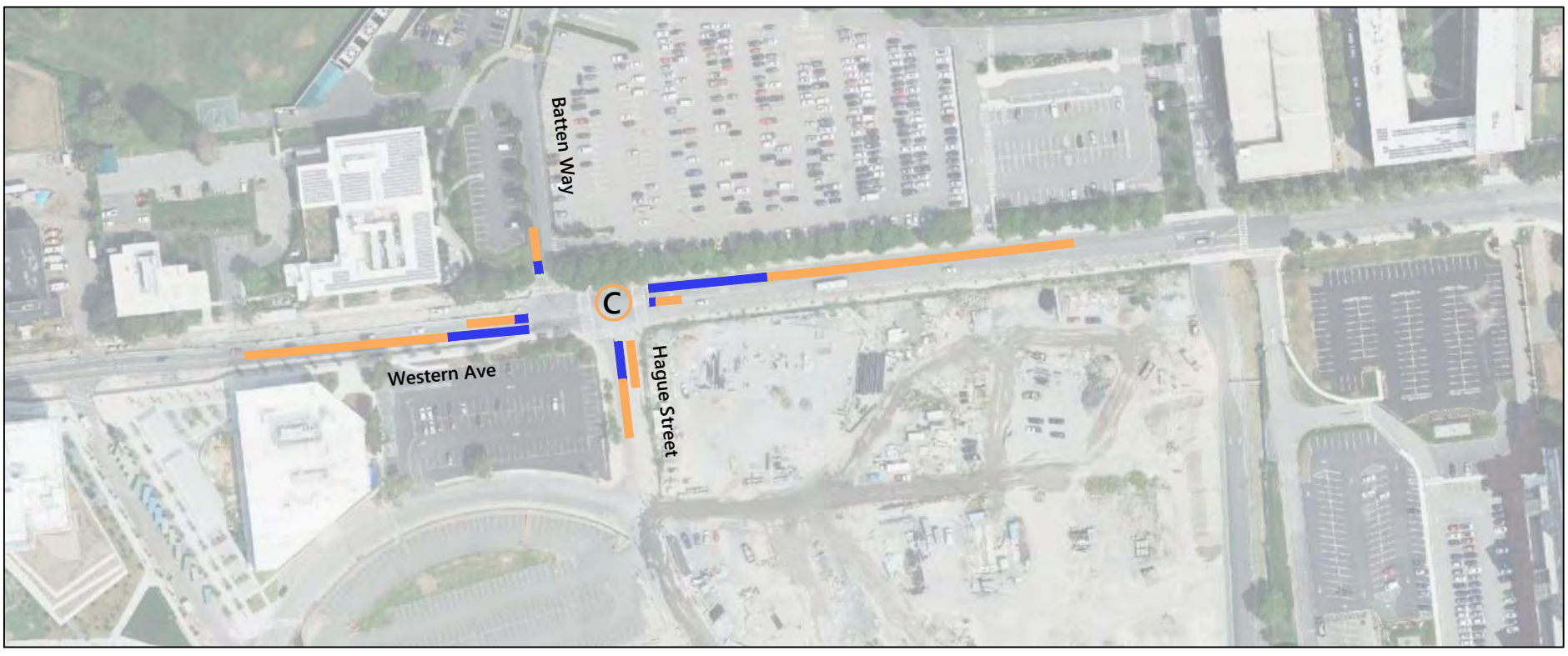
Enterprise Research Campus Project
Boston, MA

Western Ave at Batten Way/ Hague Street

X Overall Intersection Level of Service

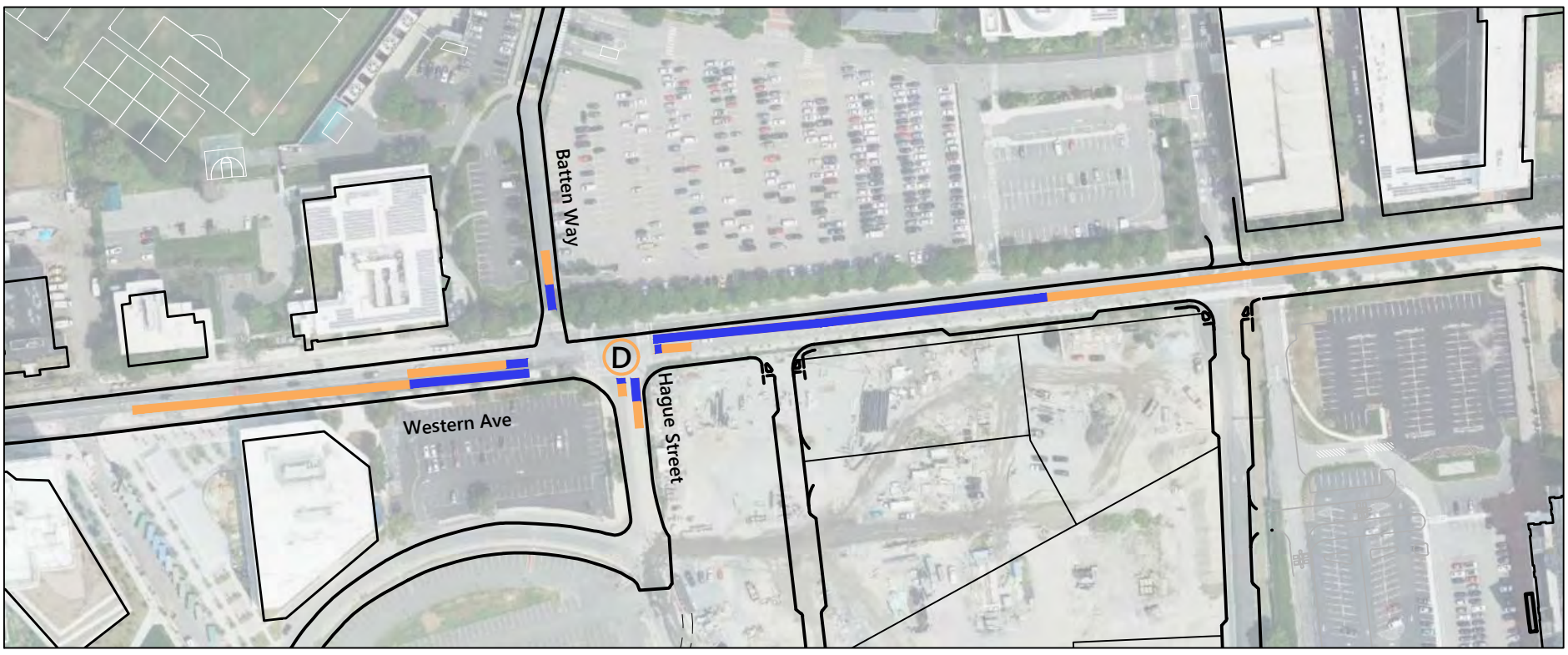
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)



Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus Project
Boston, MA

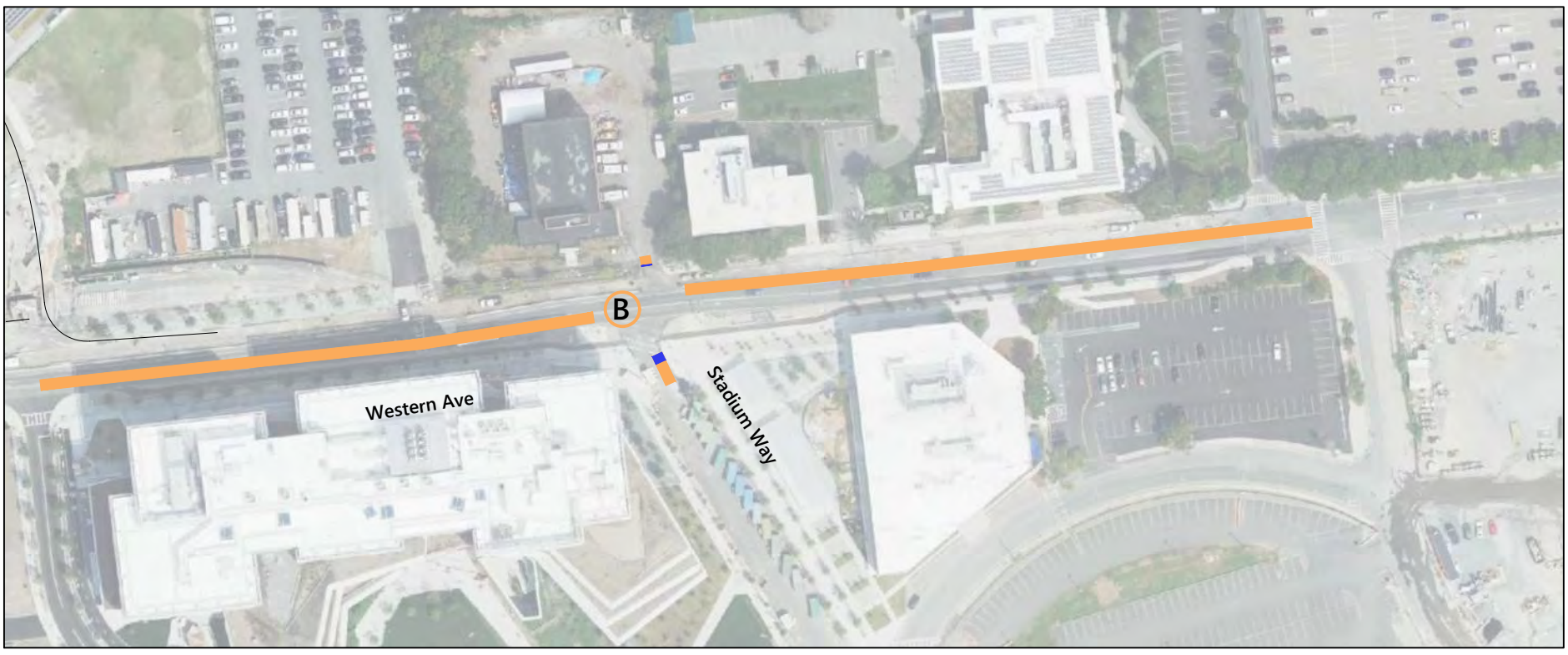
Western Ave at Stadium Way

X Overall Intersection Level of Service

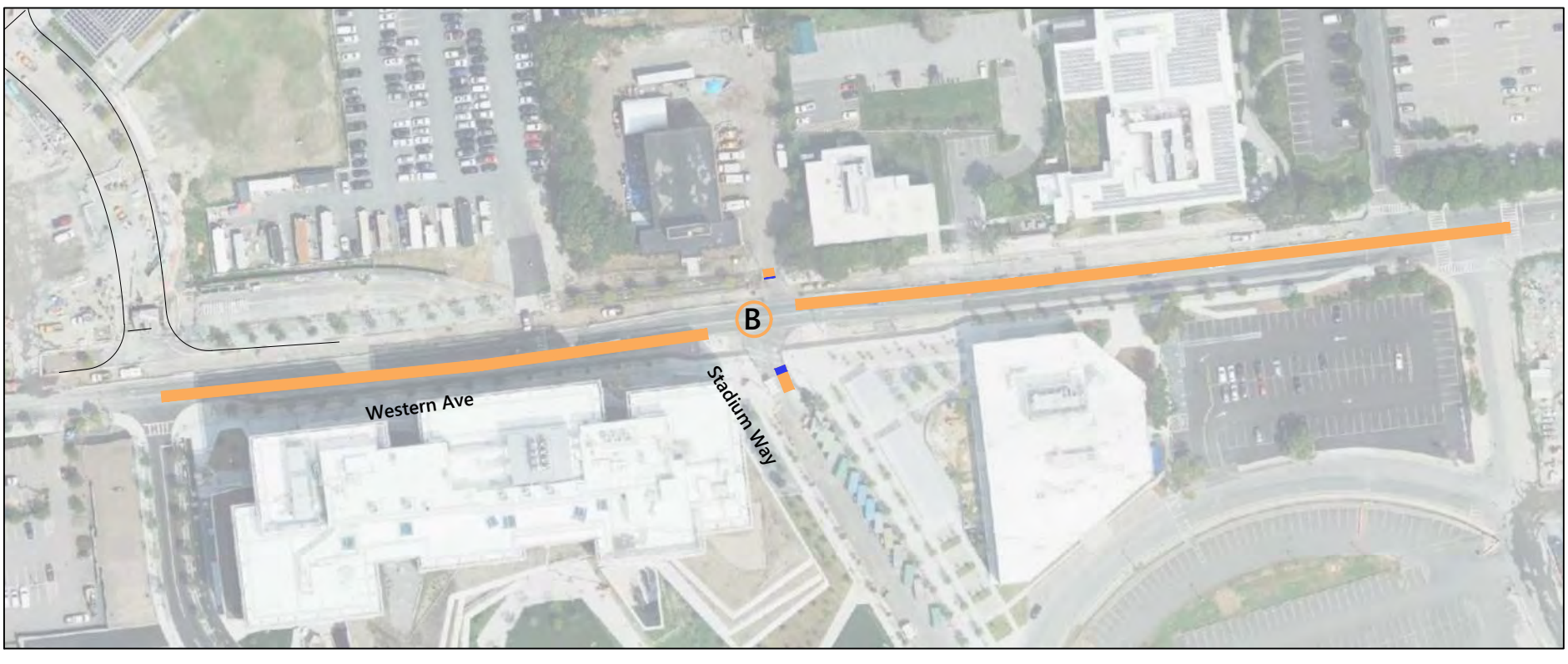
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 75 150 Feet

Enterprise Research Campus Project
Boston, MA

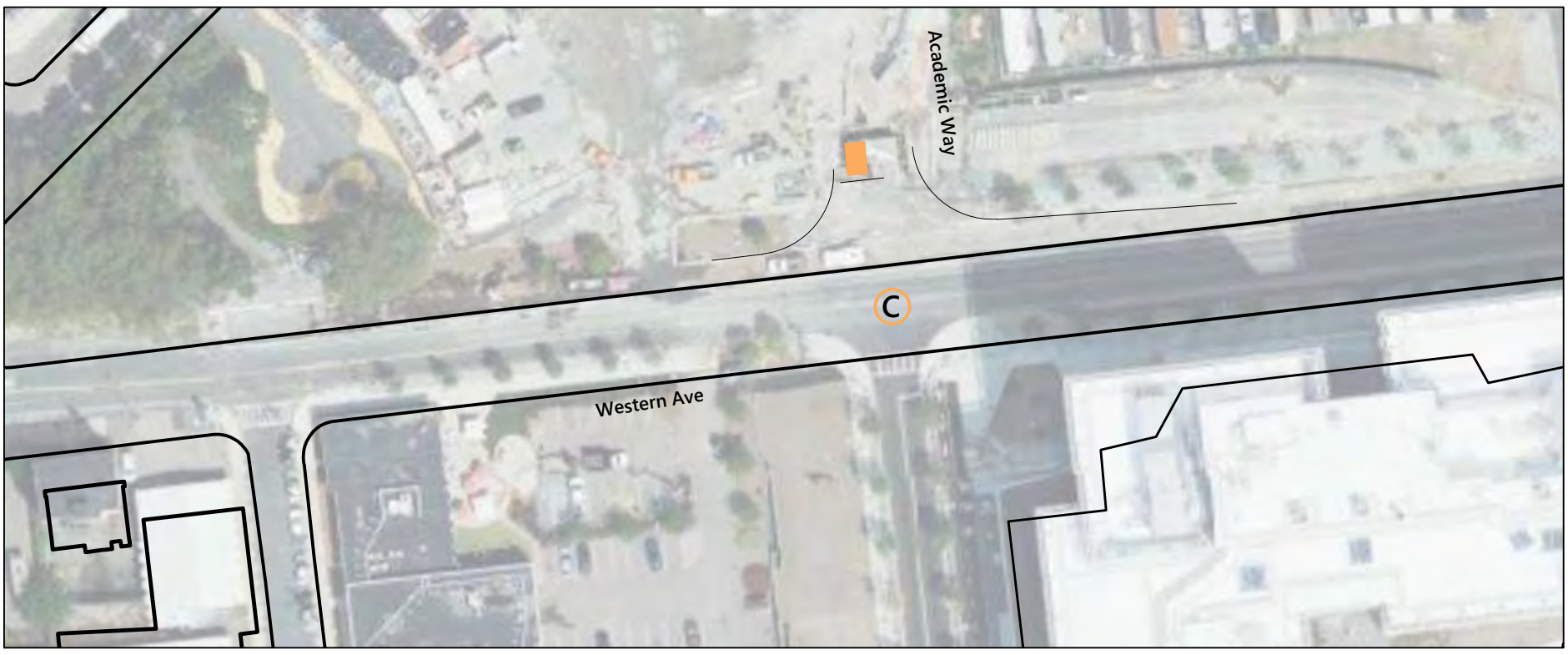
Western Ave at Academic Way

X Overall Intersection Level of Service

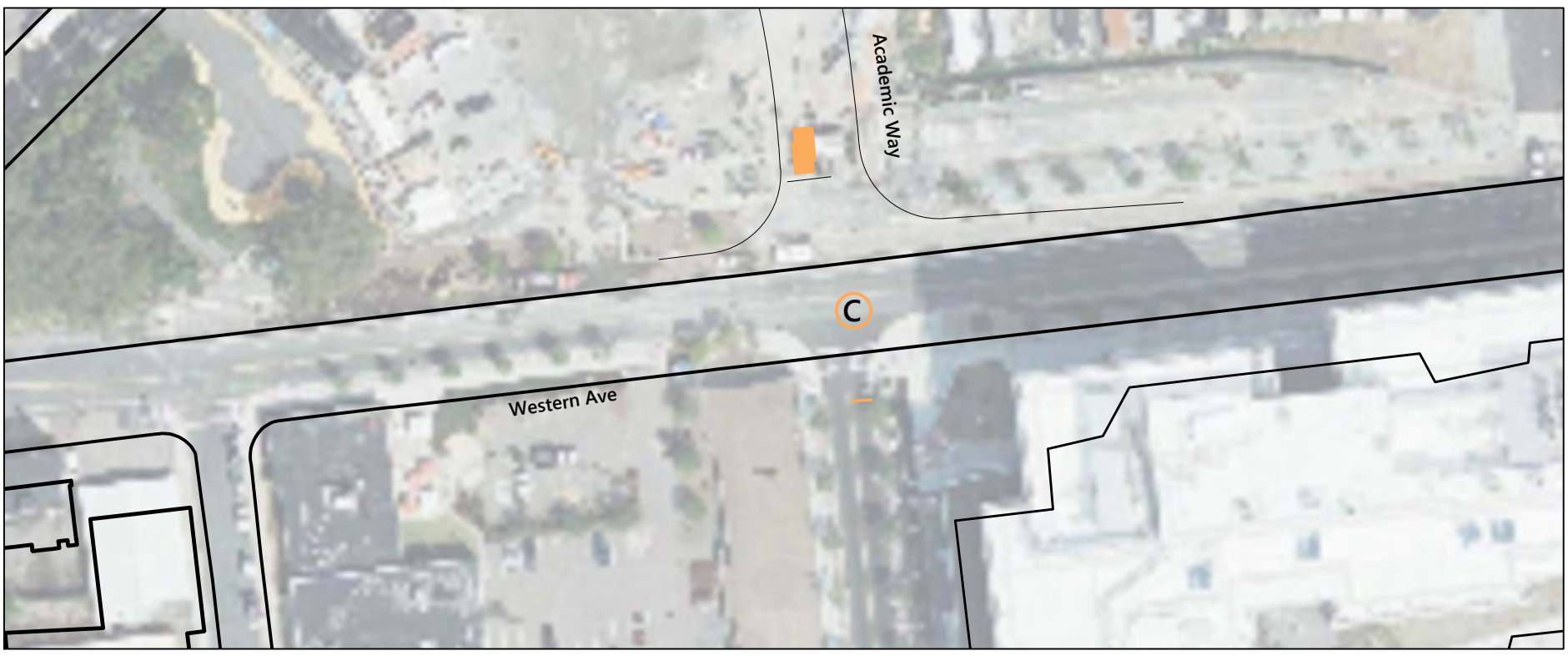
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Academic Way

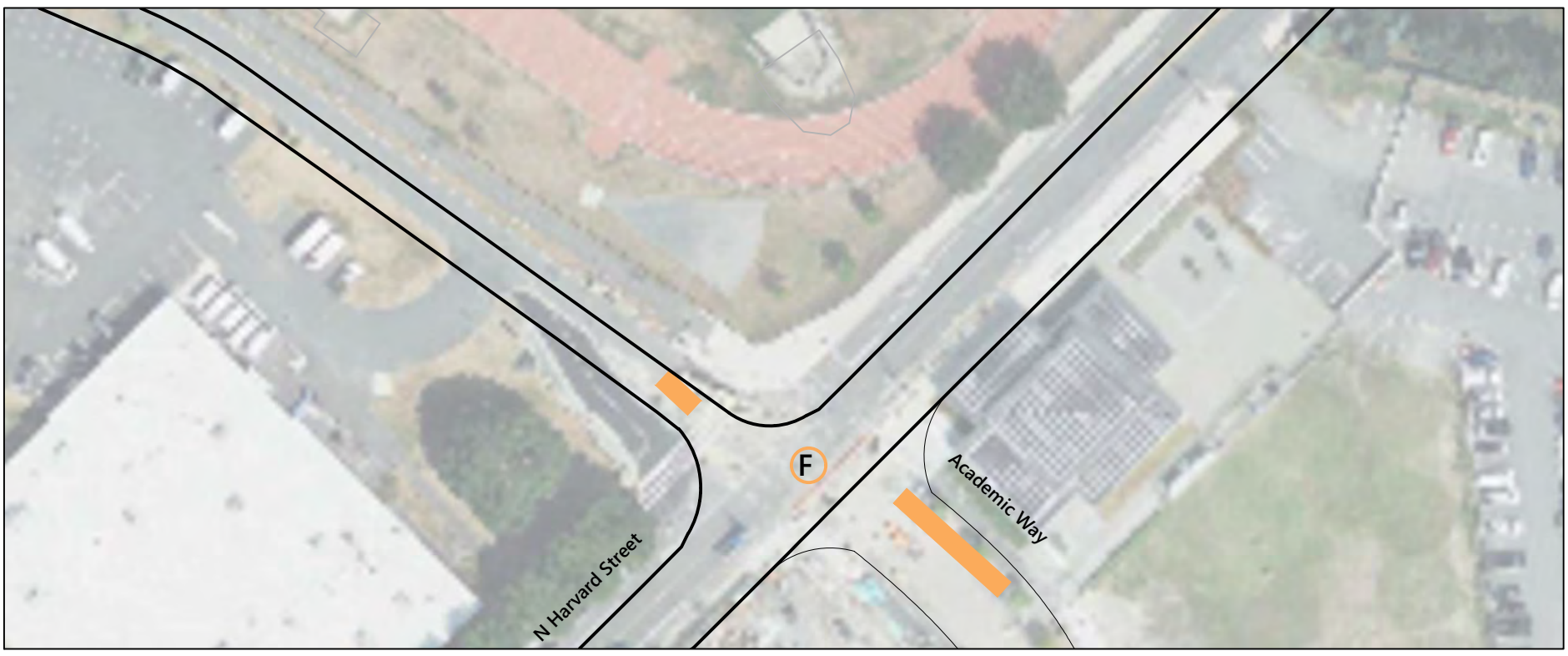
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive at DEF Drive

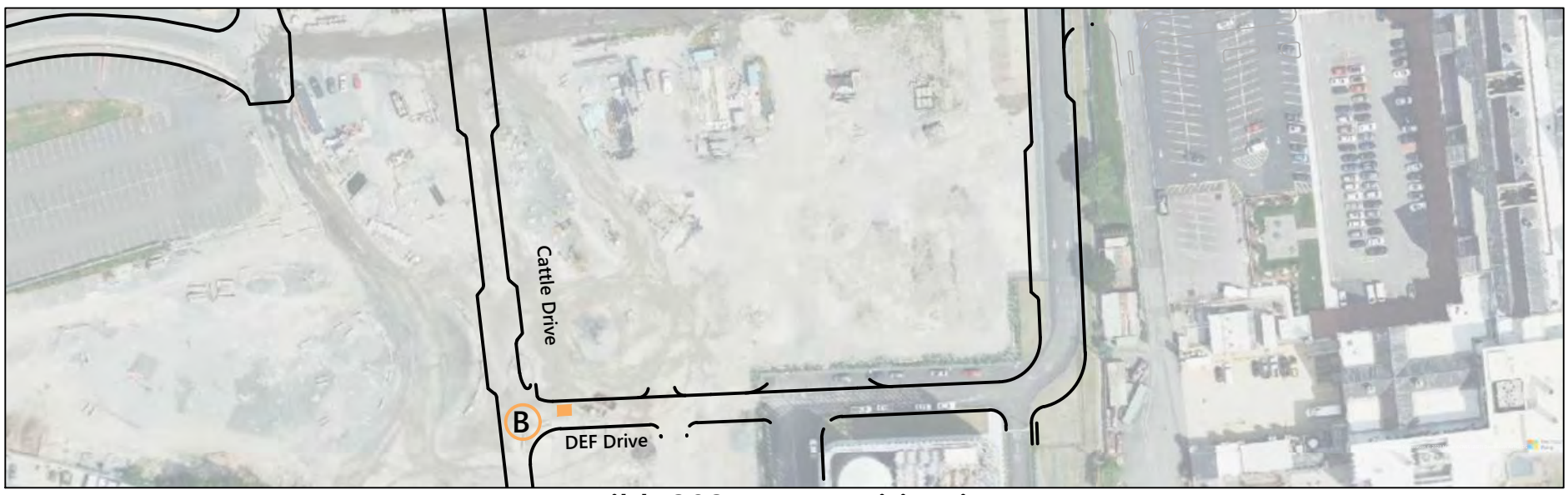
X Overall Intersection Level of Service

50th Percentile Queue

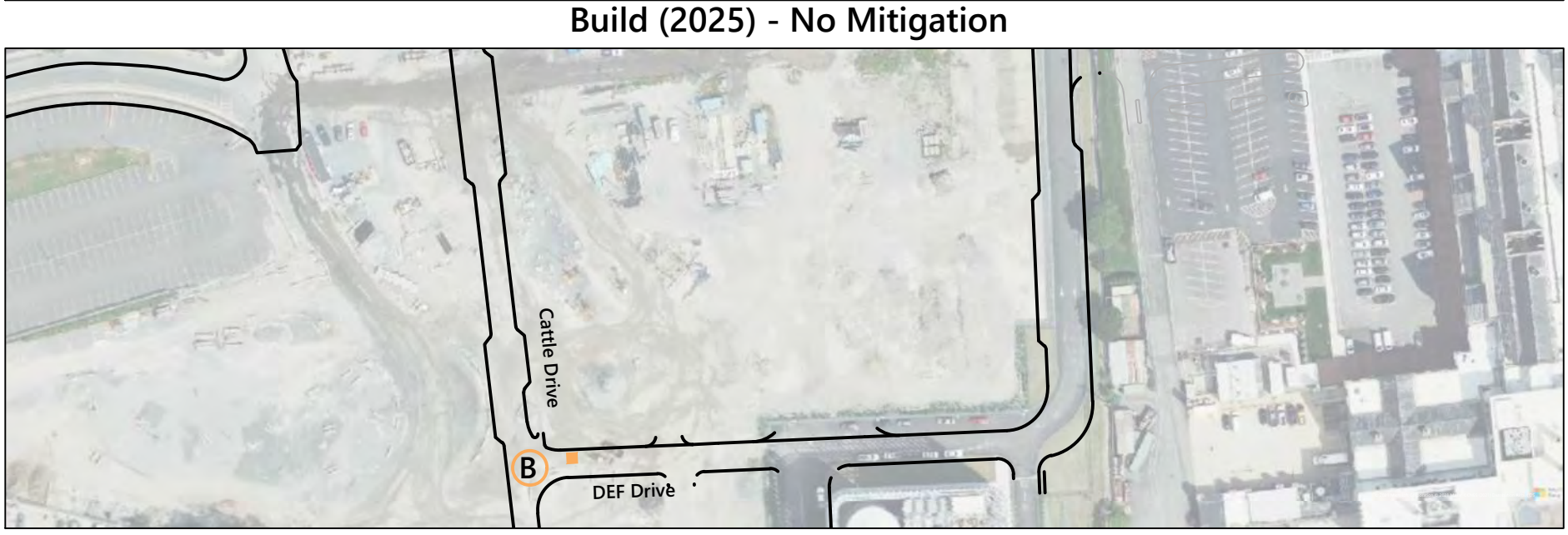
95th Percentile Queue

Existing

No-Build (2025)



Build (2025) - No Mitigation



Build (2025) - With Mitigation

Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

2025 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive/ Almy Street at Windom Street

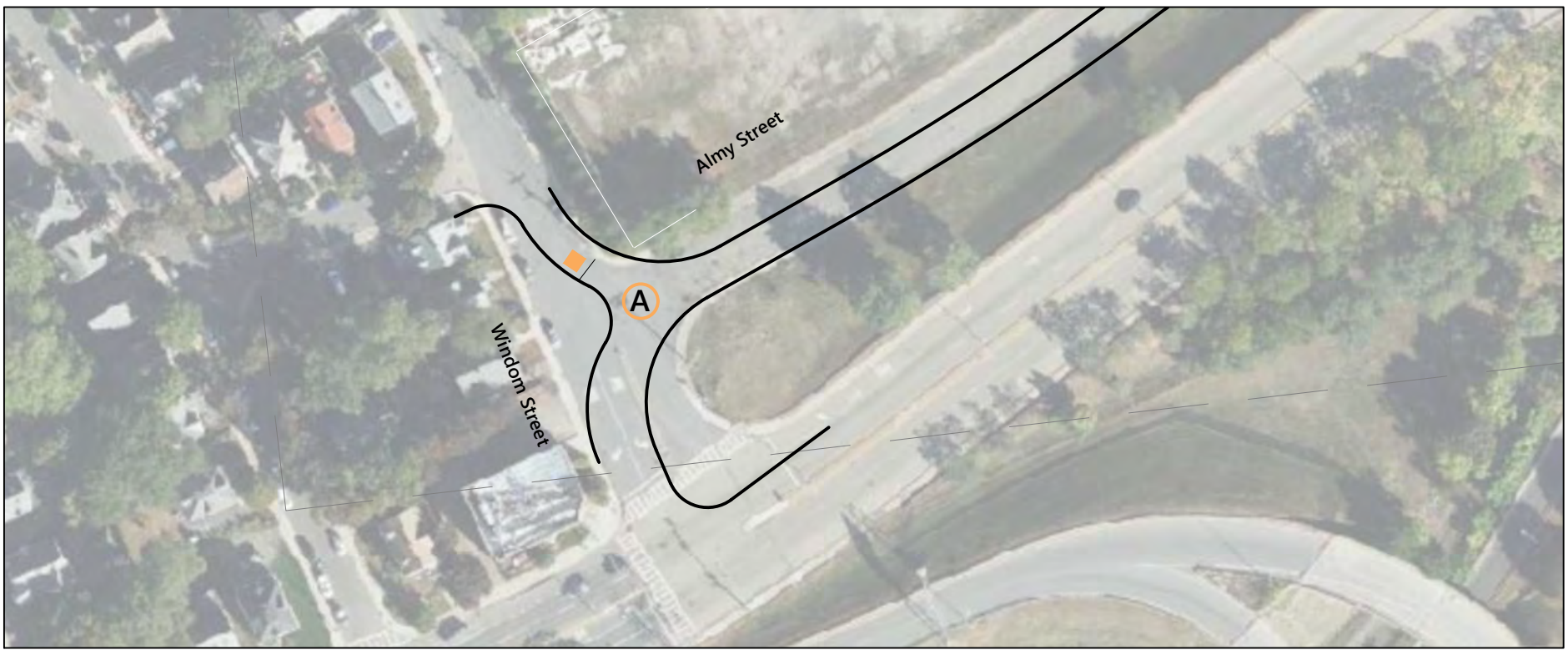
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

Build (2025)

2025 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

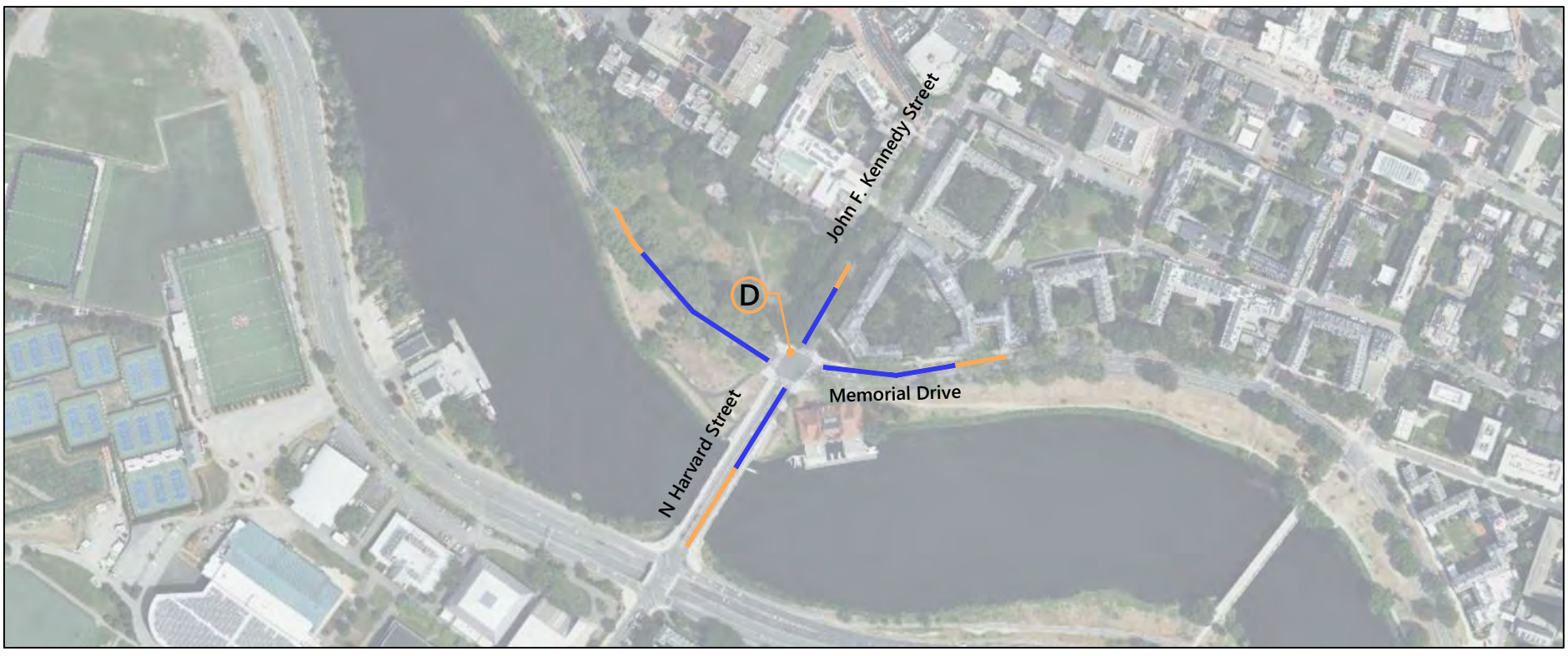
Enterprise Research Campus Project
Boston, MA

John F. Kennedy Street at Memorial Drive

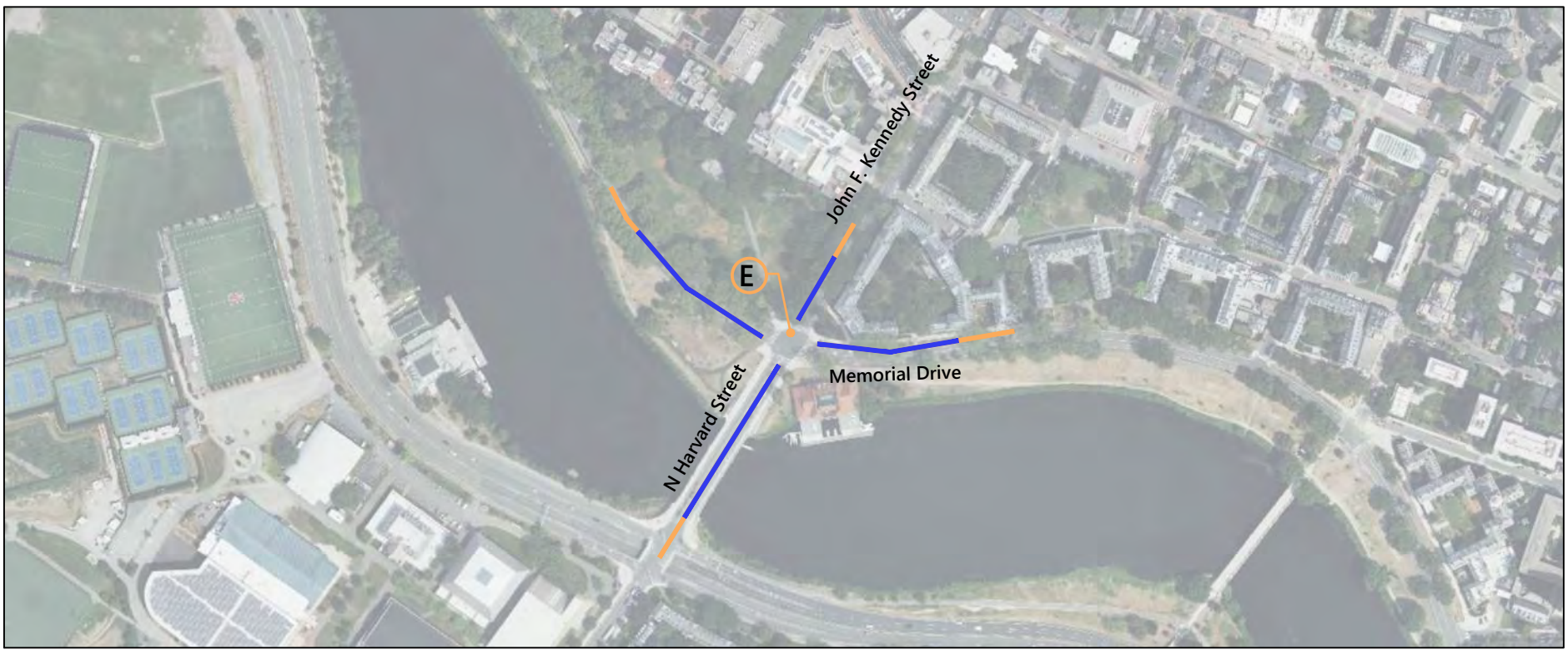
X Overall Intersection Level of Service

50th Percentile Queue

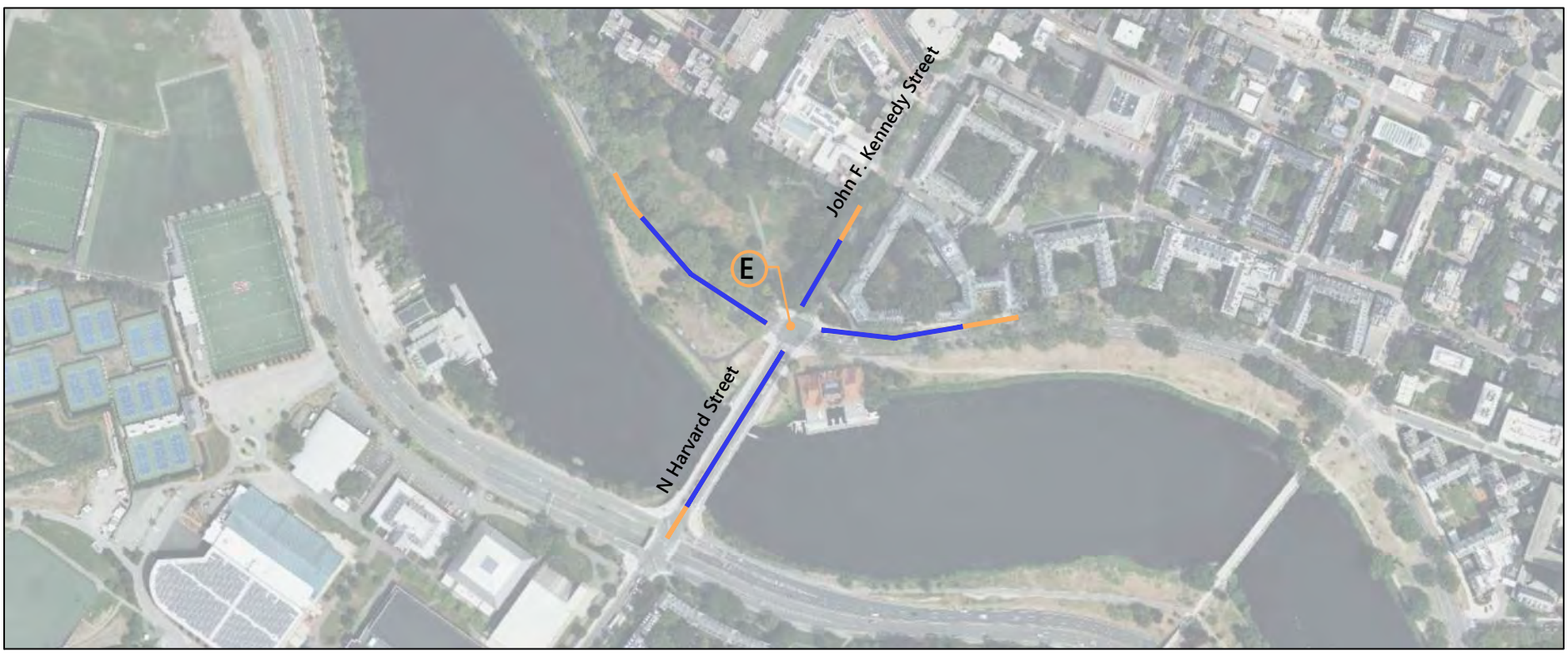
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 200 400 Feet

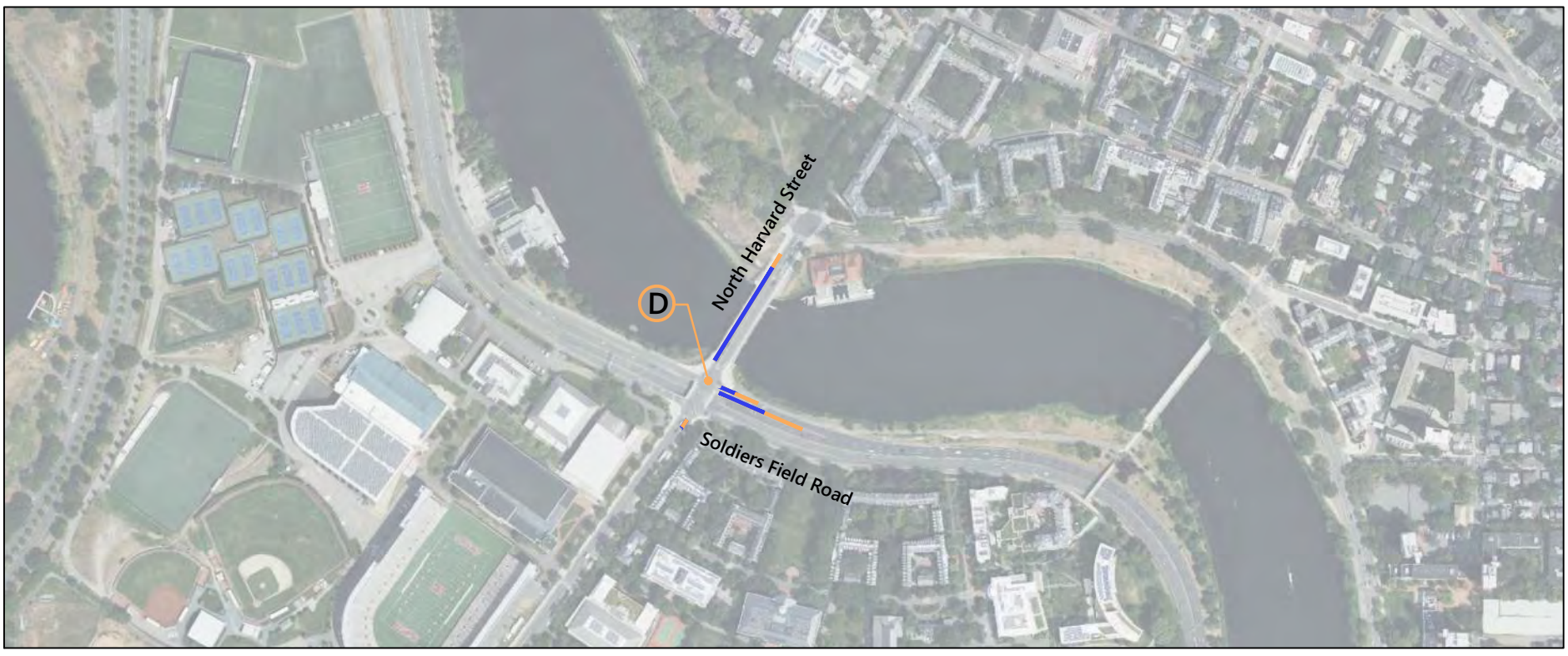
Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road WB

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road EB

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

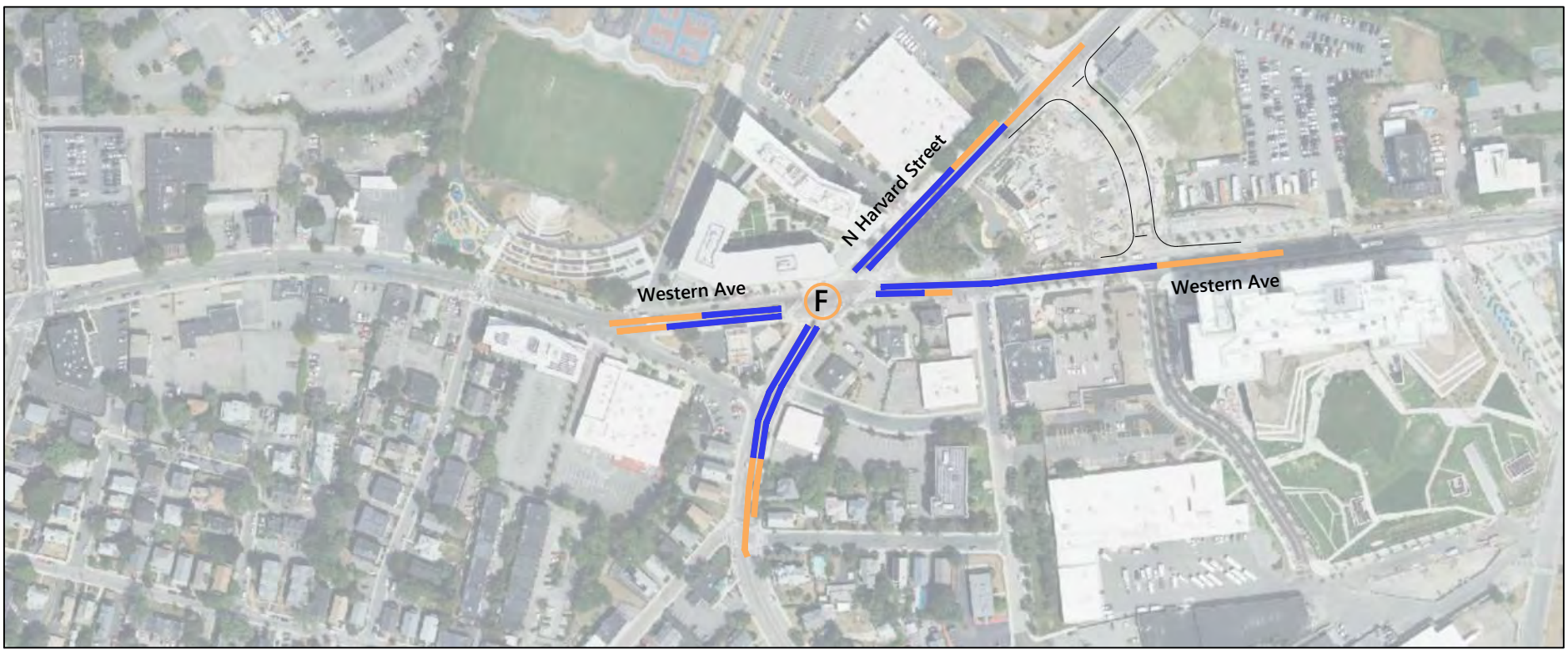
North Harvard Street at Western Ave

X Overall Intersection Level of Service

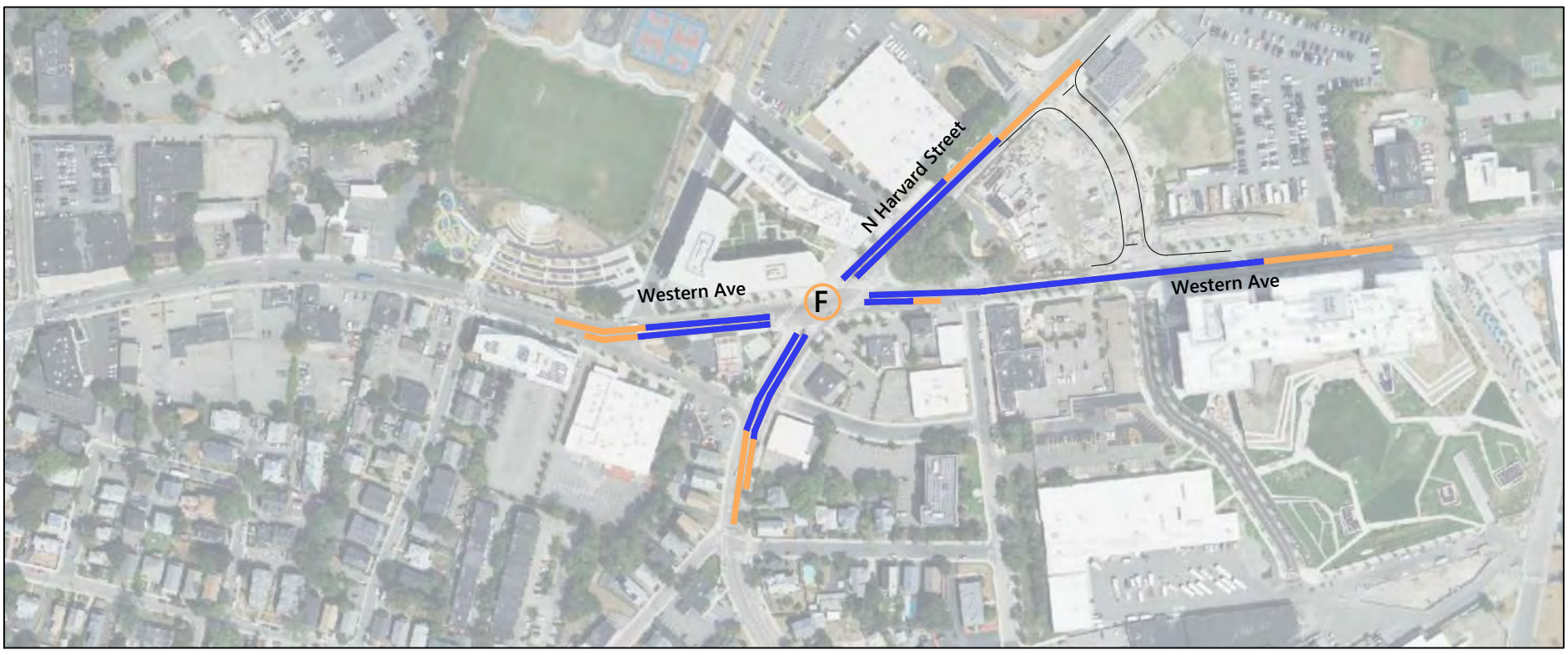
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Franklin St/ Kingsley St

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at North Harvard Street

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

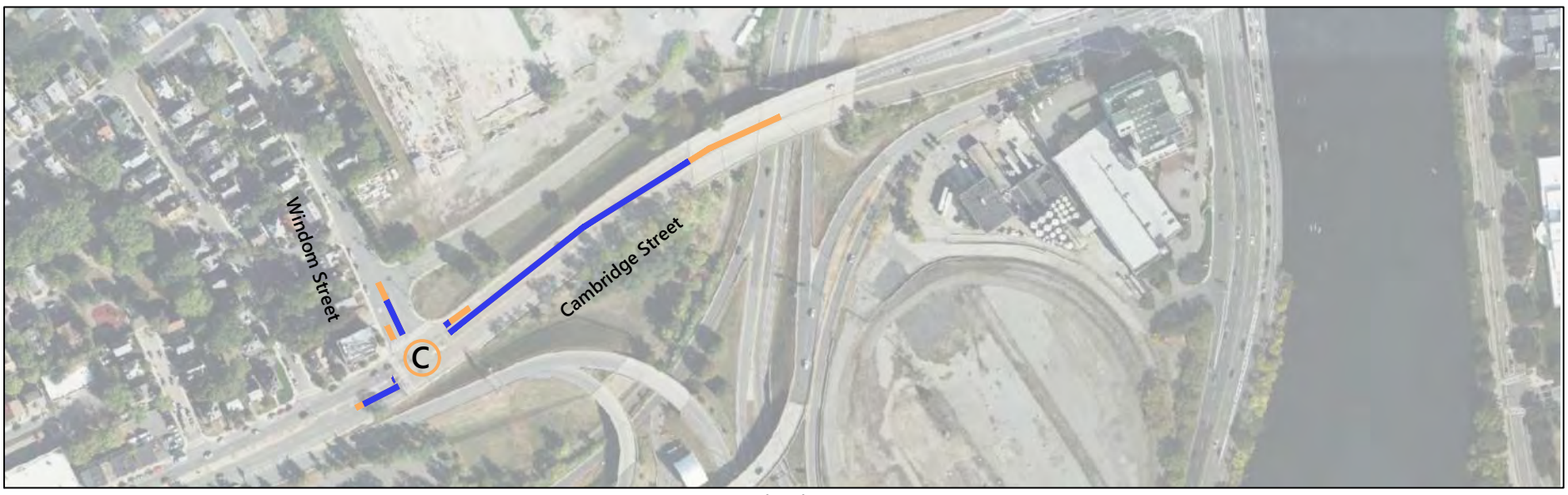
Enterprise Research Campus Project
Boston, MA

Cambridge Street at Windom Street

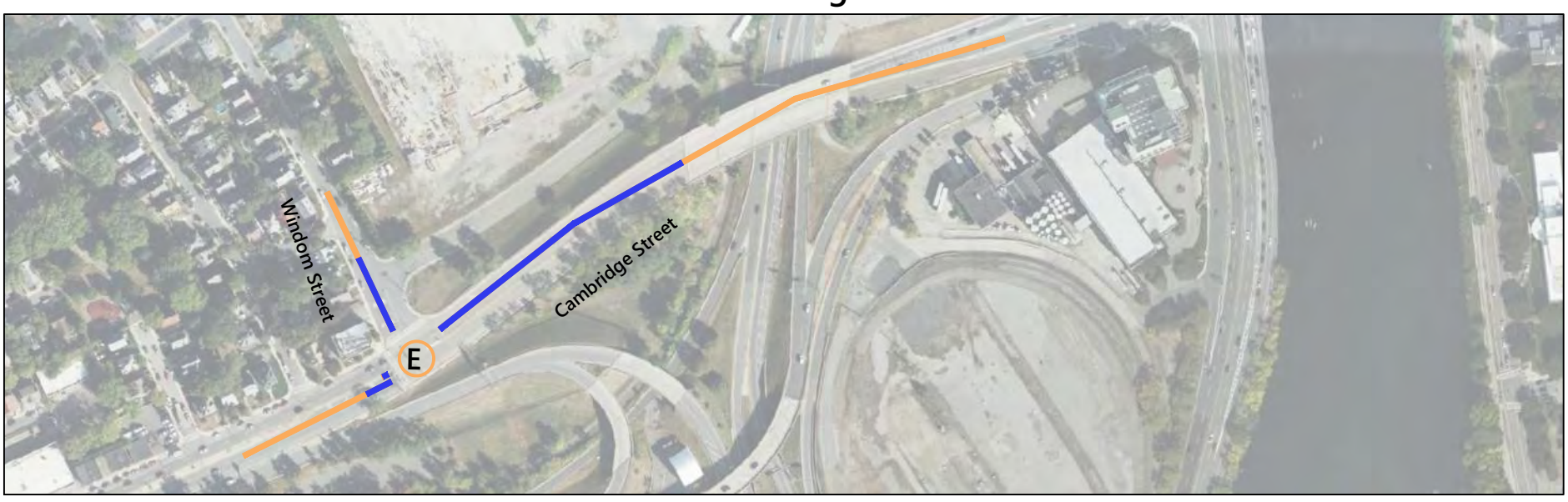
X Overall Intersection Level of Service

50th Percentile Queue

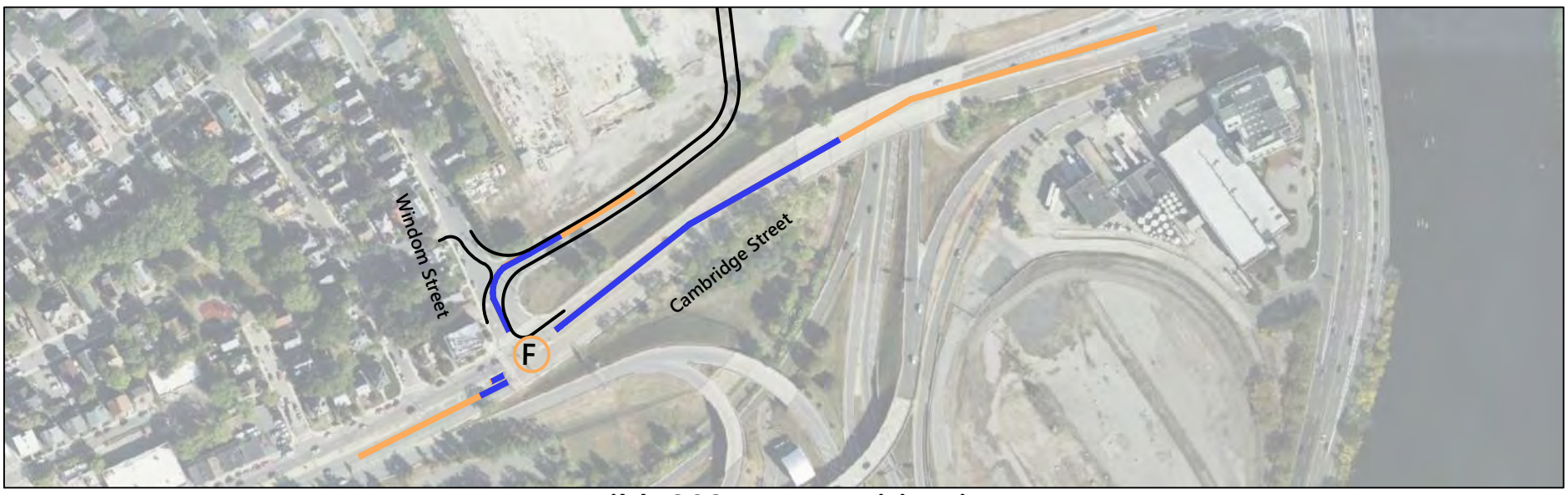
95th Percentile Queue



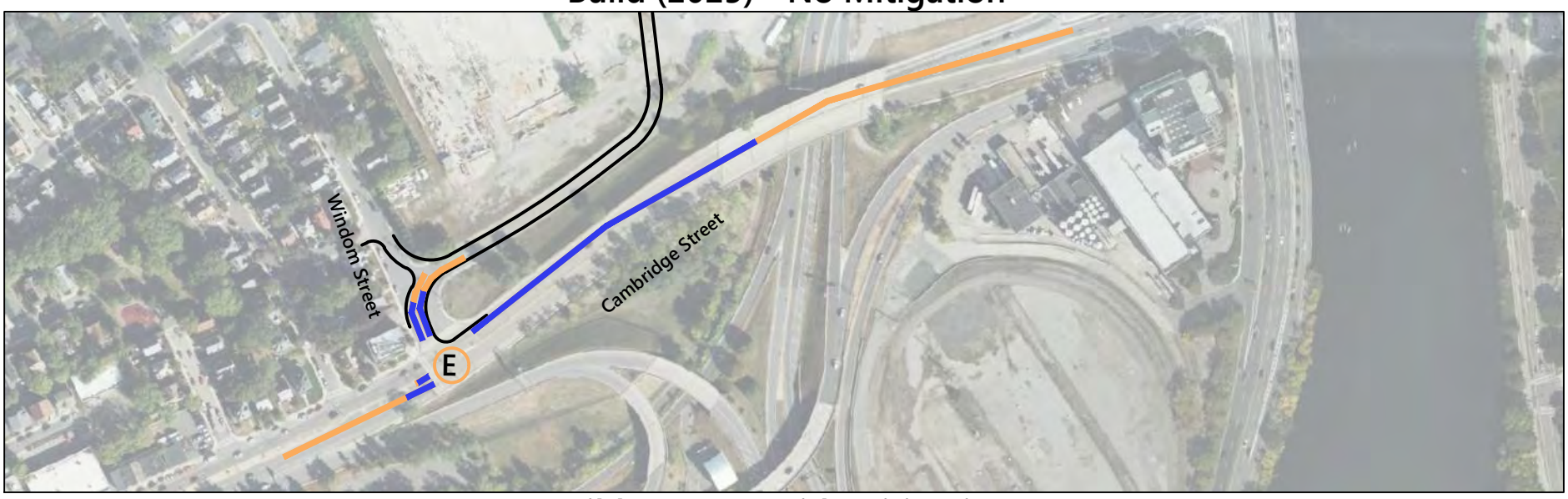
Existing



No-Build (2025)



Build (2025) - No Mitigation



Build (2025) - With Mitigation

2025 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

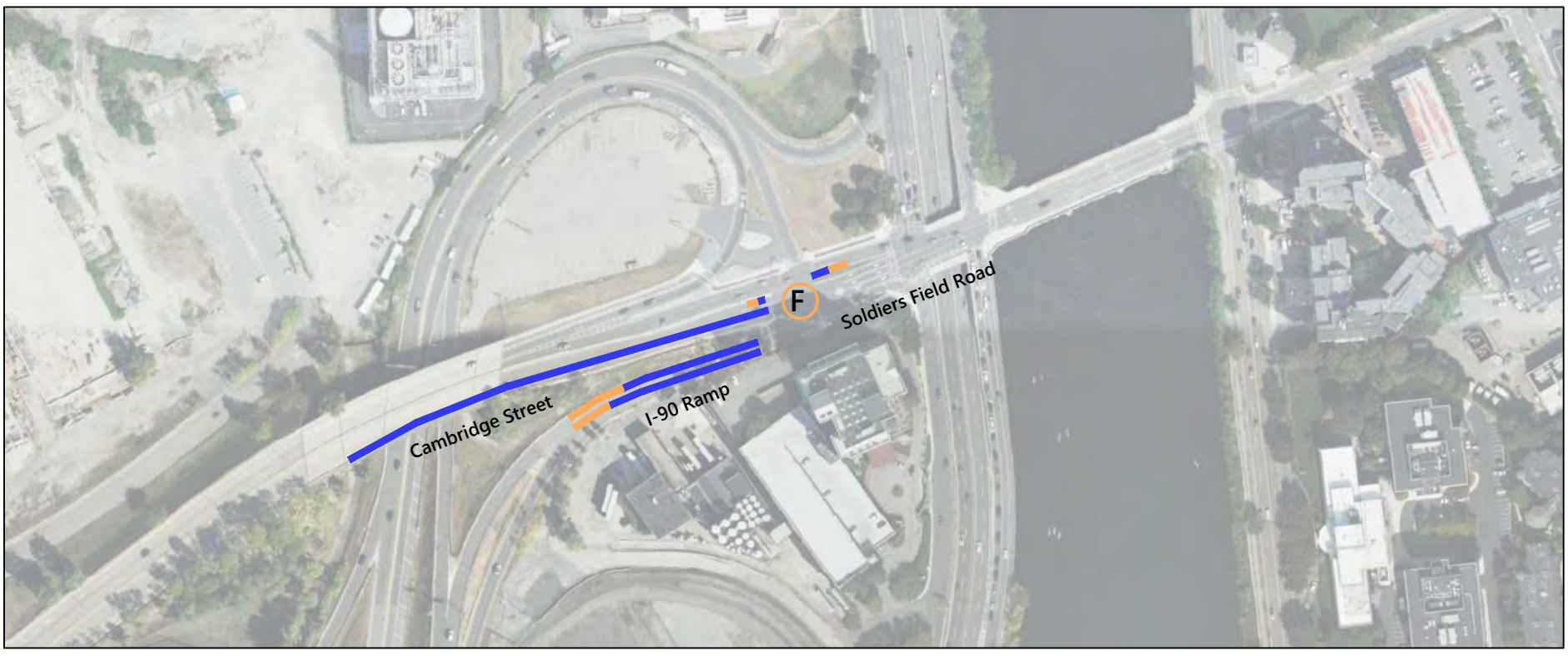
Enterprise Research Campus Project
Boston, MA

Cambridge Street at I-90 Ramps/ Double Tree Hotel

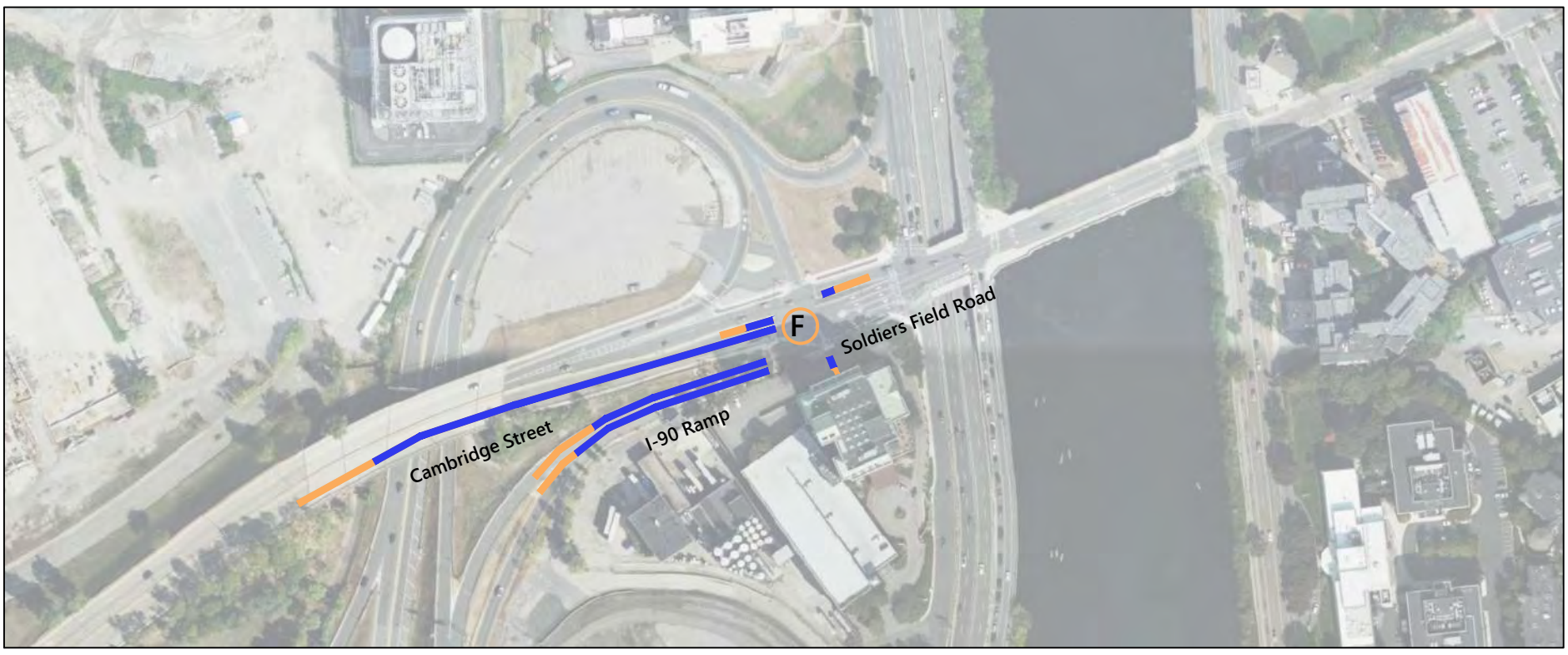
X Overall Intersection Level of Service

50th Percentile Queue

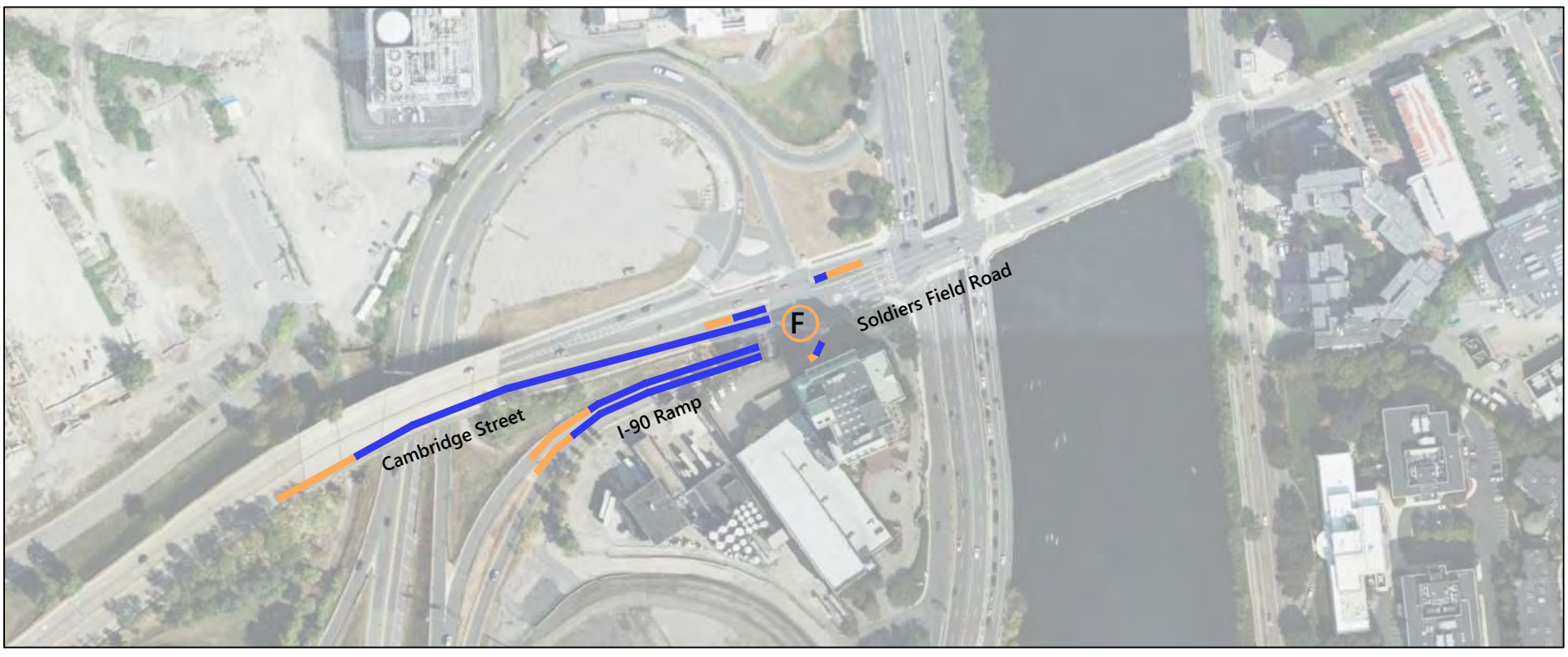
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at Soldiers Field Road

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 200 400 Feet

Enterprise Research Campus Project
Boston, MA

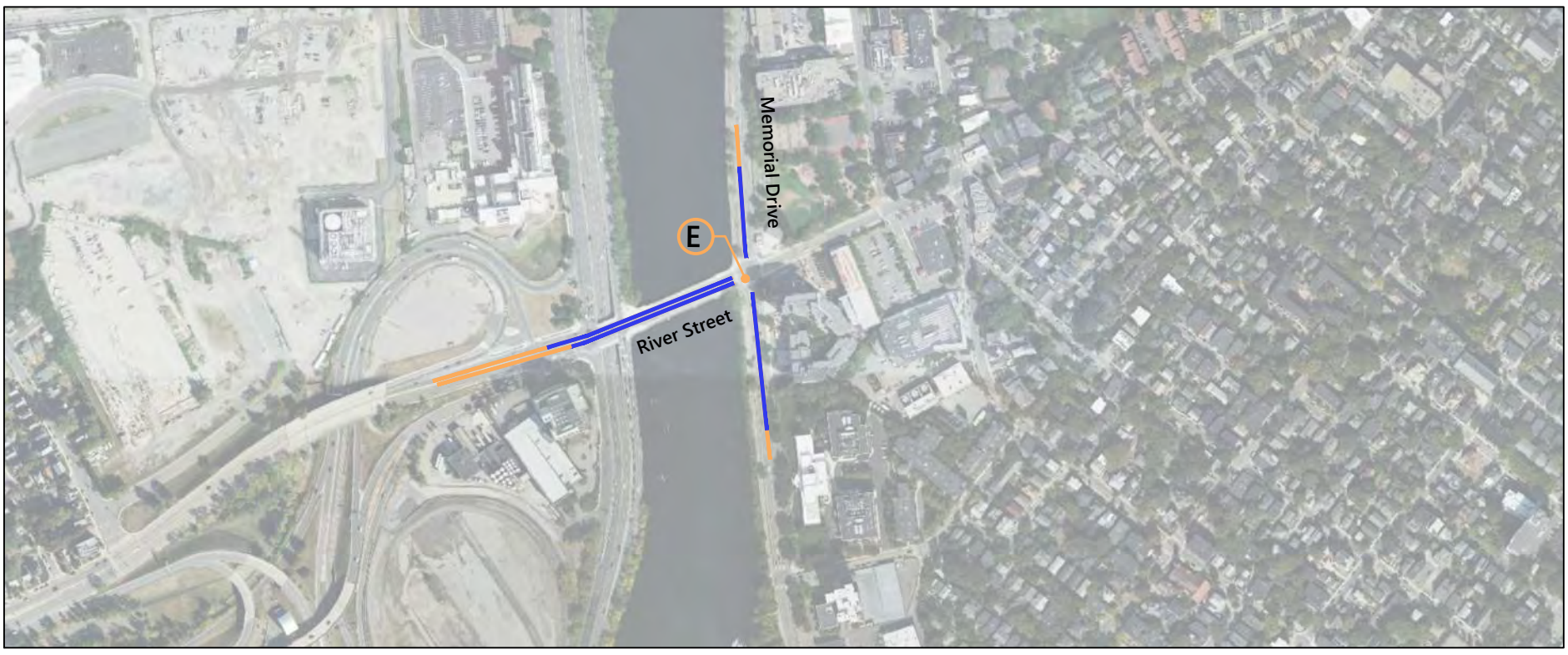
Memorial Drive at River Street

X Overall Intersection Level of Service

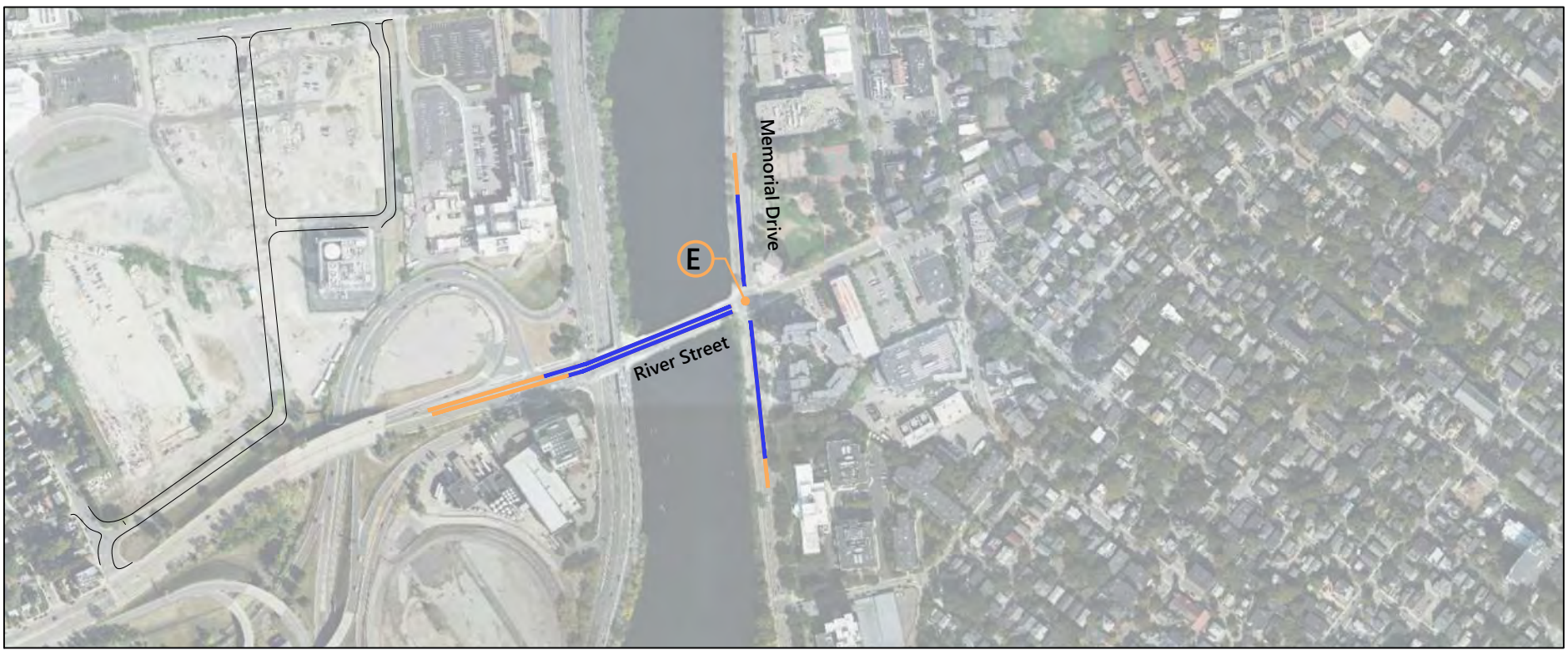
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

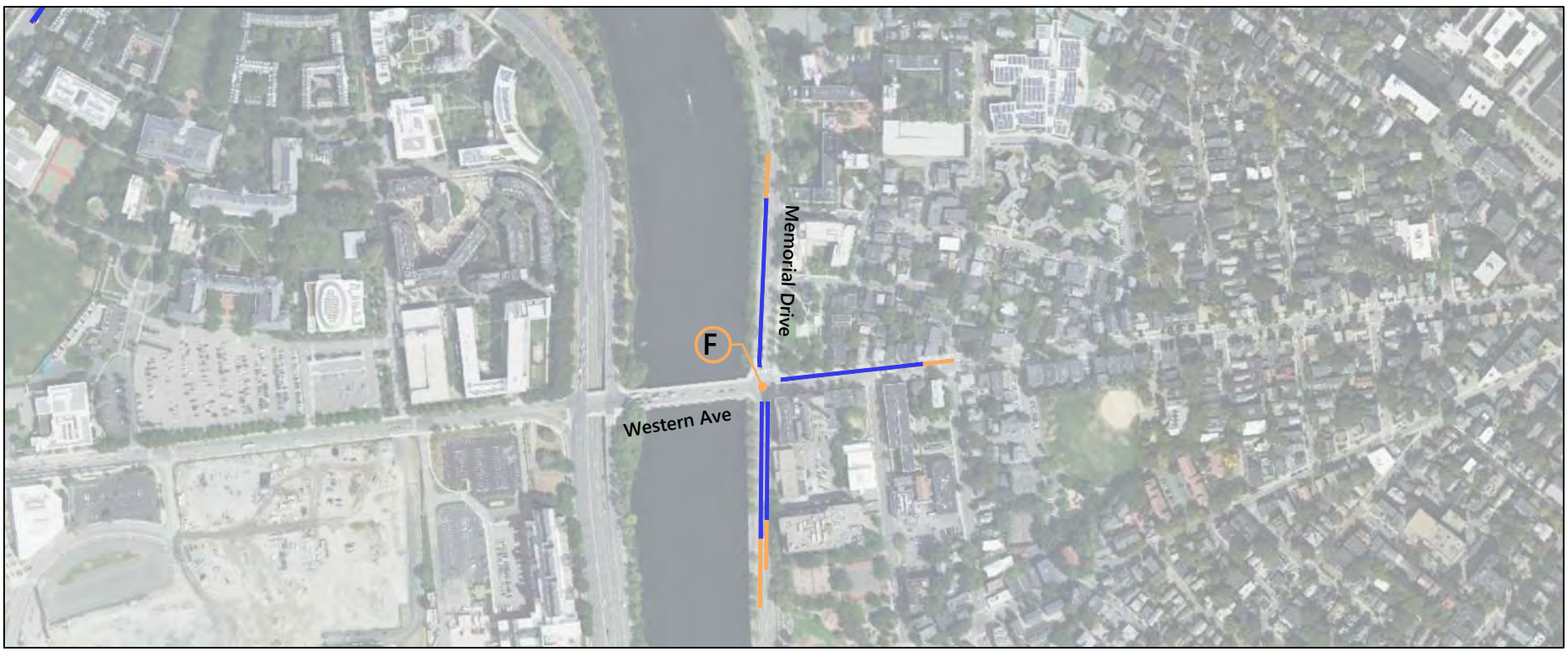
Enterprise Research Campus Project
Boston, MA

Western Ave at Memorial Drive

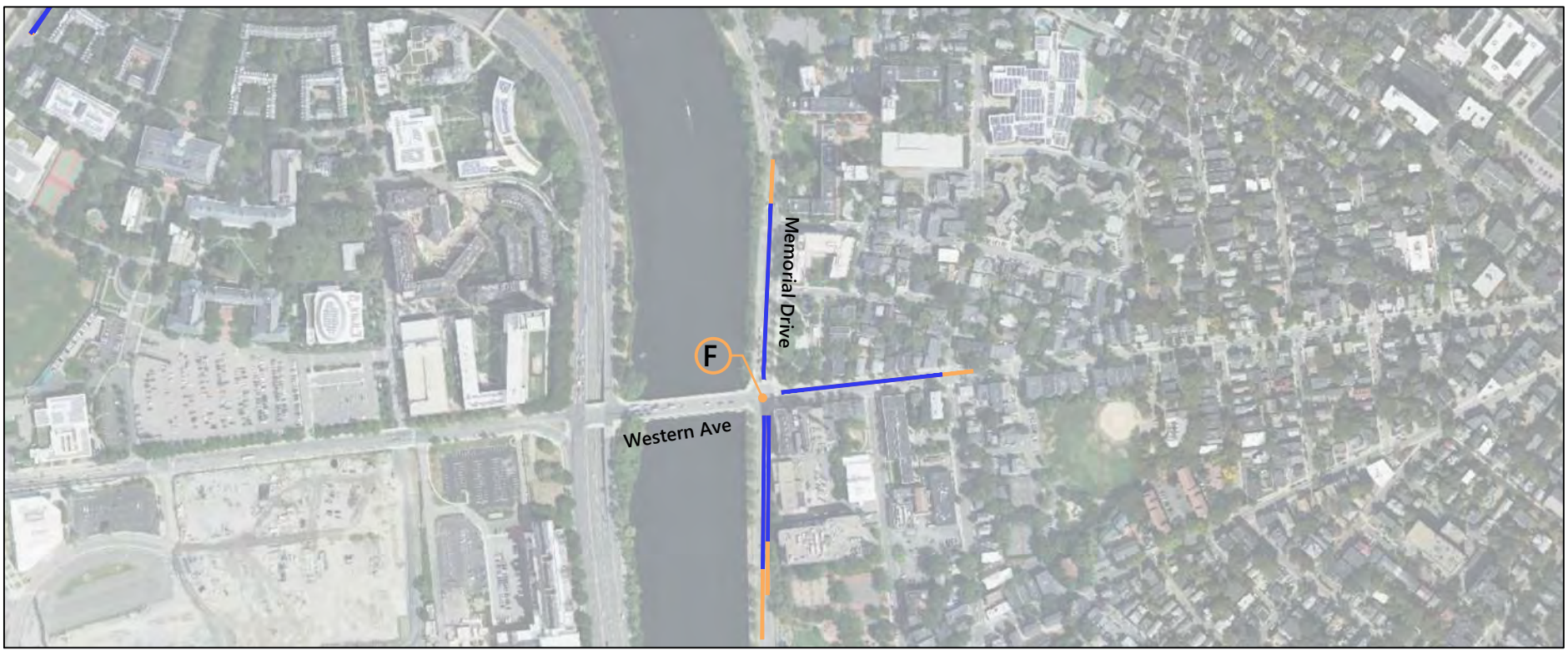
X Overall Intersection Level of Service

50th Percentile Queue

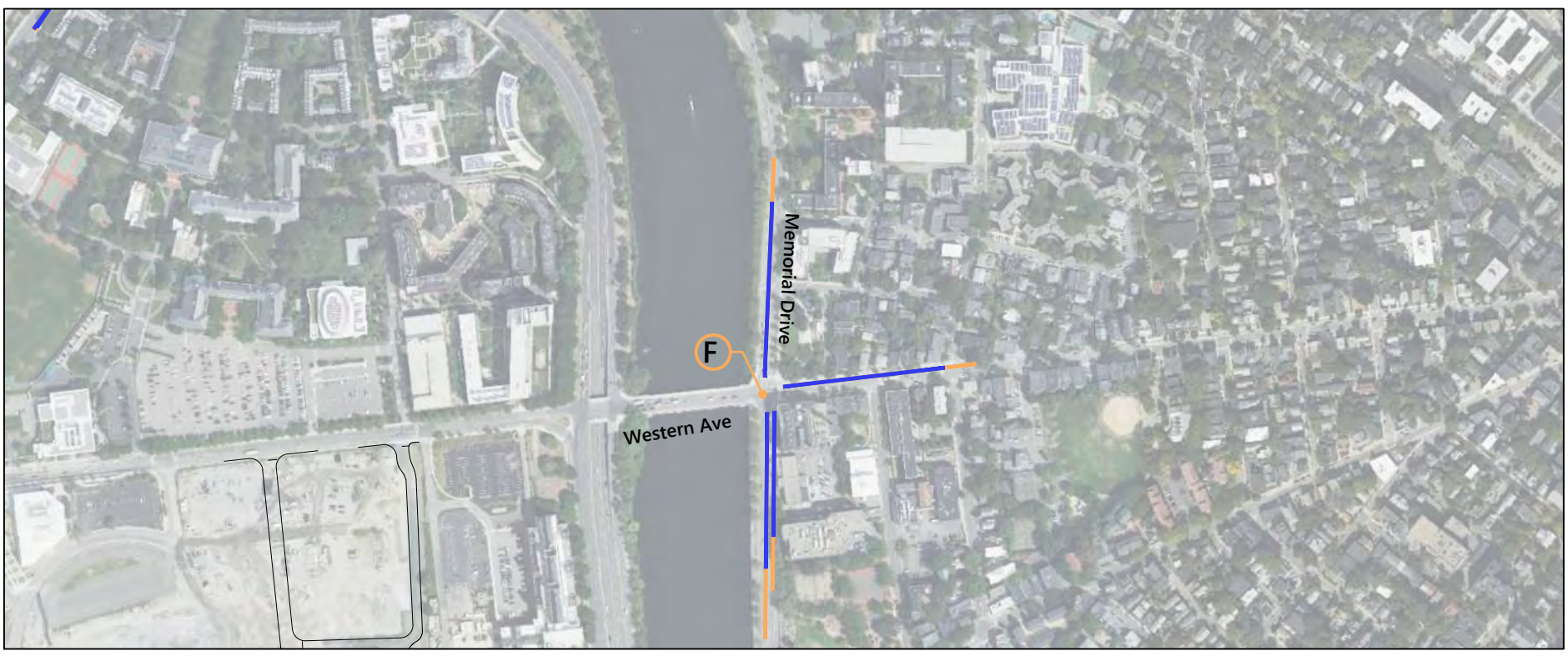
95th Percentile Queue



Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

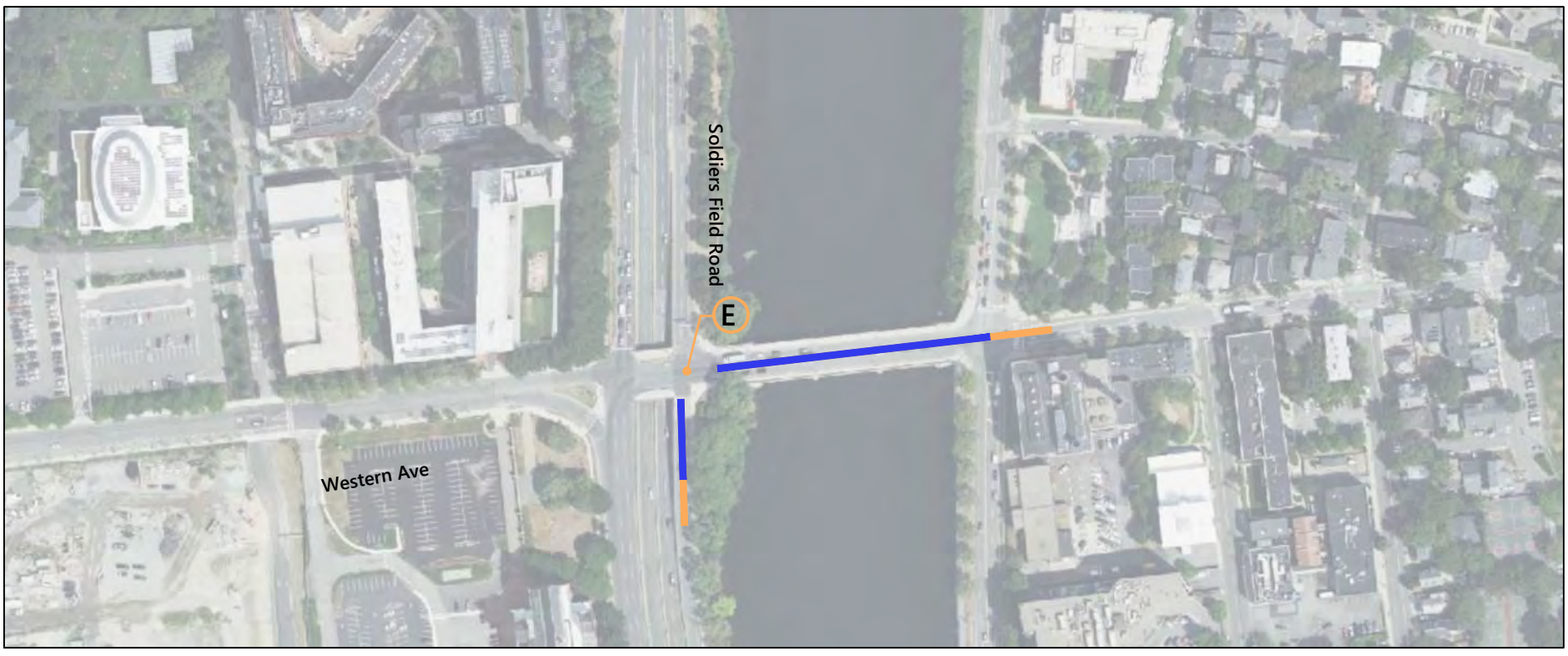
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road WB

X Overall Intersection Level of Service

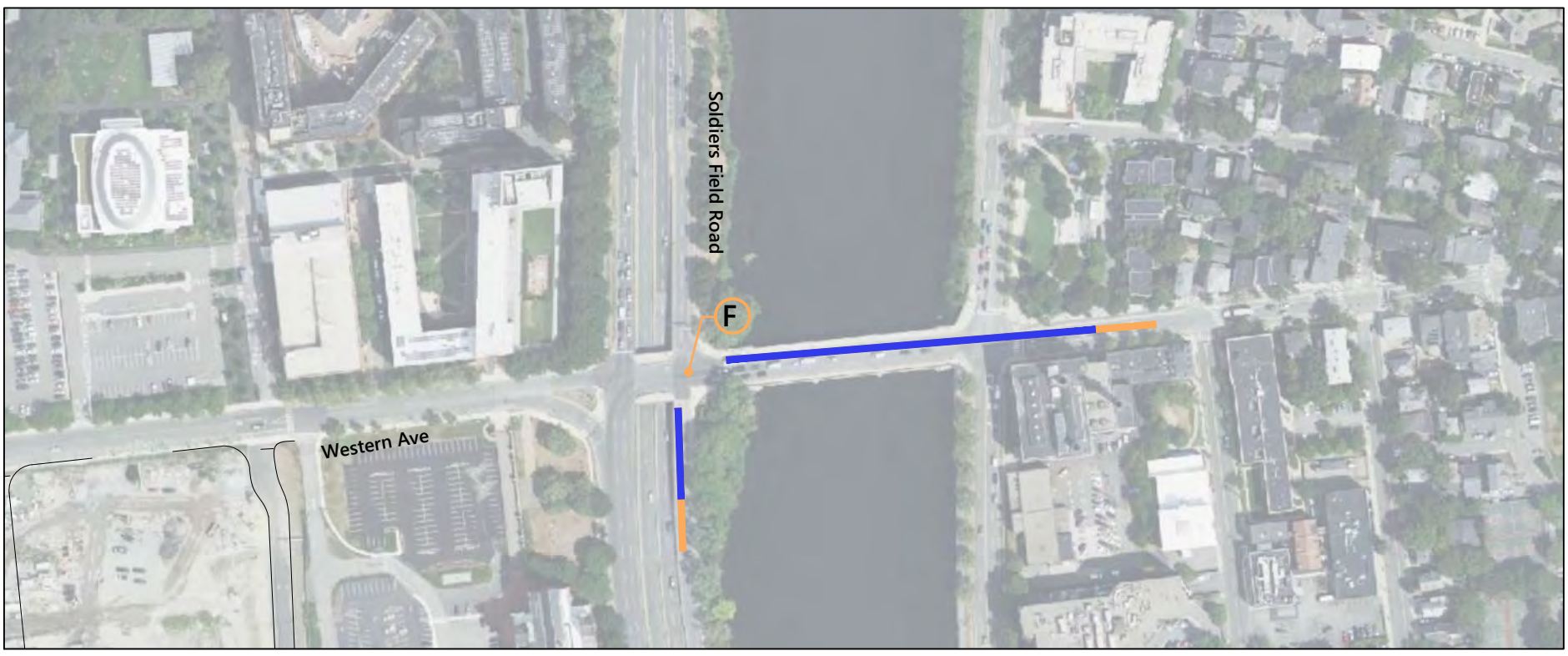
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

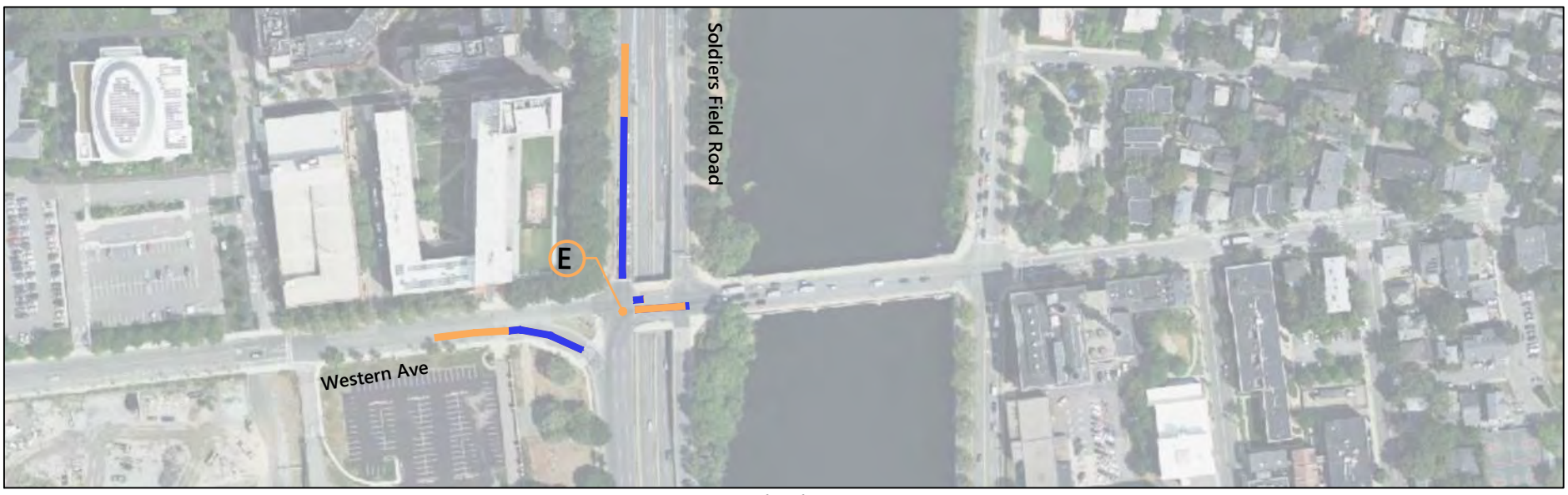
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road EB

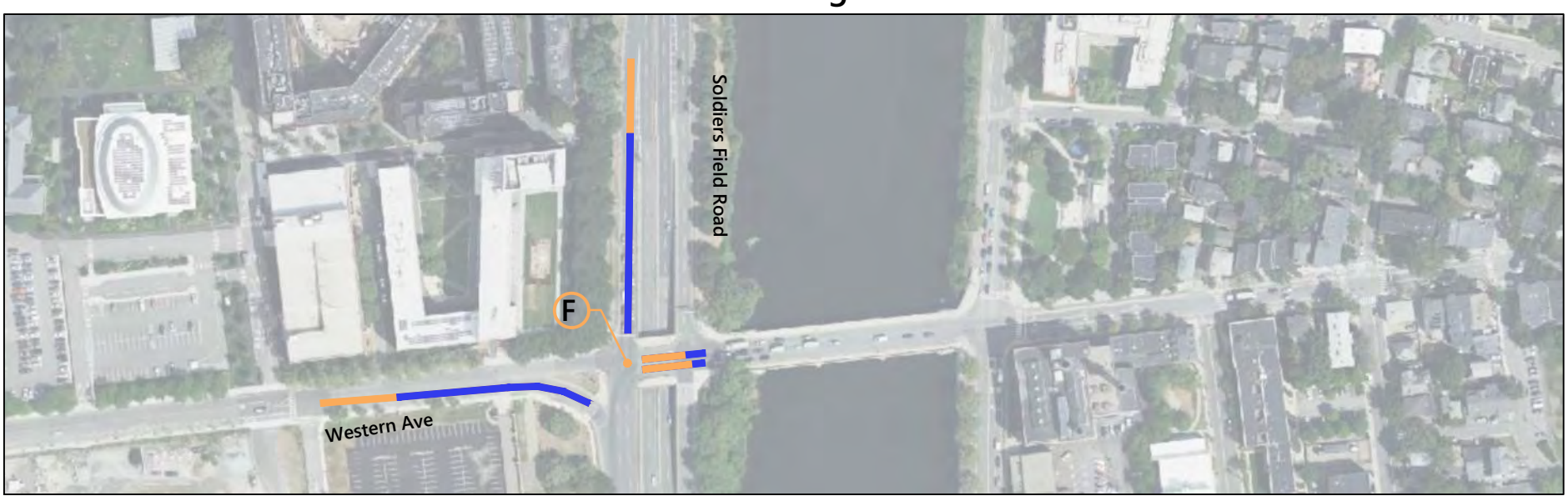
X Overall Intersection Level of Service

50th Percentile Queue

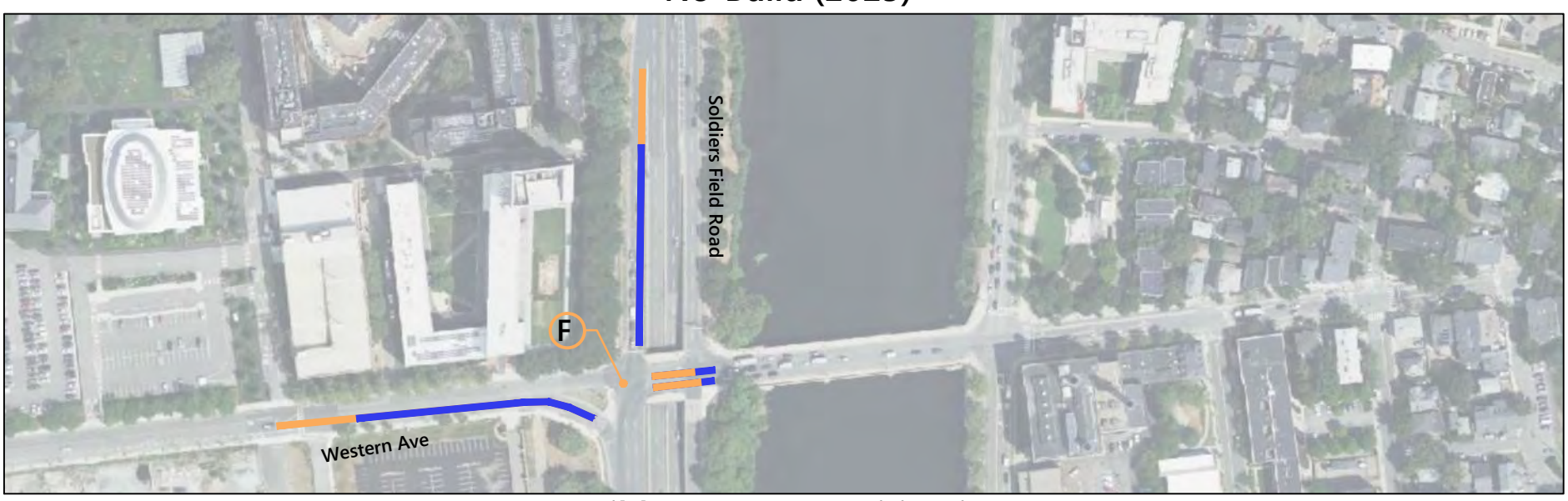
95th Percentile Queue



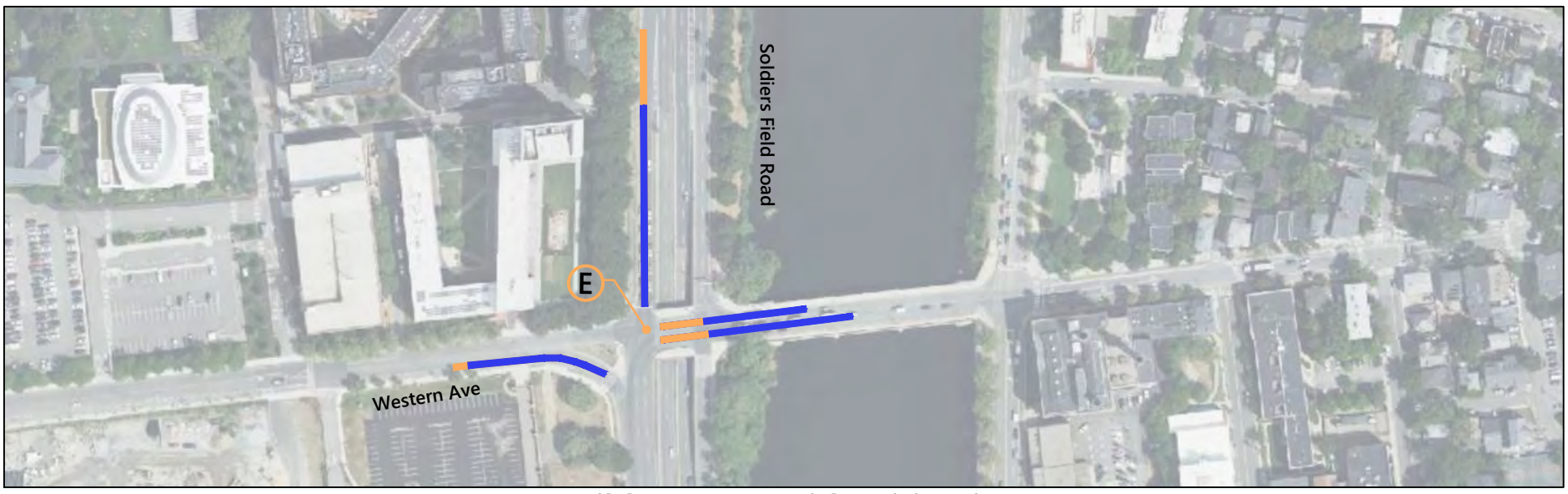
Existing



No-Build (2025)



Build (2025) - No Mitigation



Build (2025) - With Mitigation

2025 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

Western Ave at Kresge Way/ East Drive

X Overall Intersection Level of Service

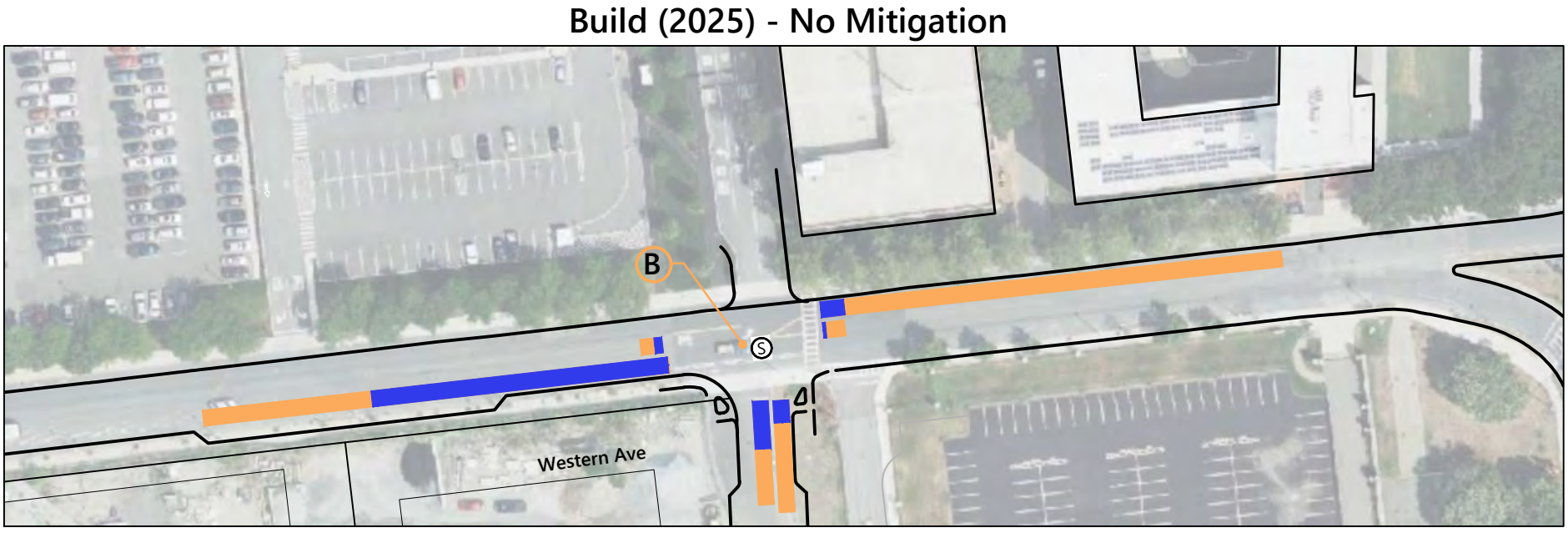
50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Build (2025) - No Mitigation



Build (2025) - With Mitigation

2025 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive at Western Ave

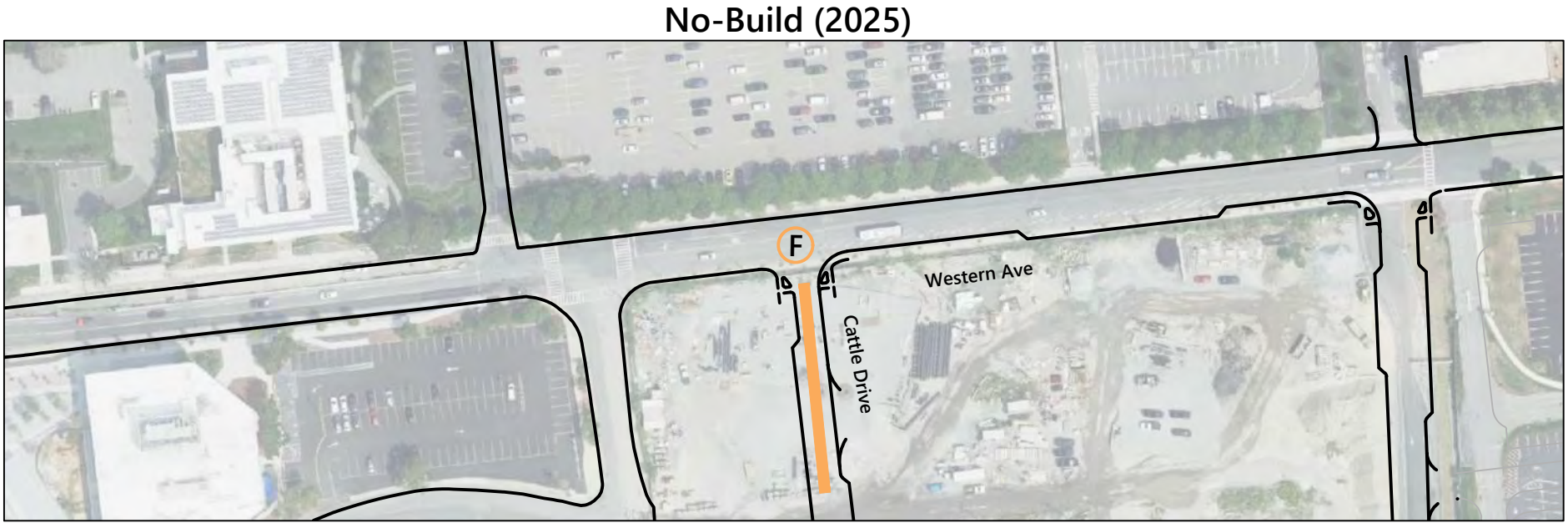
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Build (2025) - No Mitigation

Build (2025) - With Mitigation

Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

2025 Conditions: Evening Peak Hour Queue Diagrams

0 75 150 Feet

Enterprise Research Campus Project
Boston, MA

\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2025 Conditions - PM.dwg

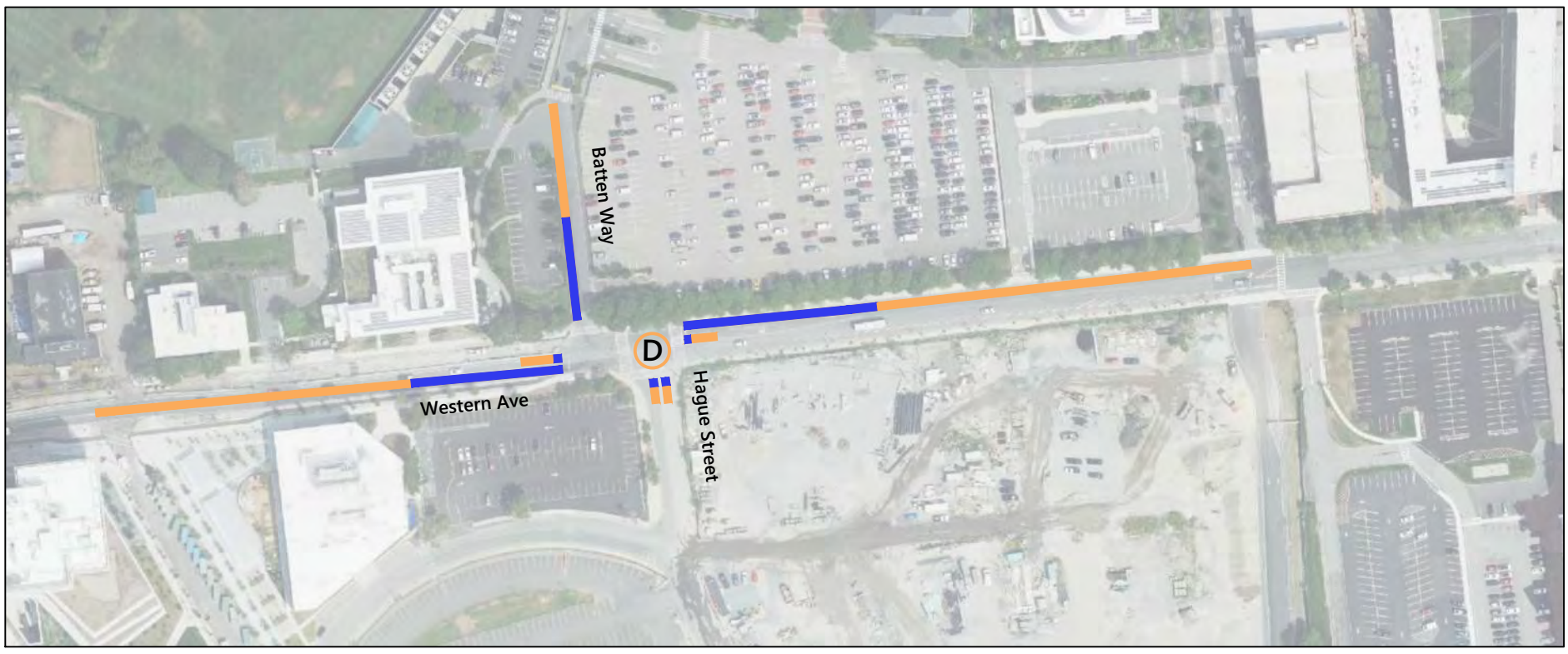
Western Ave at Batten Way/ Hague Street

X Overall Intersection Level of Service

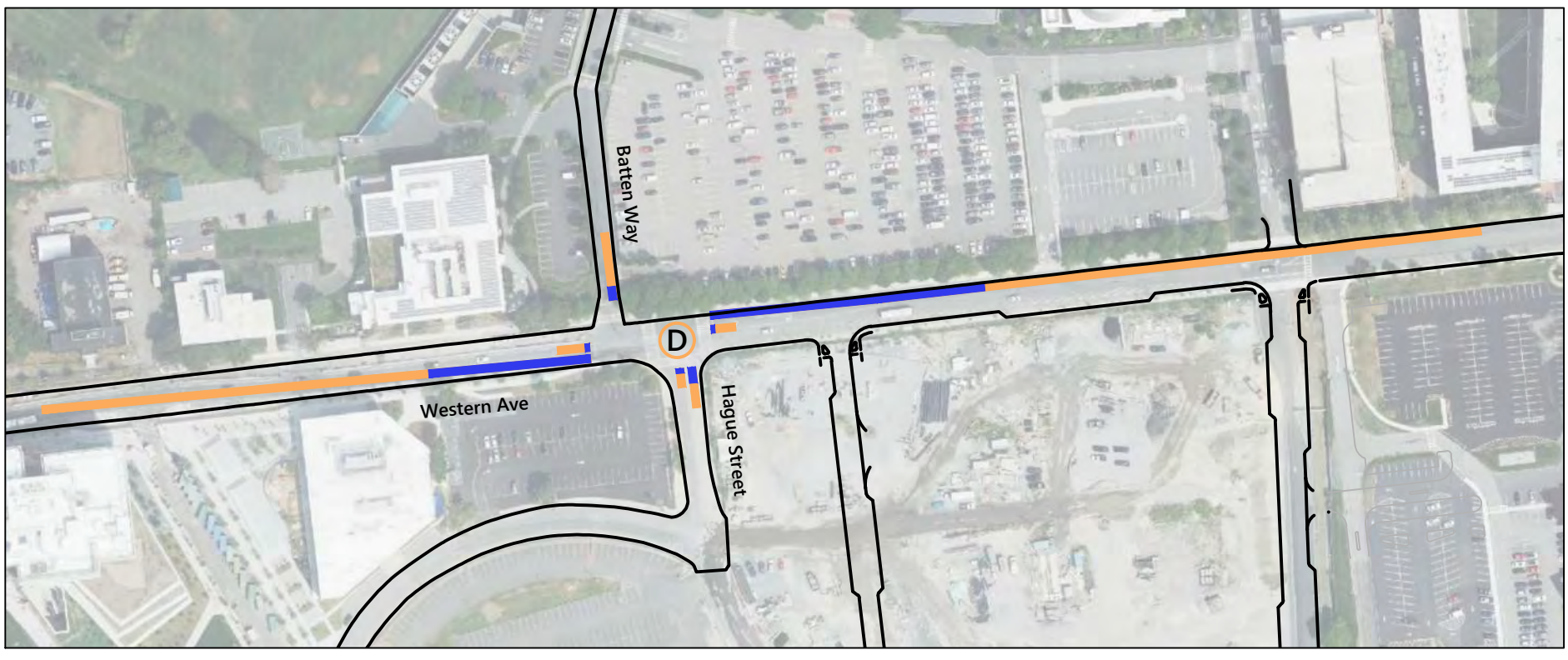
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus Project
Boston, MA

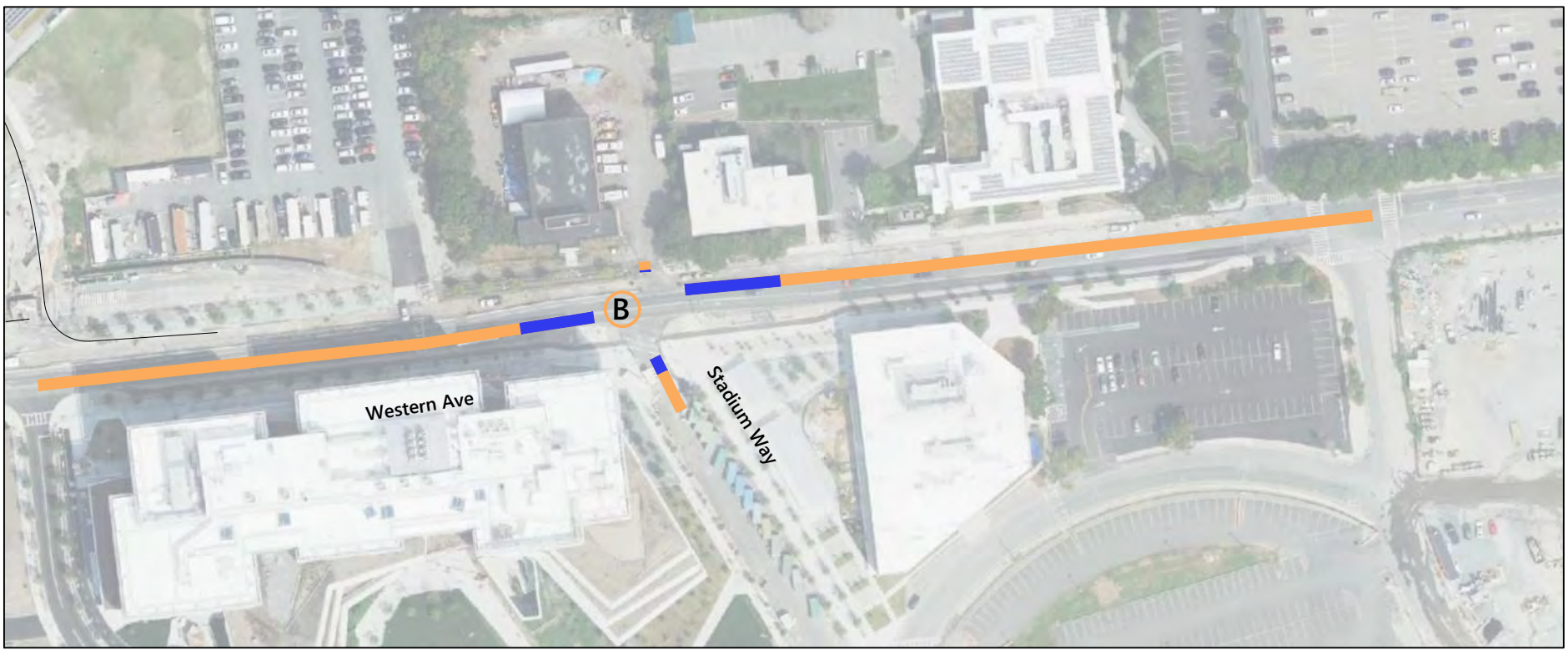
Western Ave at Stadium Way

X Overall Intersection Level of Service

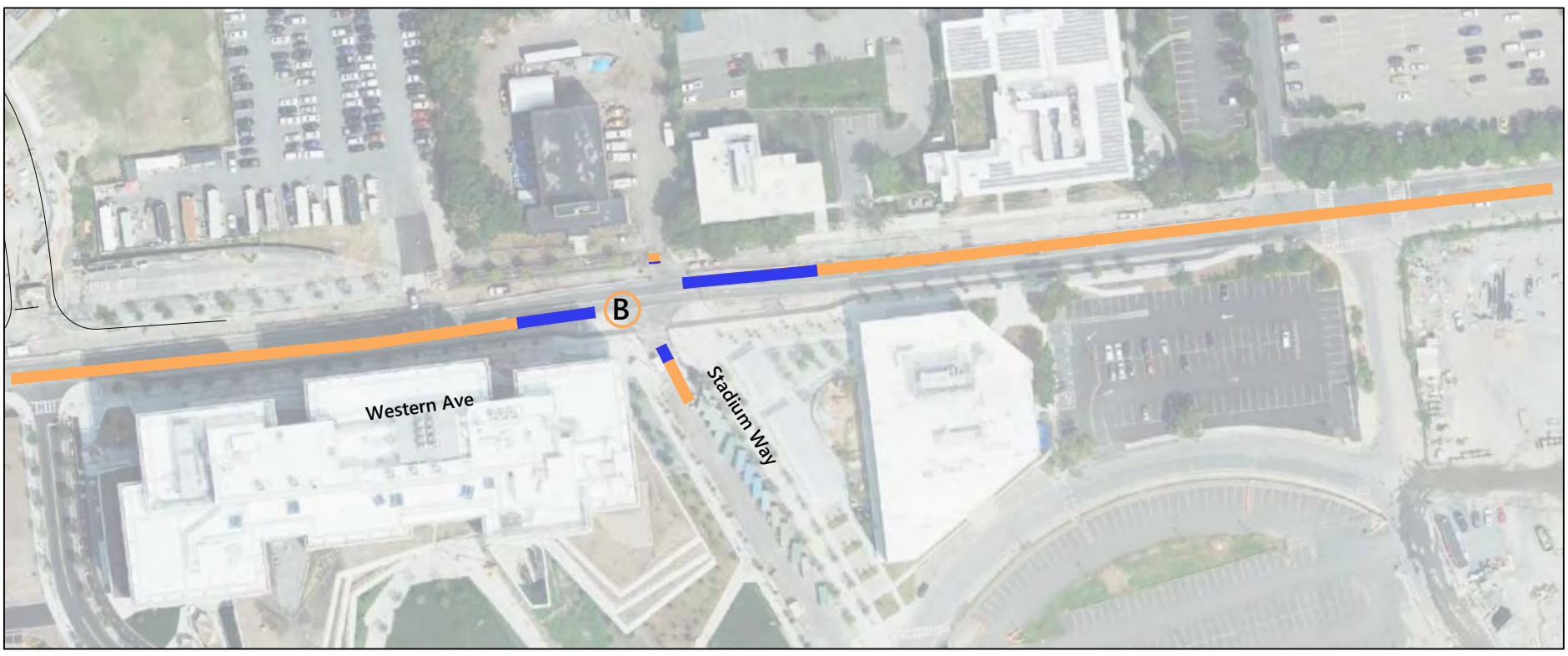
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 75 150 Feet

Enterprise Research Campus Project
Boston, MA

Western Ave at Academic Way

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)

Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

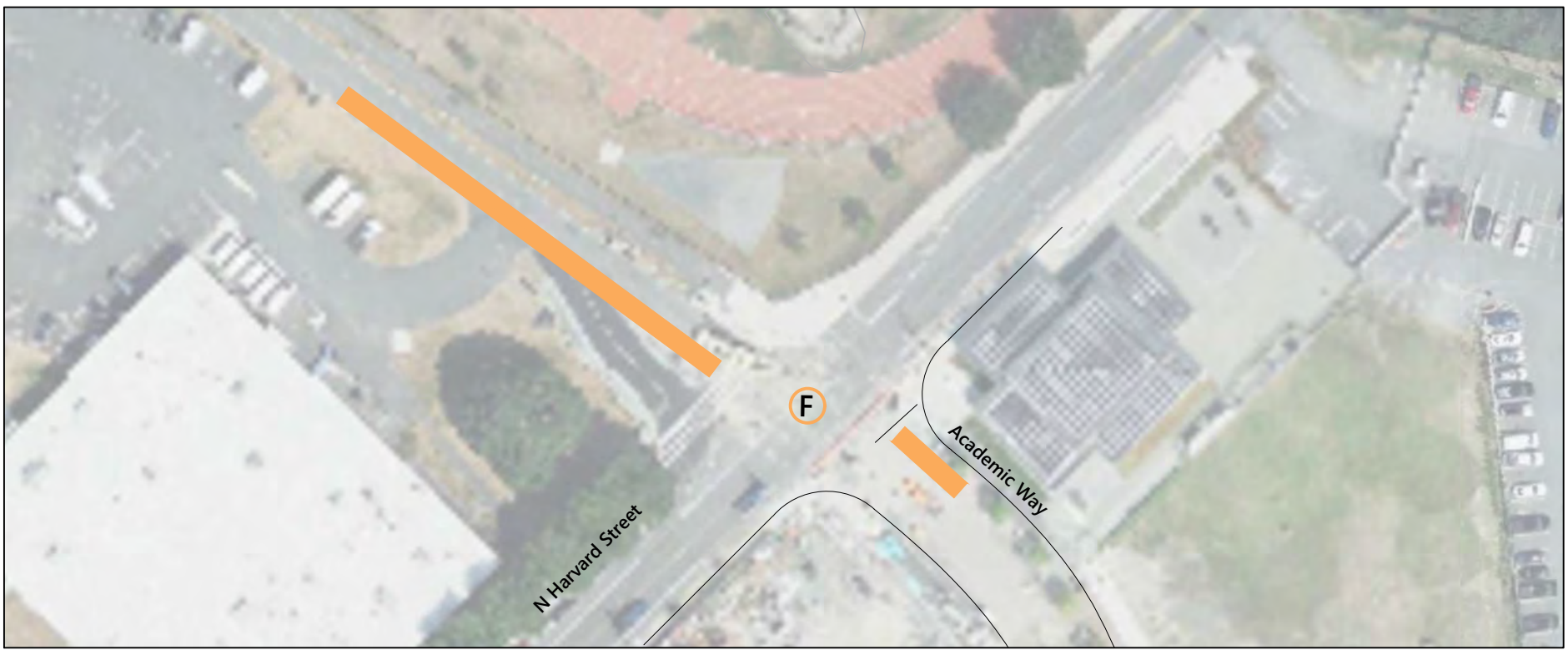
North Harvard Street at Academic Way

X Overall Intersection Level of Service

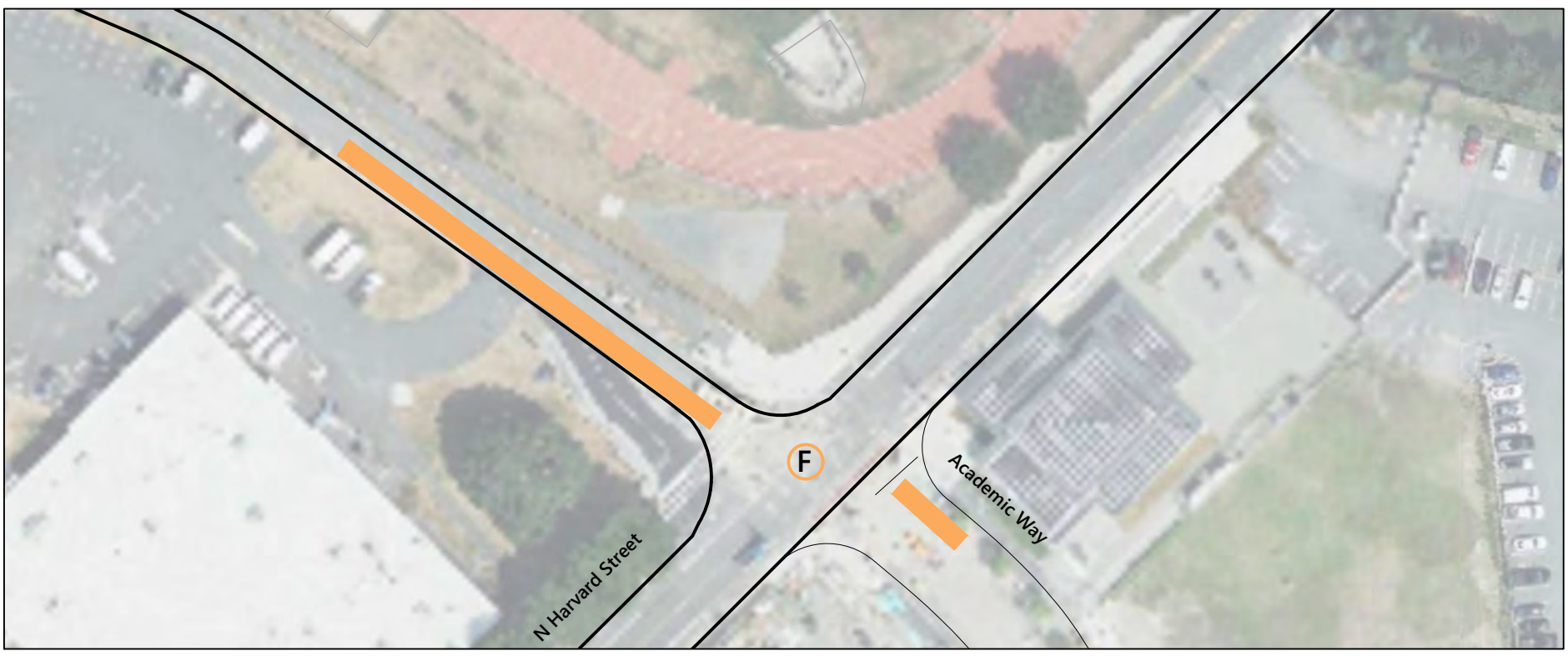
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Intersection does not exist under 2021 Existing Conditions

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

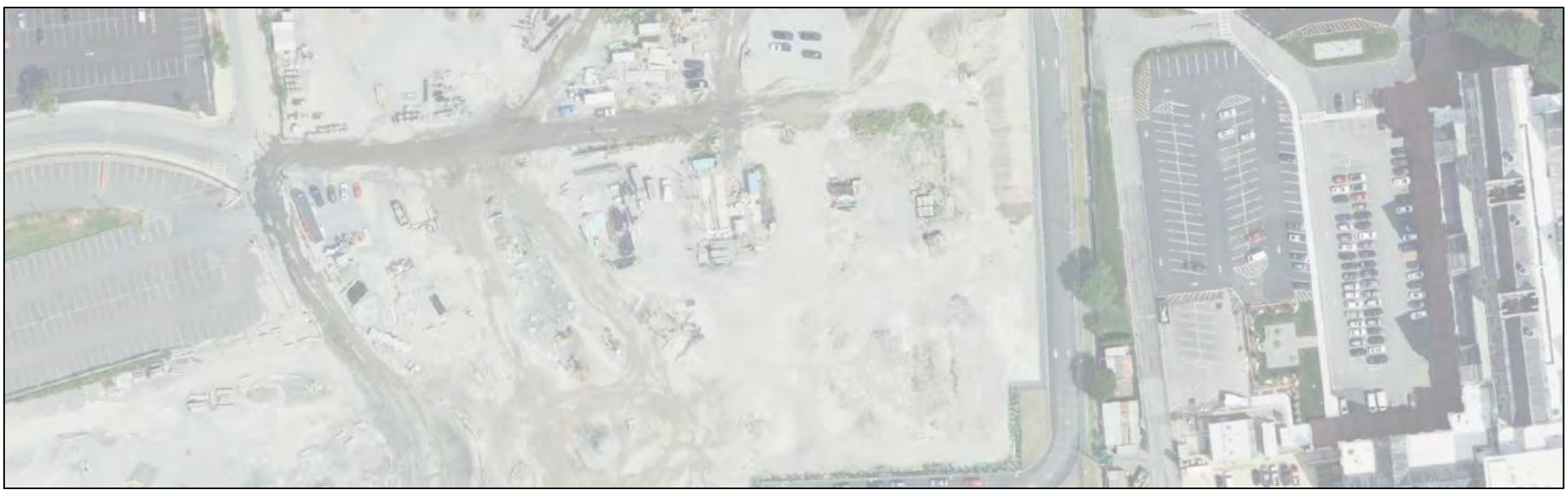
Cattle Drive at DEF Drive

X Overall Intersection Level of Service

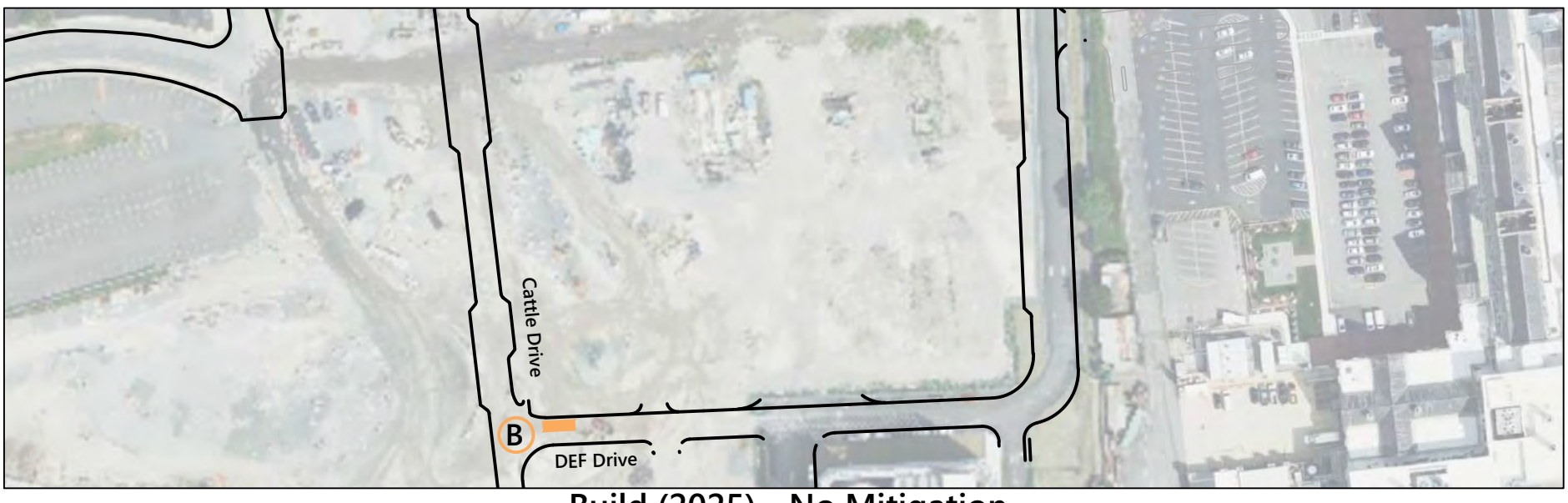
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2025)



Build (2025) - No Mitigation

Build (2025) - With Mitigation

Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

2025 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive/ Almy Street at Windom Street

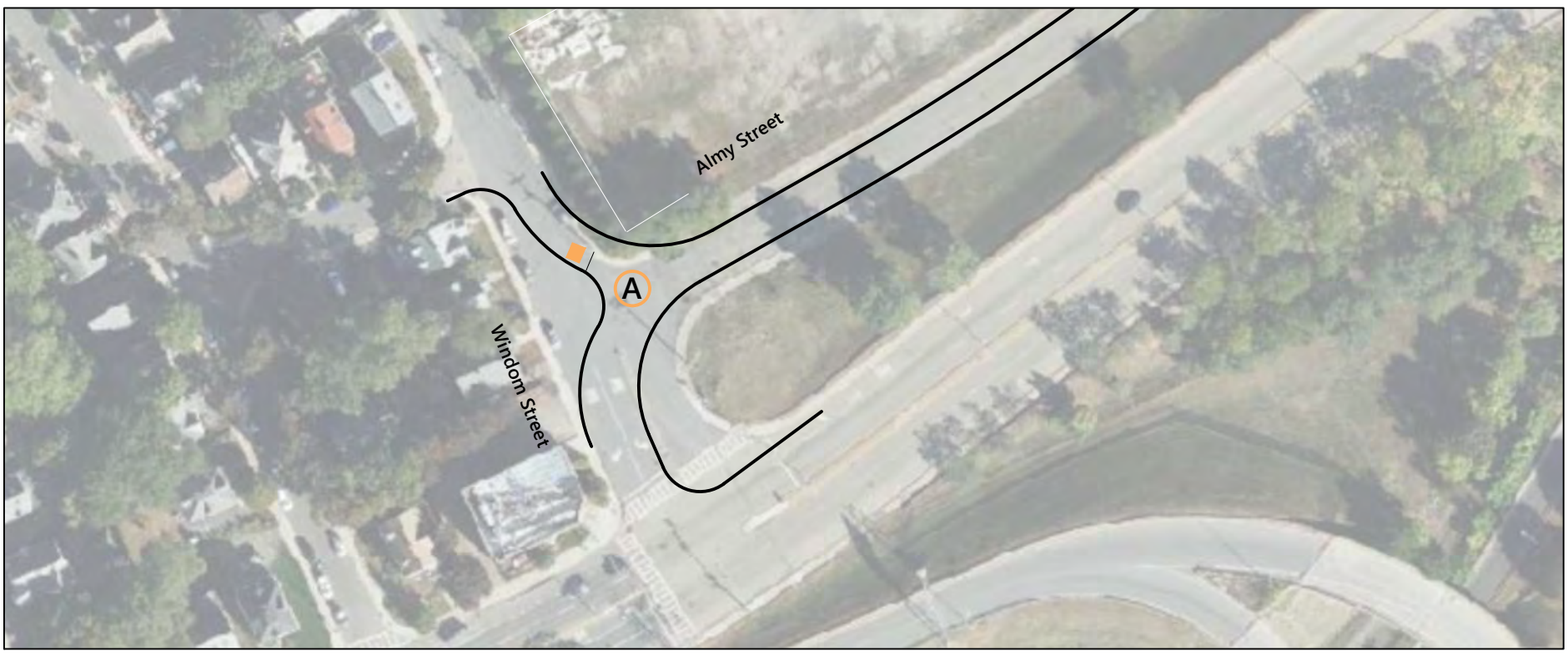
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2025)



Intersection does not exist under 2021 Existing and 2025 No-Build Conditions

Build (2025)

2025 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Intersection Queue Diagrams

2030 Conditions

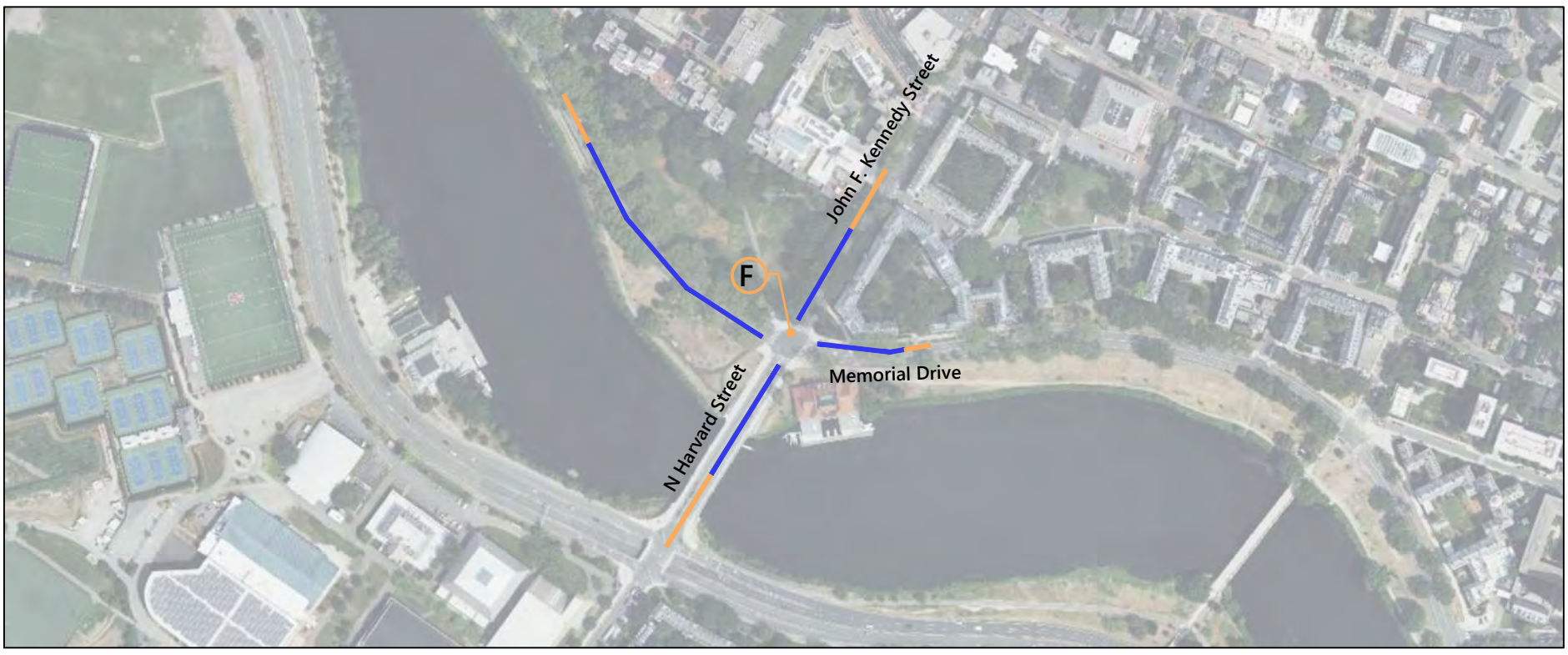
John F. Kennedy Street at Memorial Drive

X Overall Intersection Level of Service

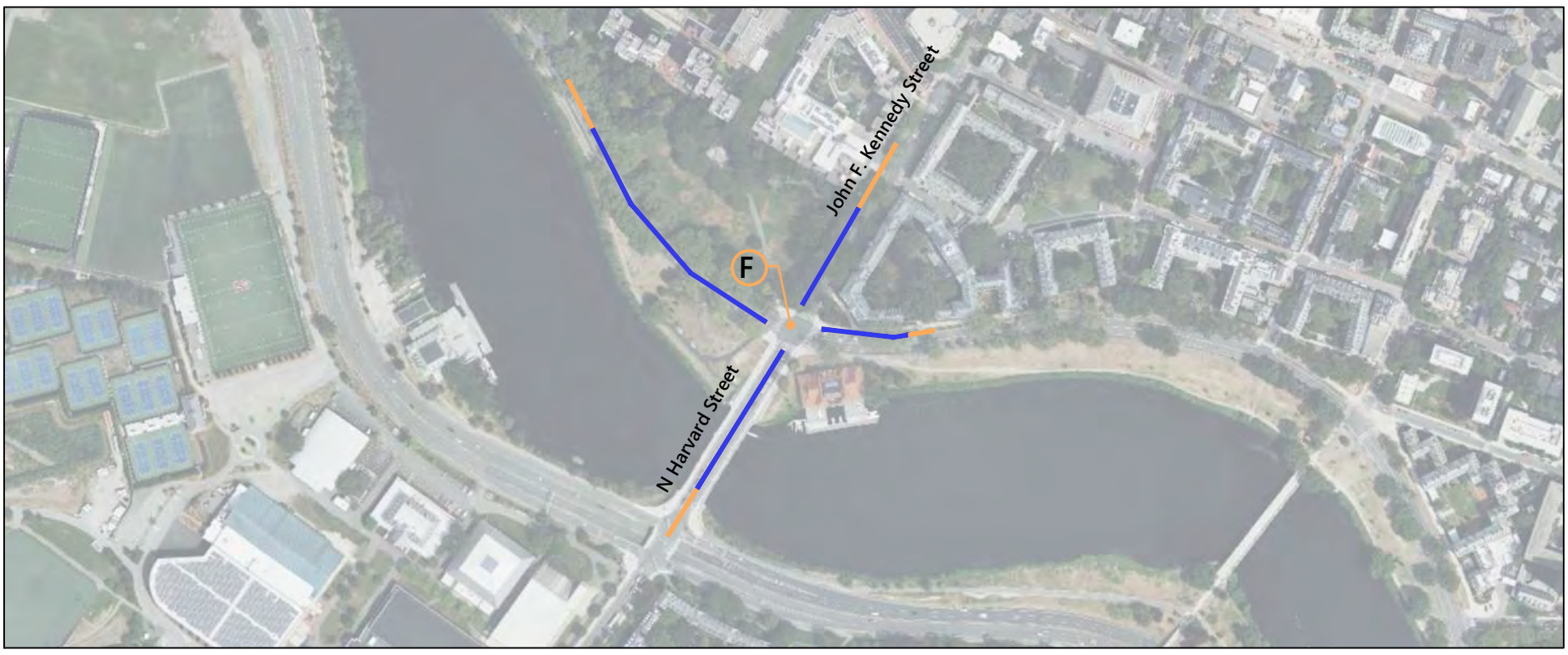
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 200 400 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road WB

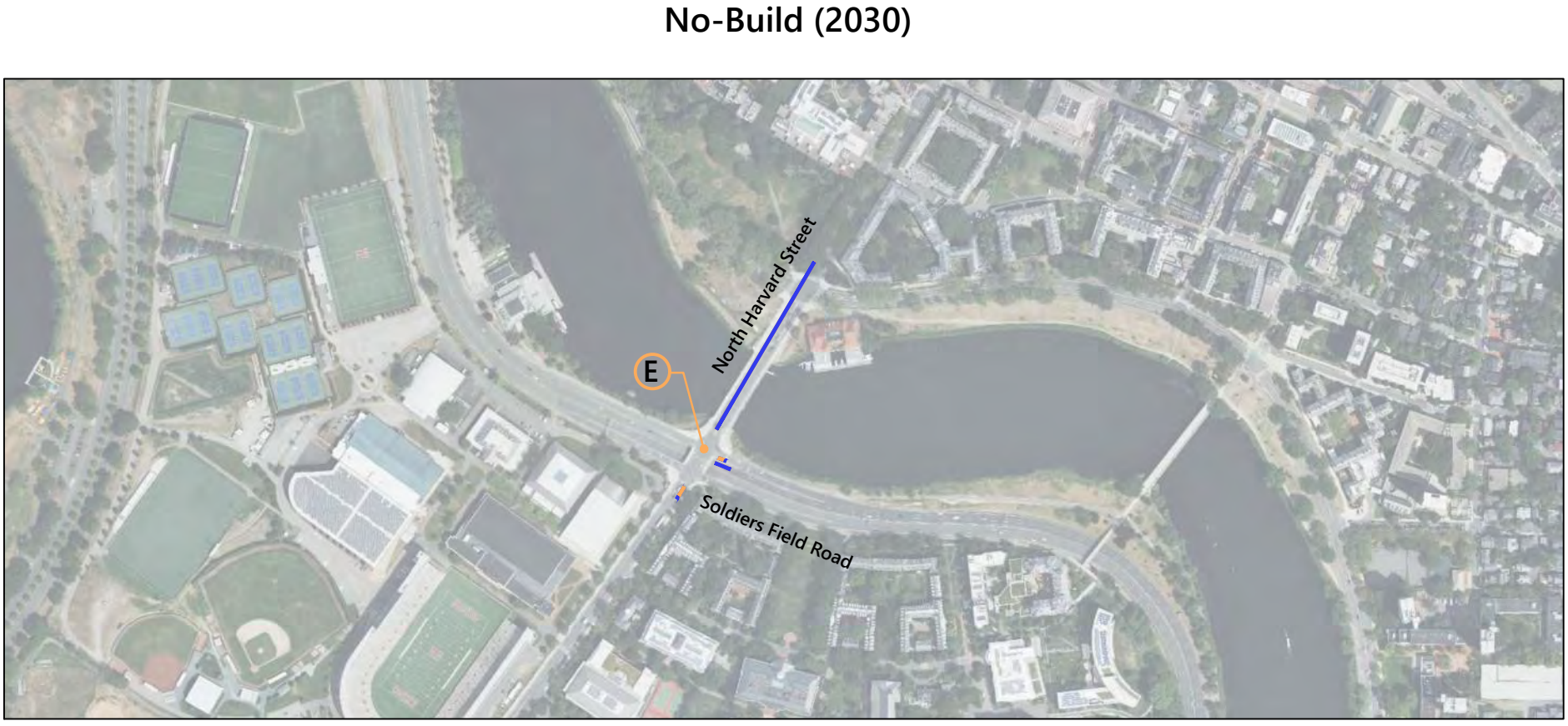
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

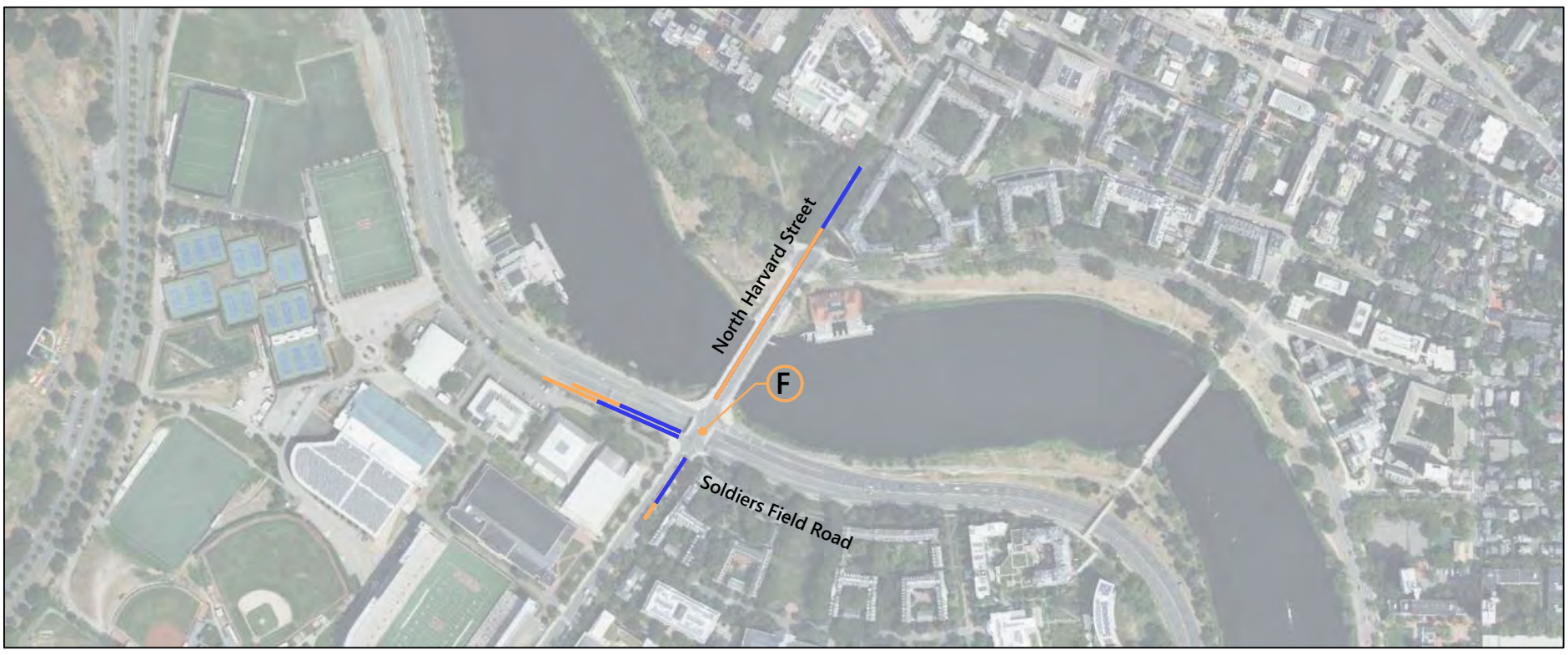
North Harvard Street at Soldiers Field Road EB

X Overall Intersection Level of Service

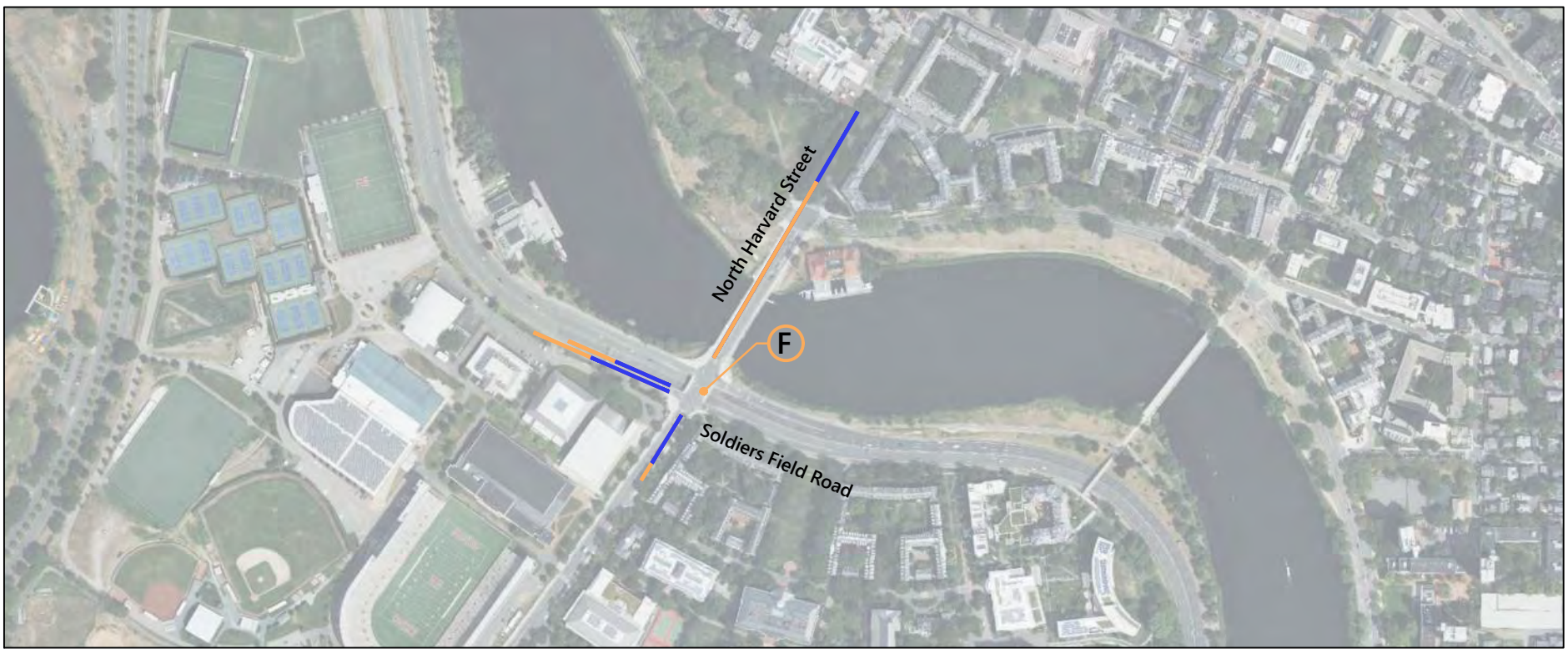
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

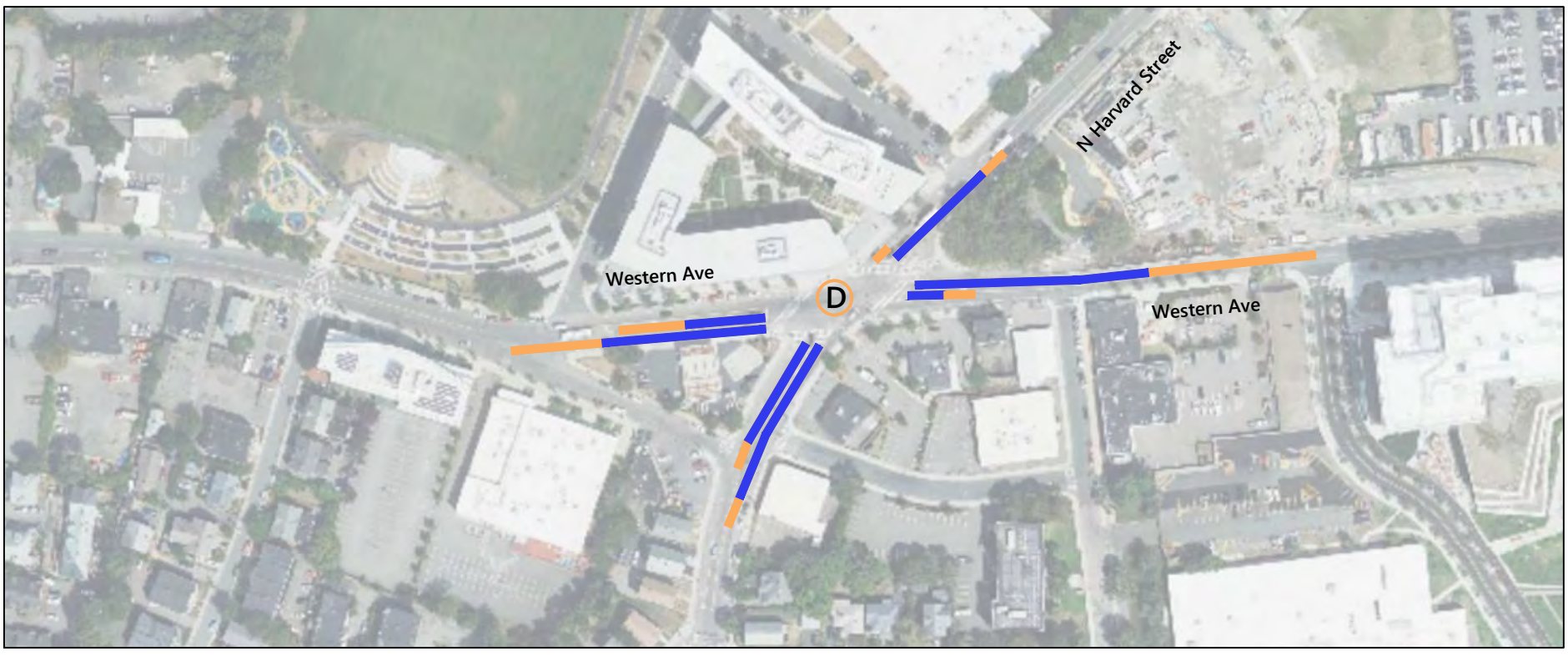
Enterprise Research Campus Project
Boston, MA

North Harvard Street at Western Ave

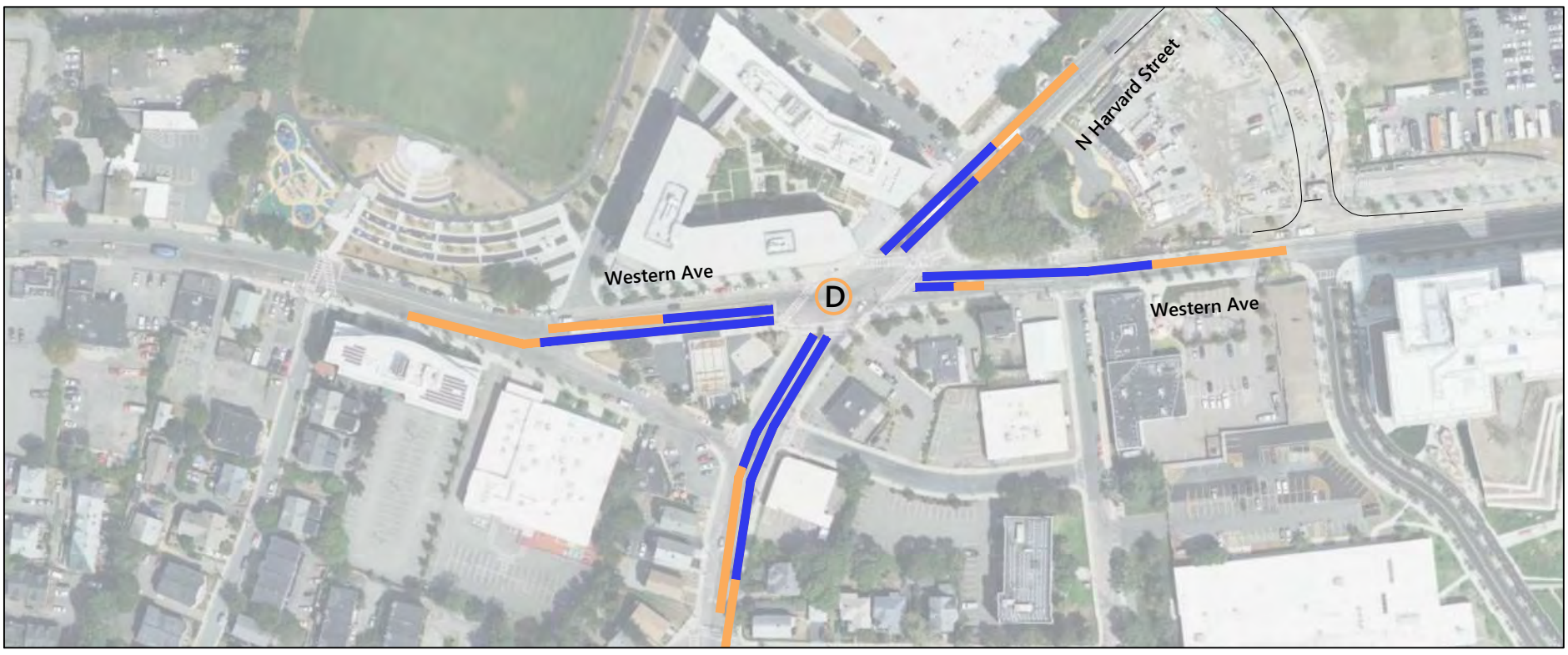
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue



Existing



No-Build (2030)

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Franklin St/ Kingsley St

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at North Harvard Street

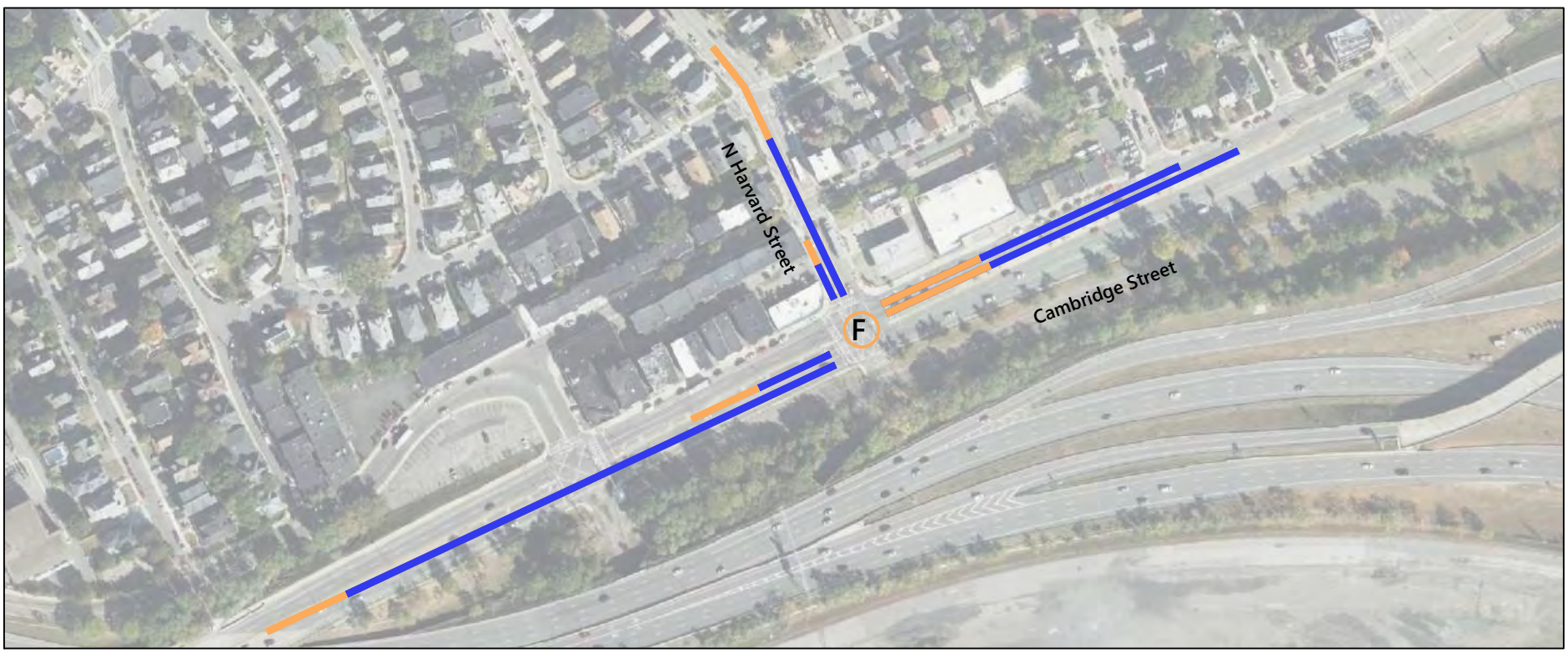
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

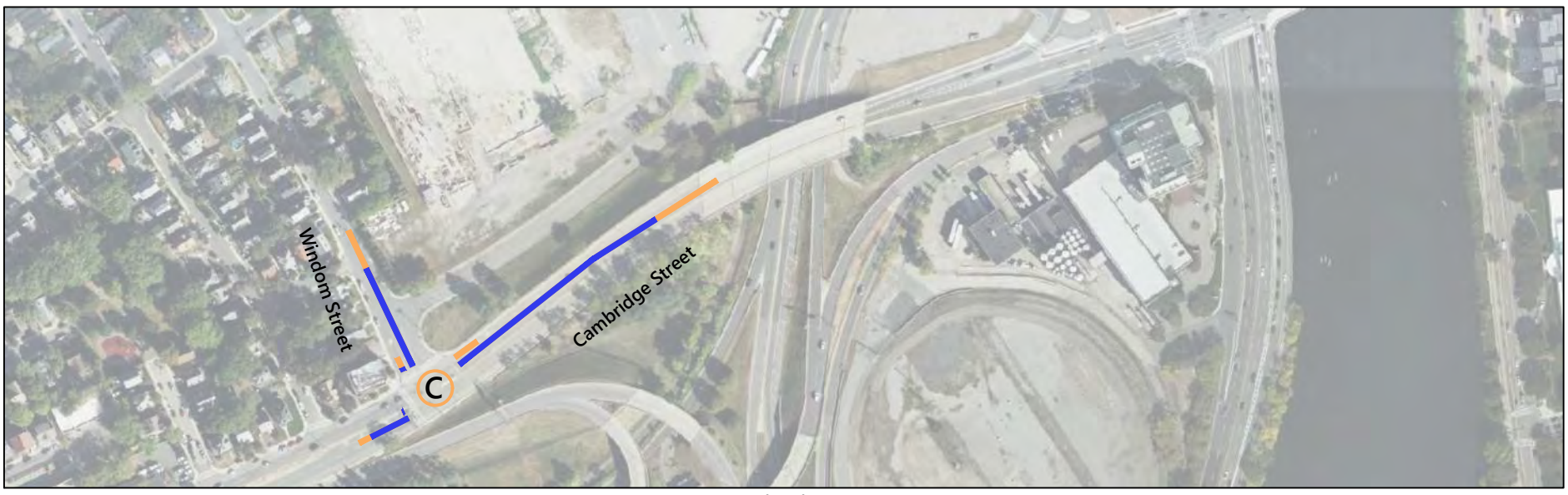
Enterprise Research Campus Project
Boston, MA

Cambridge Street at Windom Street

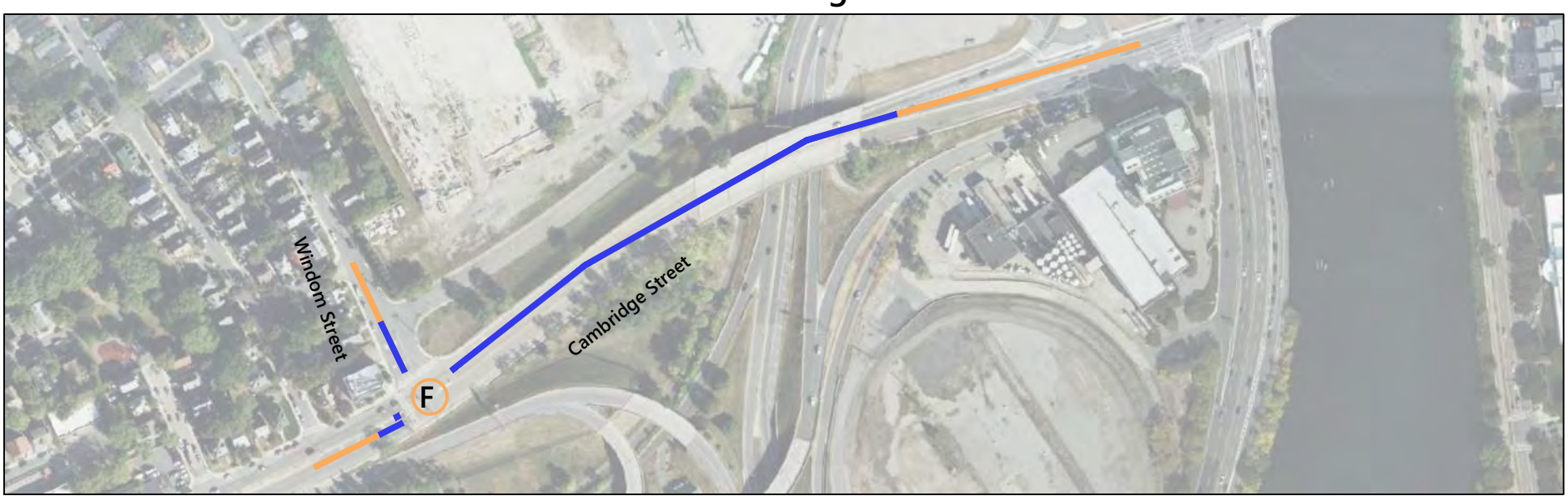
X Overall Intersection Level of Service

50th Percentile Queue

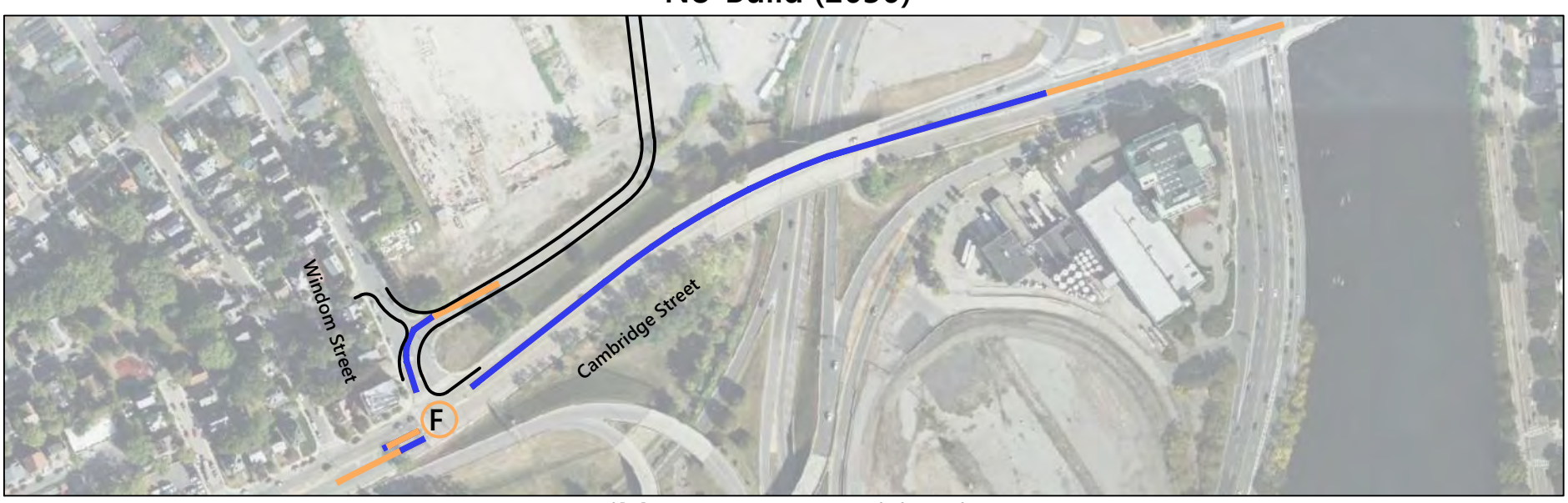
95th Percentile Queue



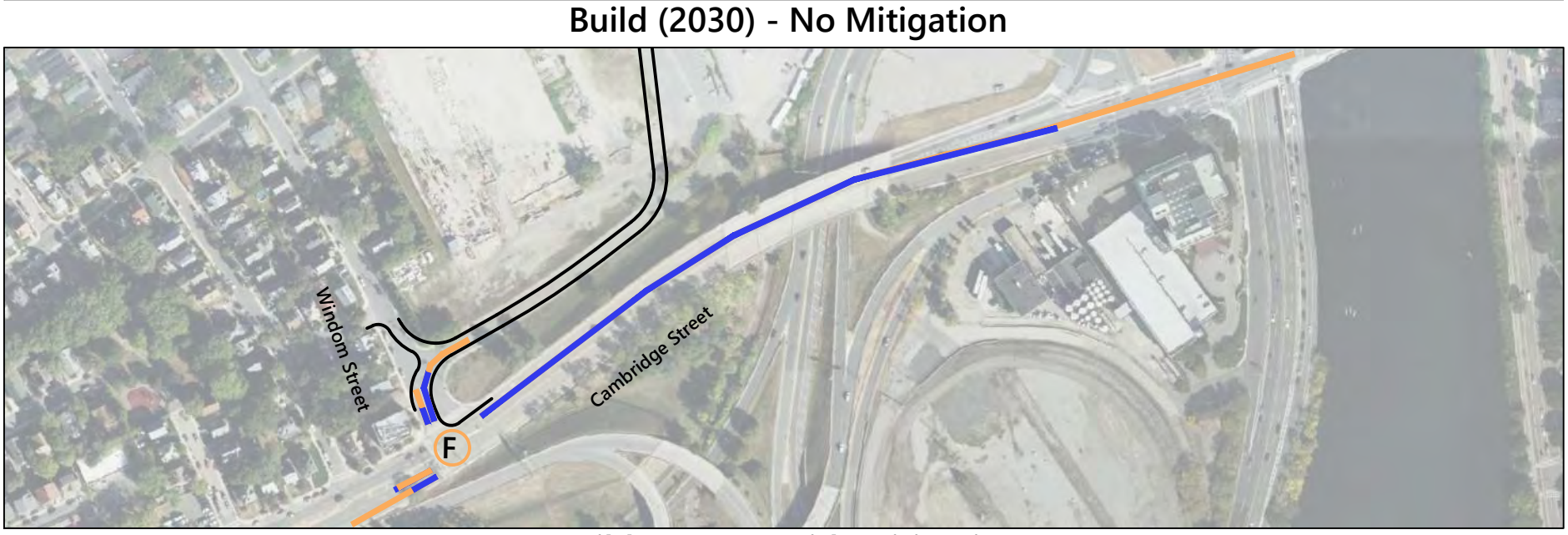
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

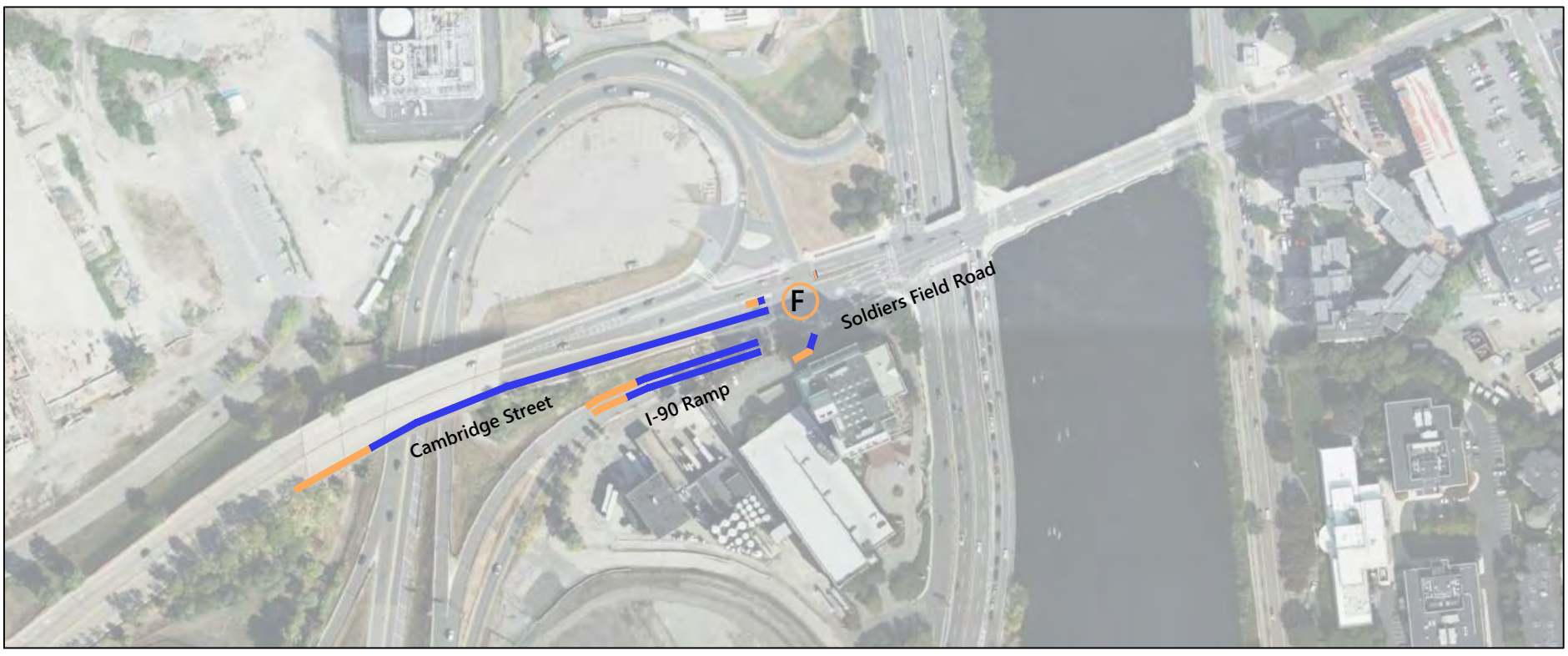
Enterprise Research Campus Project
Boston, MA

Cambridge Street at I-90 Ramps/ Double Tree Hotel

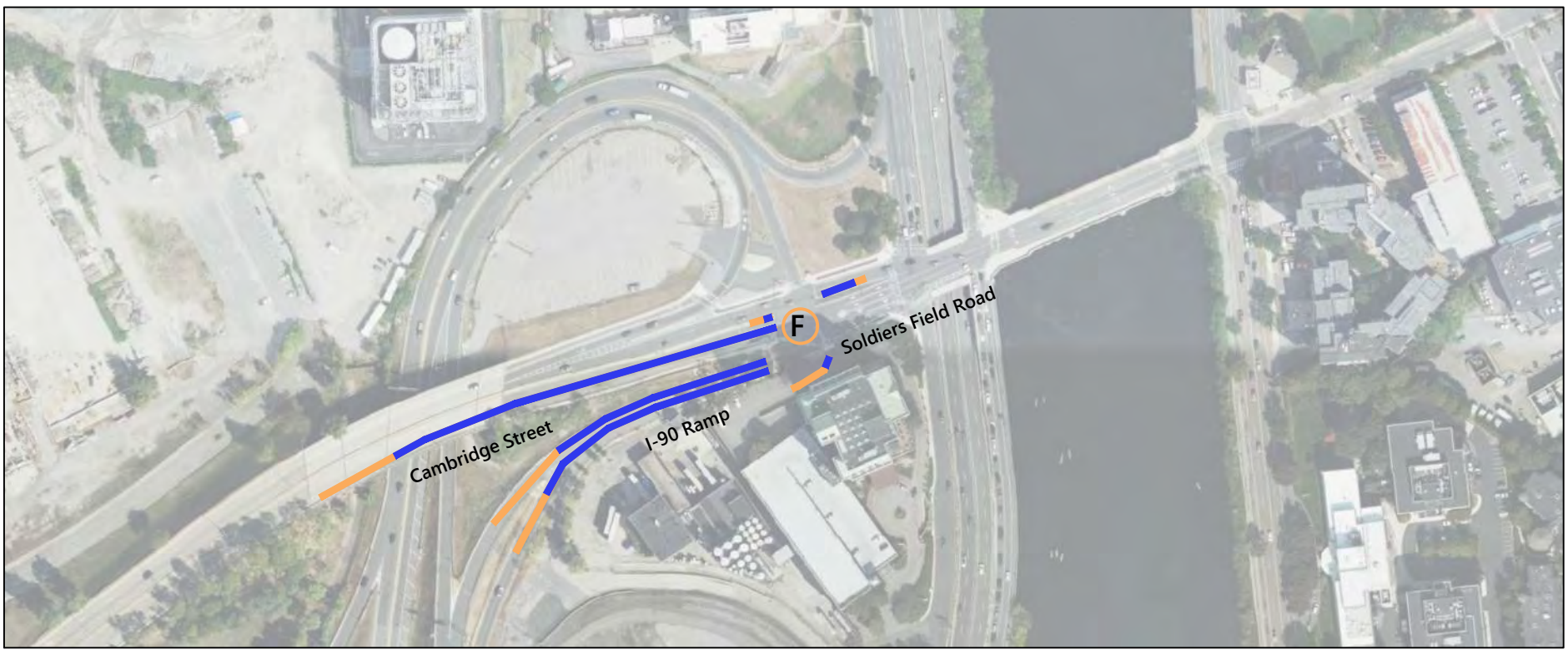
X Overall Intersection Level of Service

50th Percentile Queue

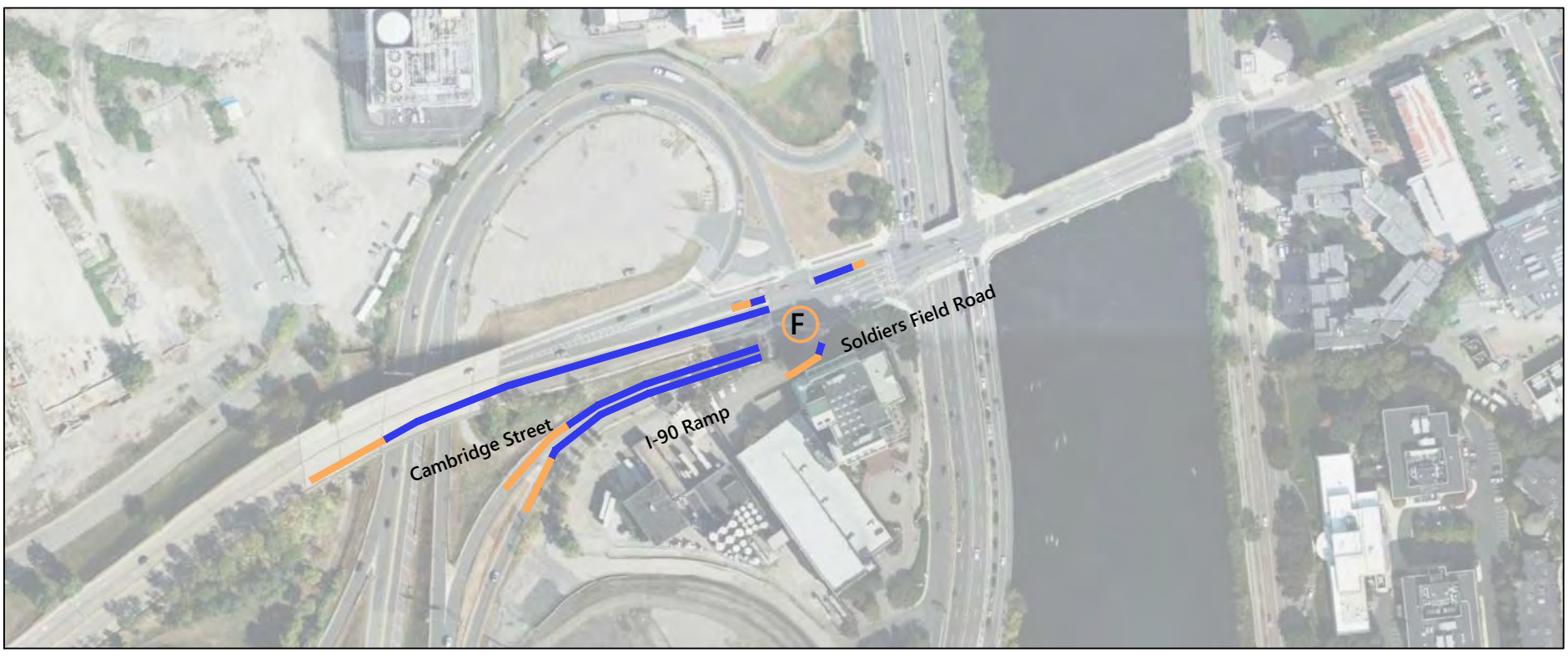
95th Percentile Queue



Existing



No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at Soldiers Field Road

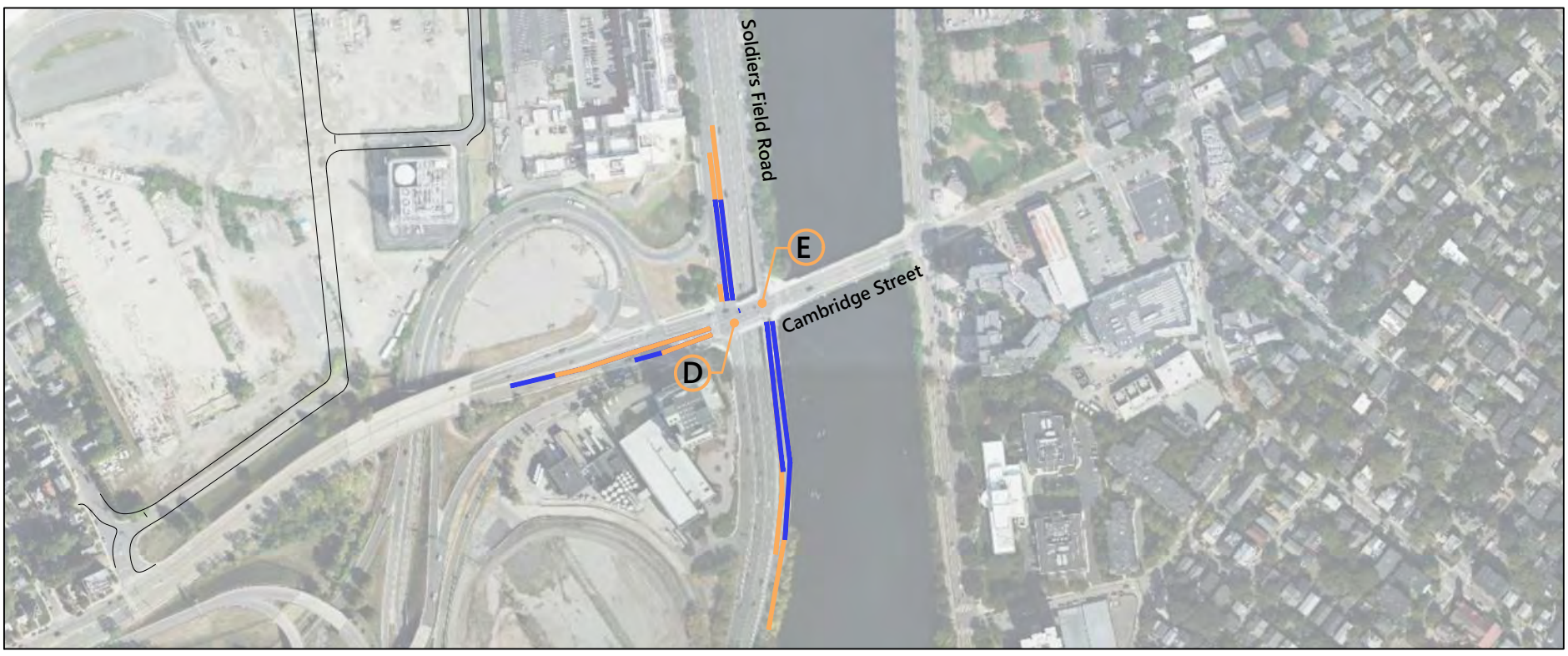
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 200 400 Feet

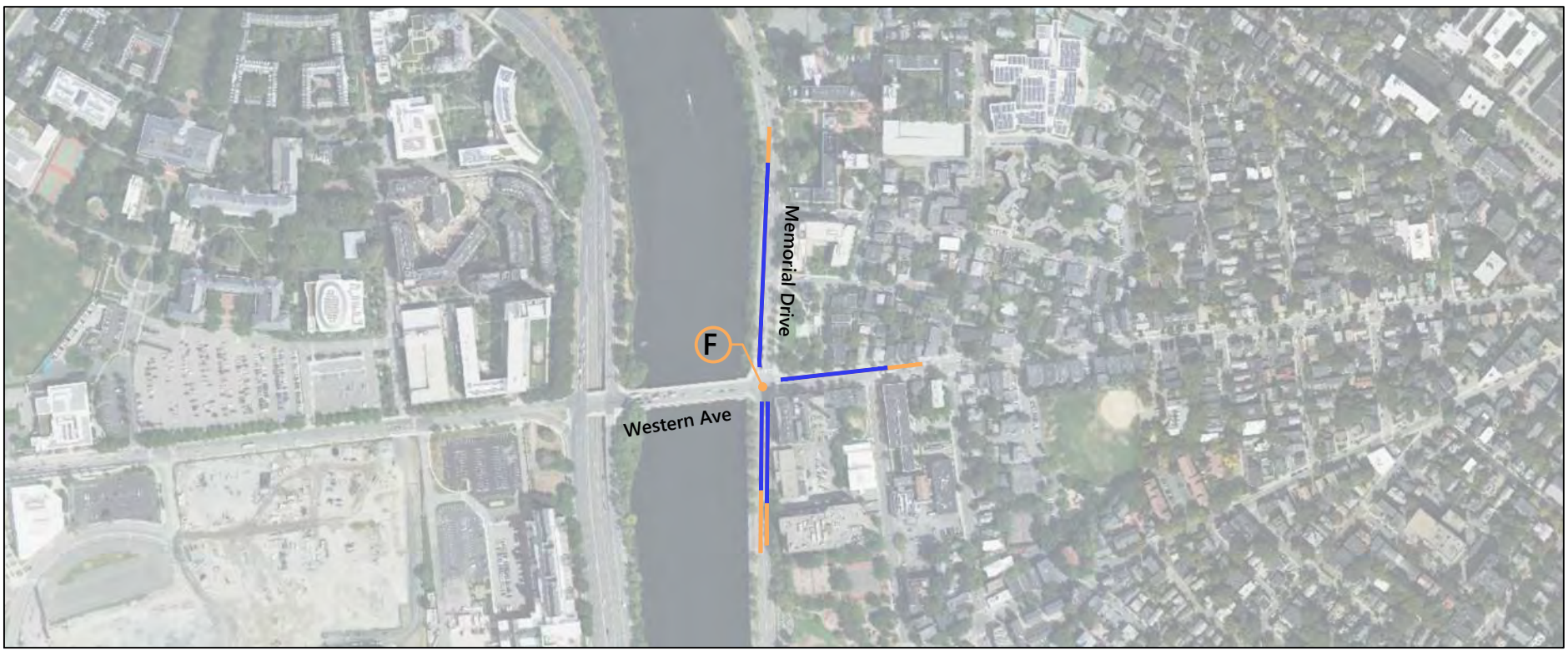
Enterprise Research Campus Project
Boston, MA

Western Ave at Memorial Drive

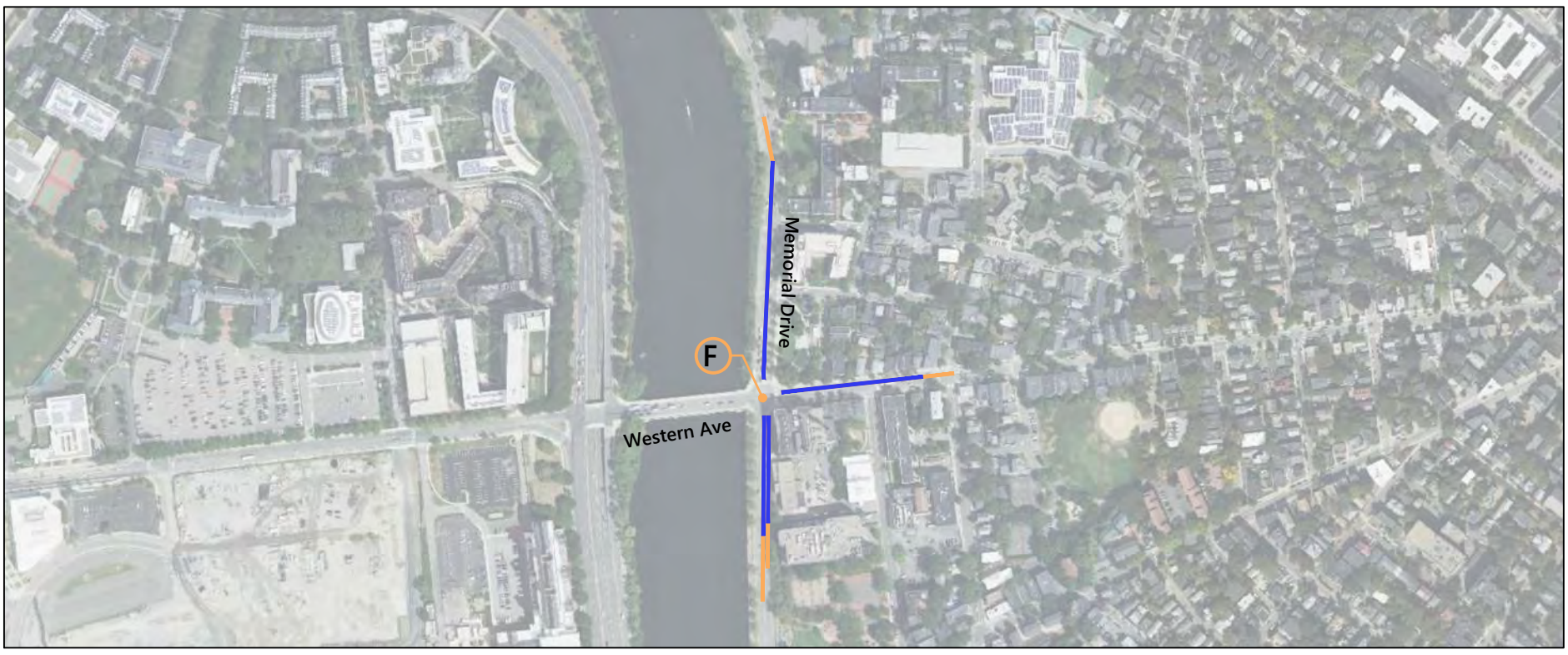
X Overall Intersection Level of Service

50th Percentile Queue

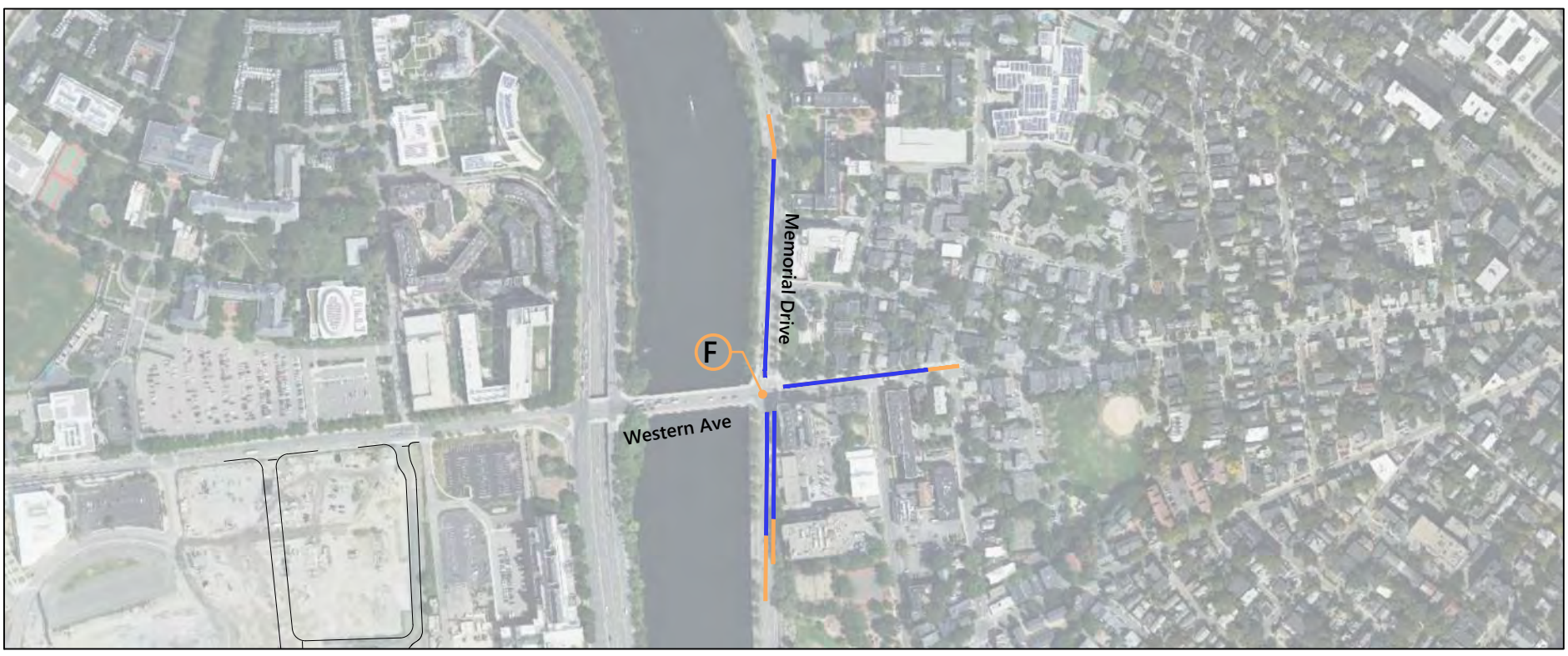
95th Percentile Queue



Existing



No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

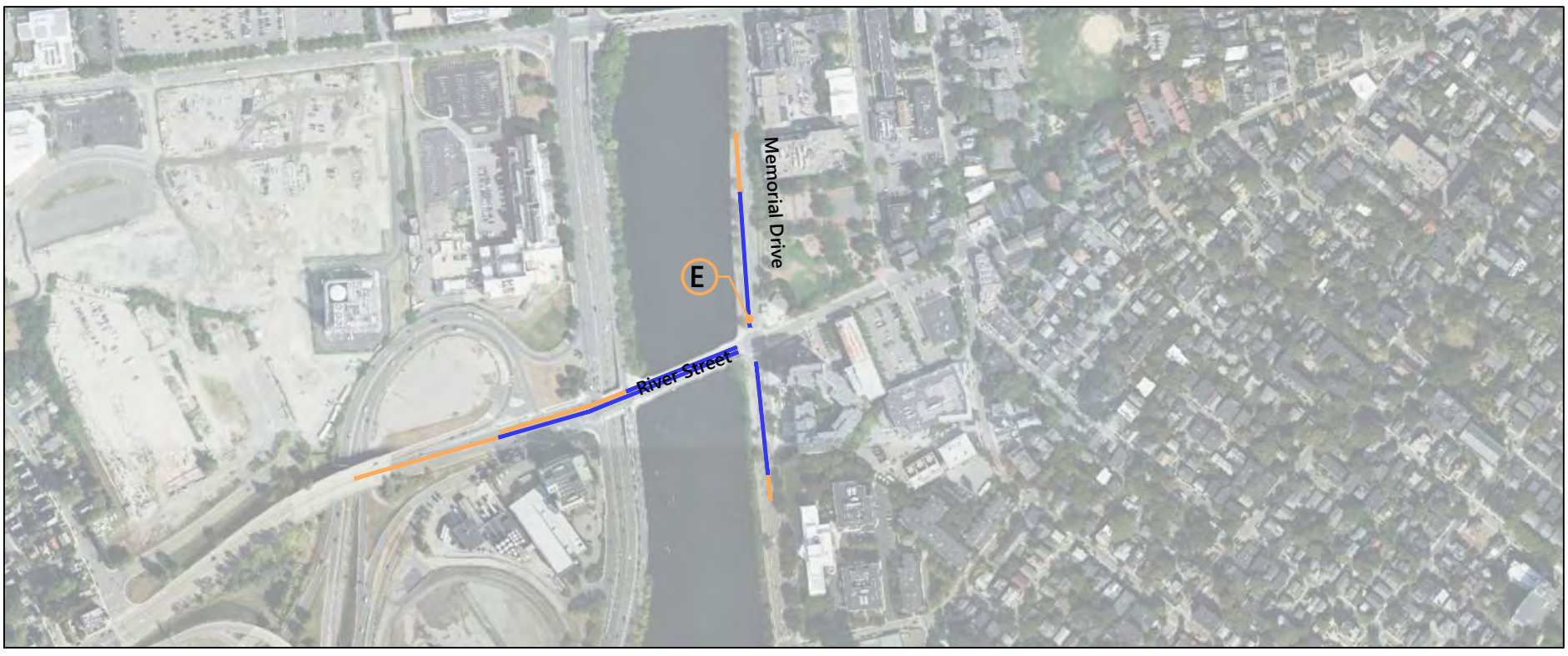
Enterprise Research Campus
Boston, Massachusetts

Memorial Drive at River Street

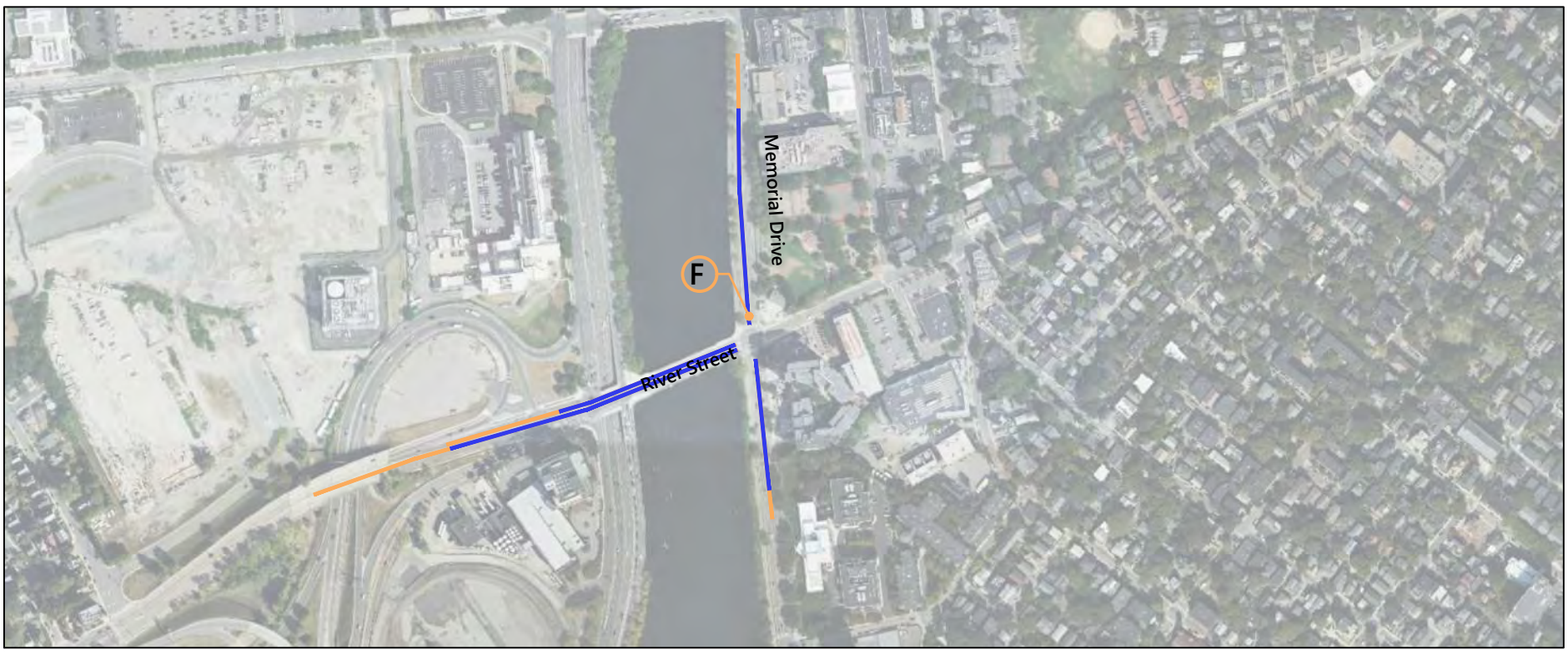
X Overall Intersection Level of Service

50th Percentile Queue

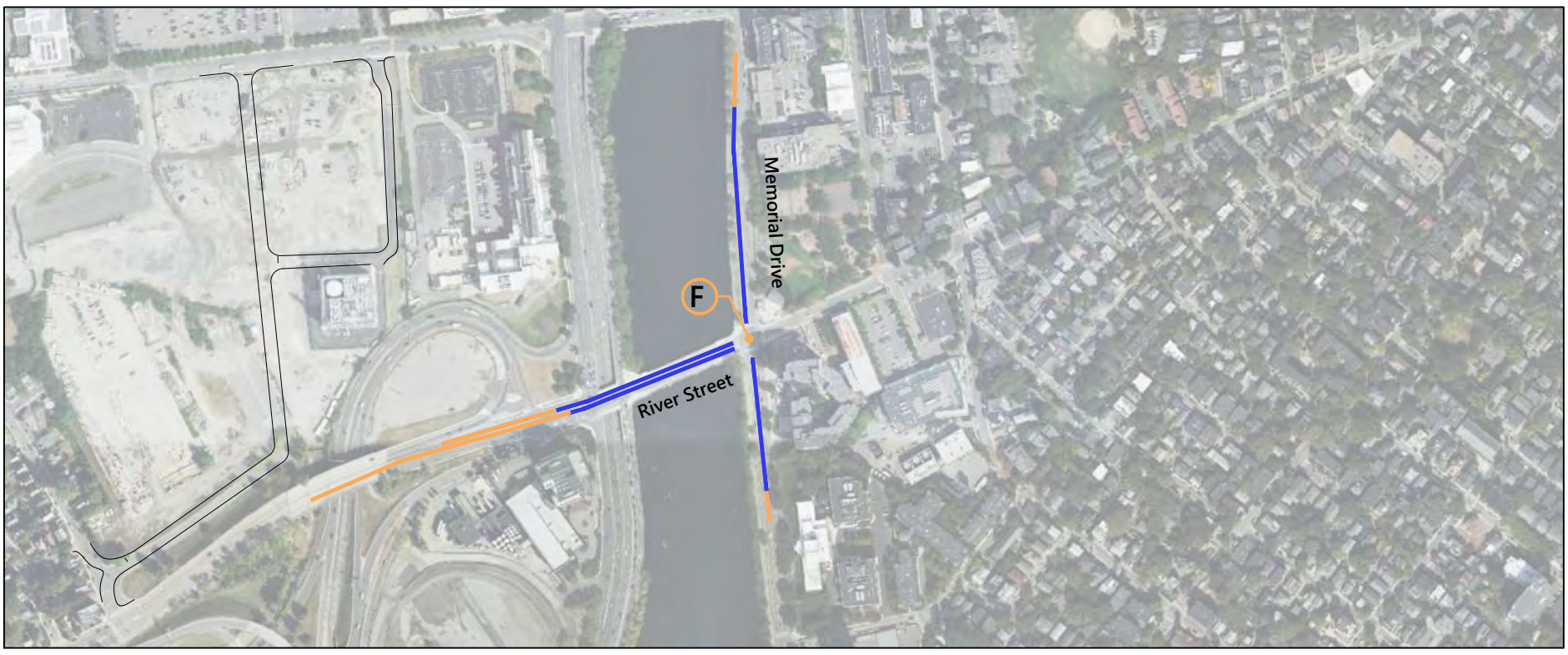
95th Percentile Queue



Existing



No-Build (2030)



Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 250 500 Feet

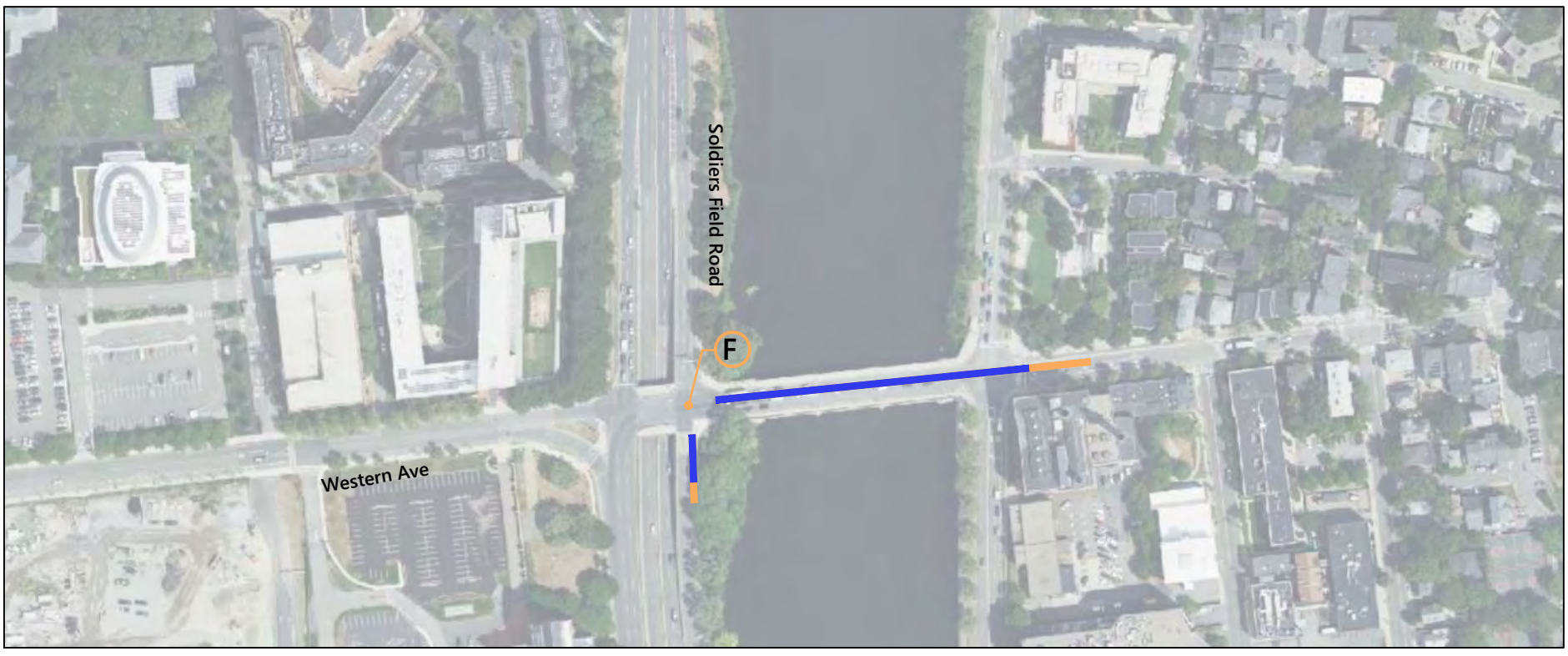
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road WB

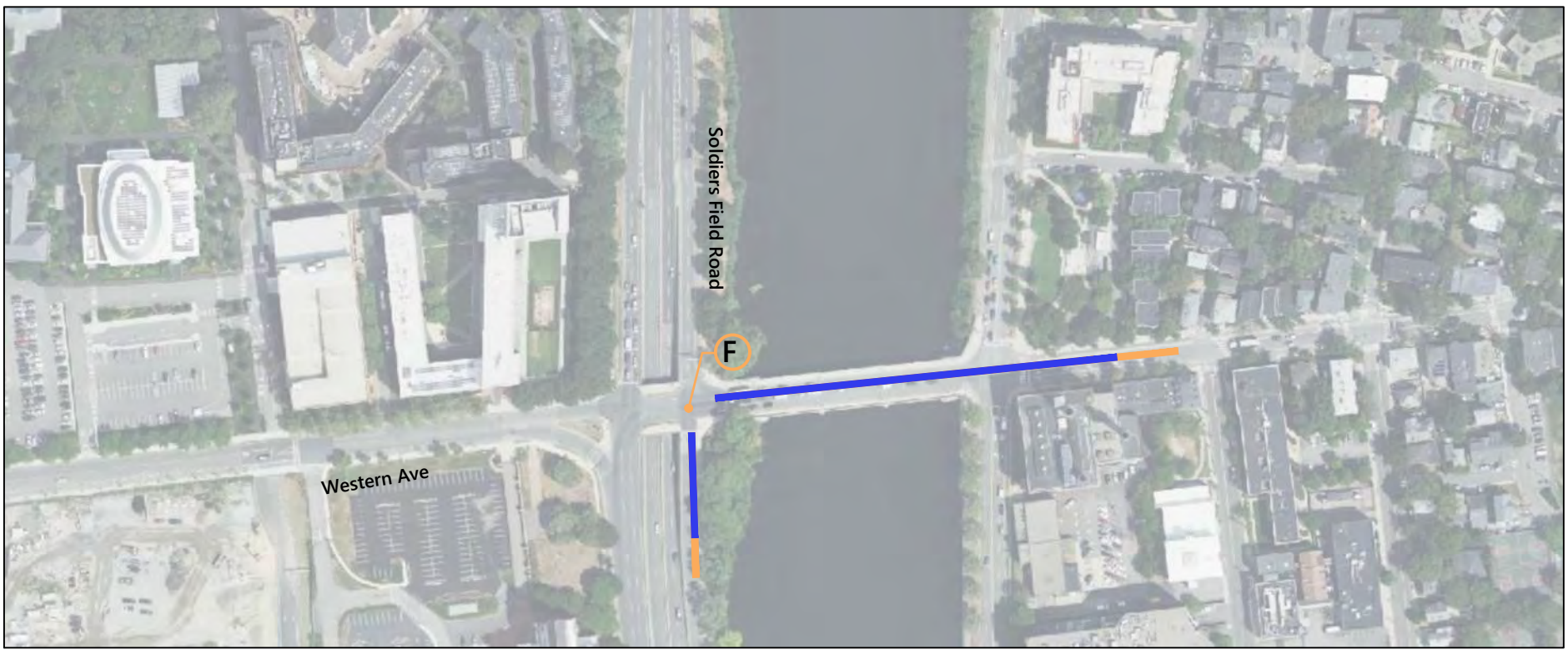
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue



Existing



No-Build (2030)

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

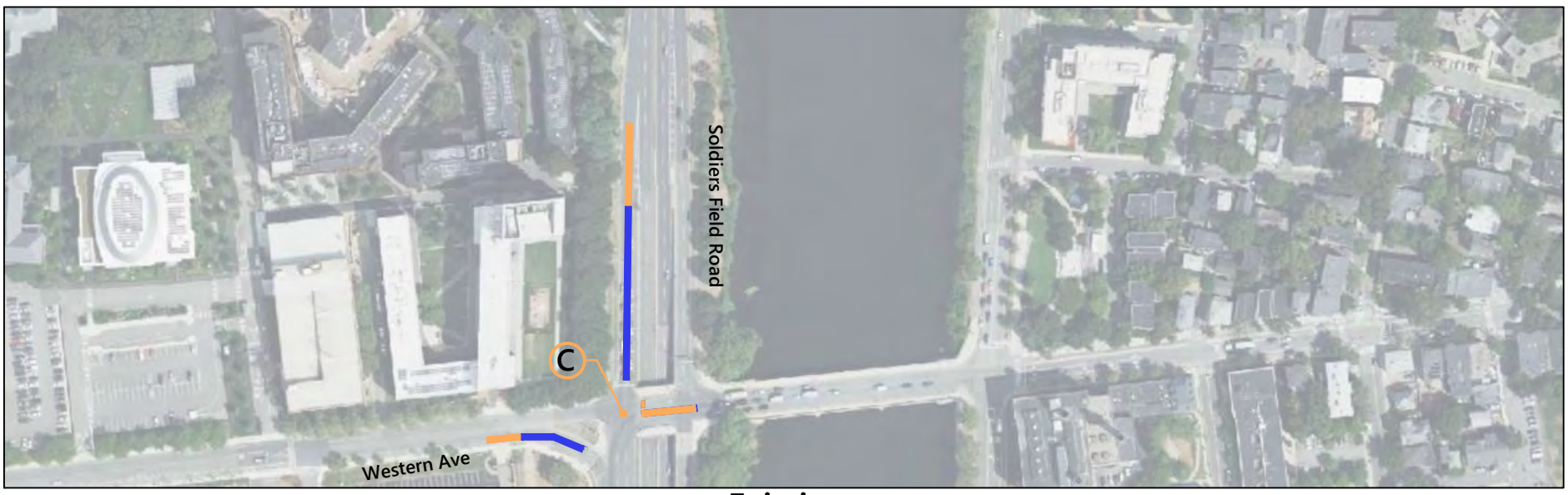
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road EB

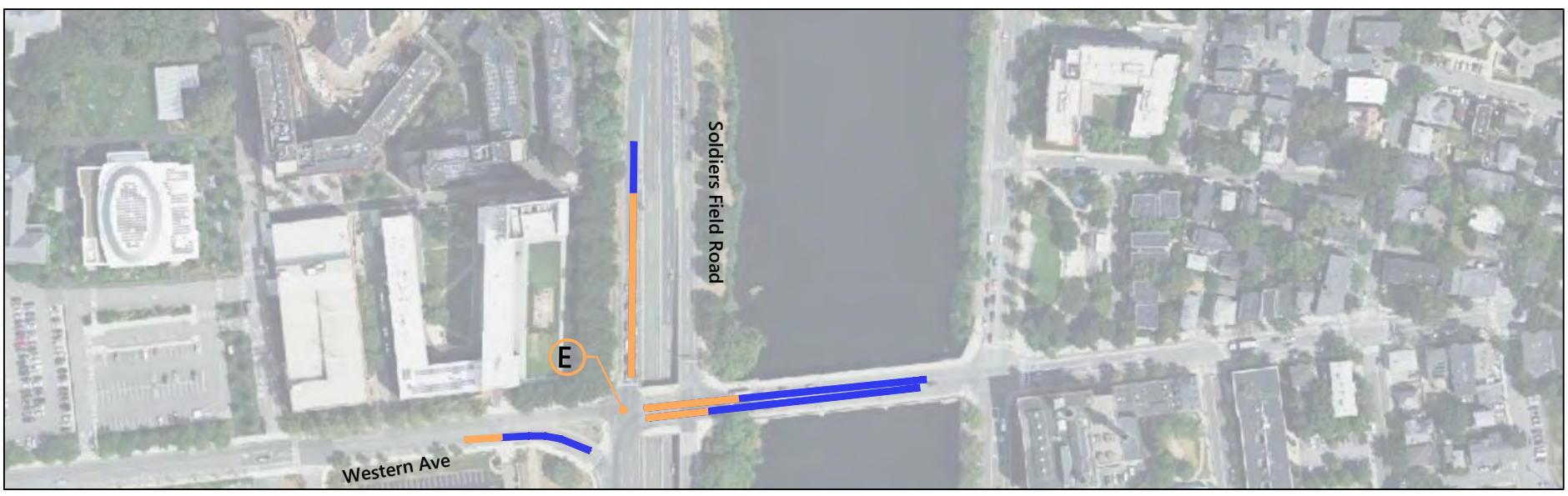
X Overall Intersection Level of Service

50th Percentile Queue

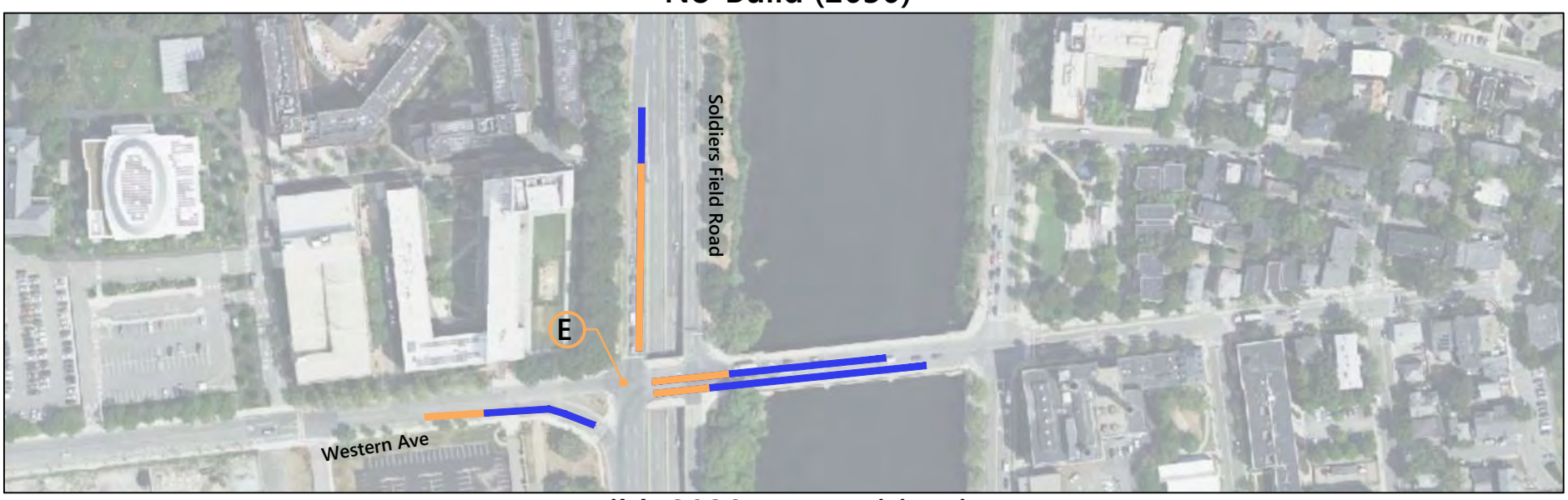
95th Percentile Queue



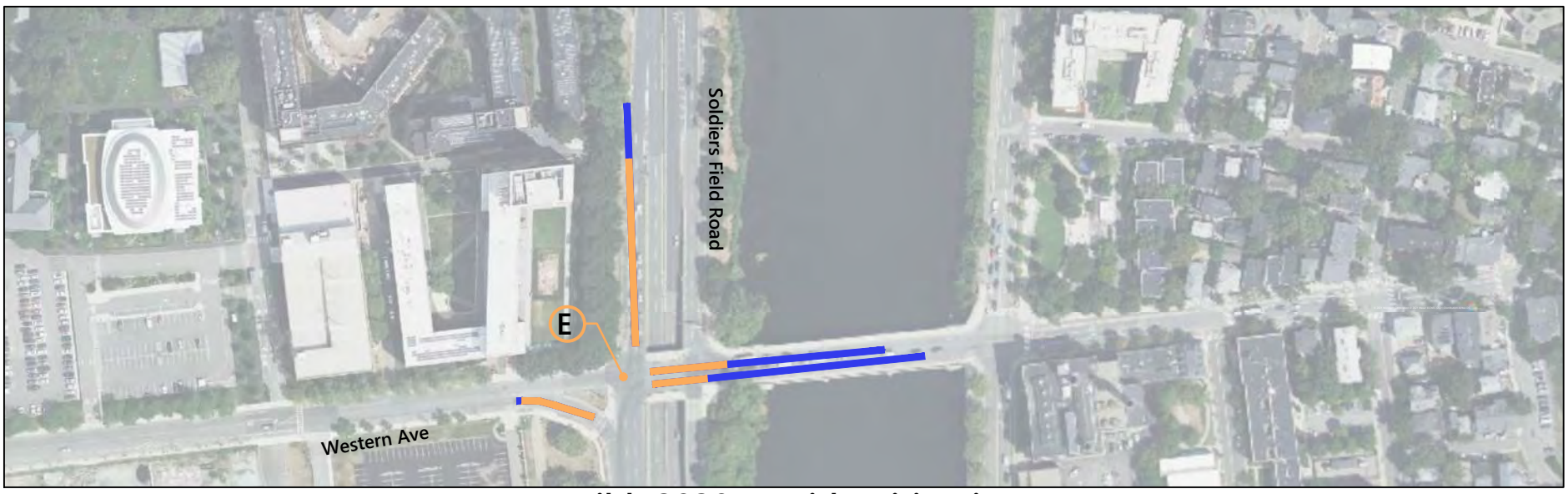
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Morning Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus
Boston, Massachusetts

Western Ave at Kresge Way/ East Drive

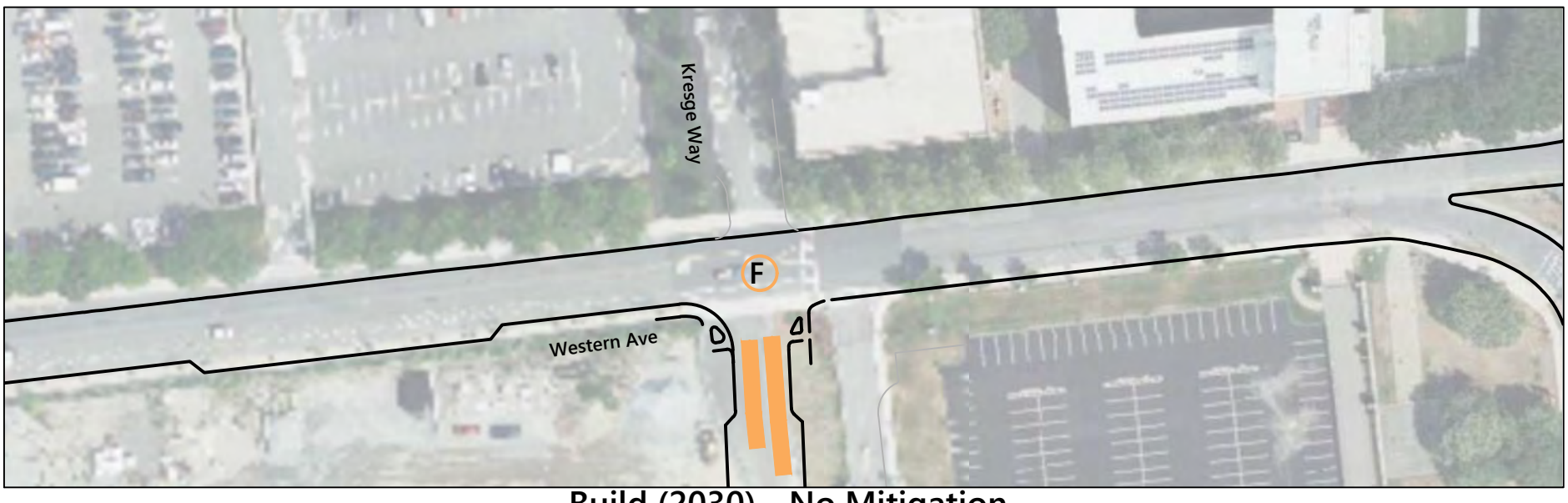
X Overall Intersection Level of Service

50th Percentile Queue

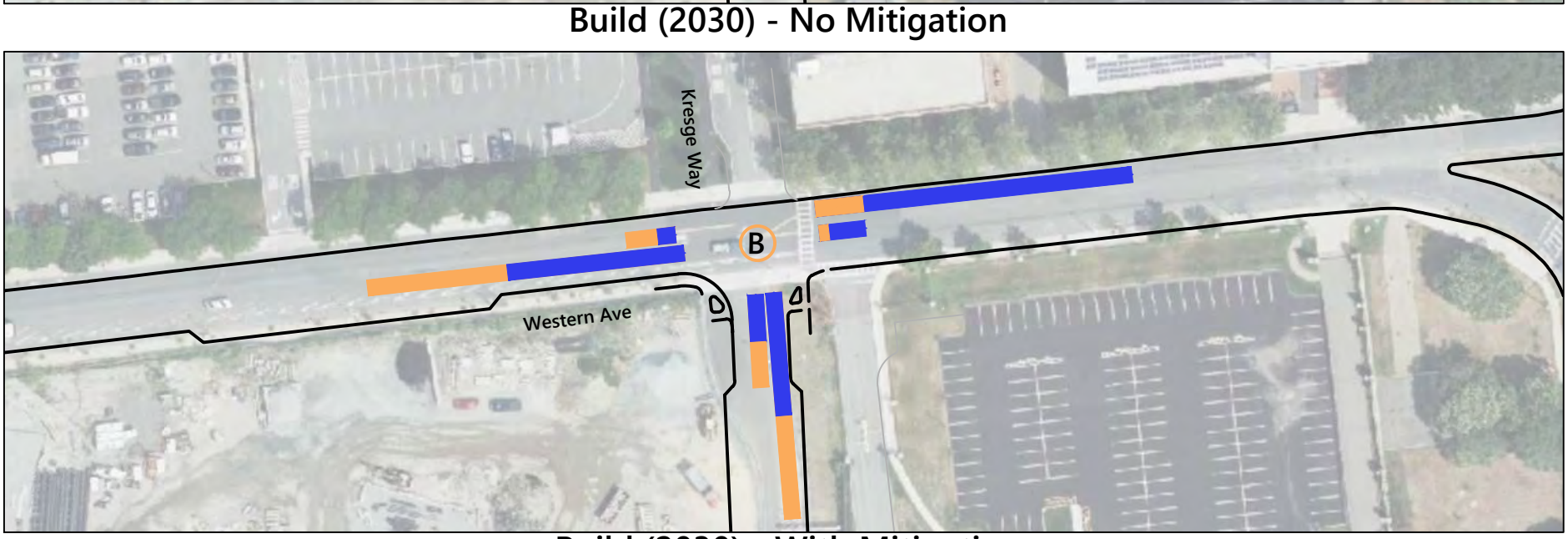
95th Percentile Queue

Existing

No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive at Western Ave

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Build (2030) - No Mitigation

Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

2030 Conditions: Morning Peak Hour Queue Diagrams

0 75 150 Feet

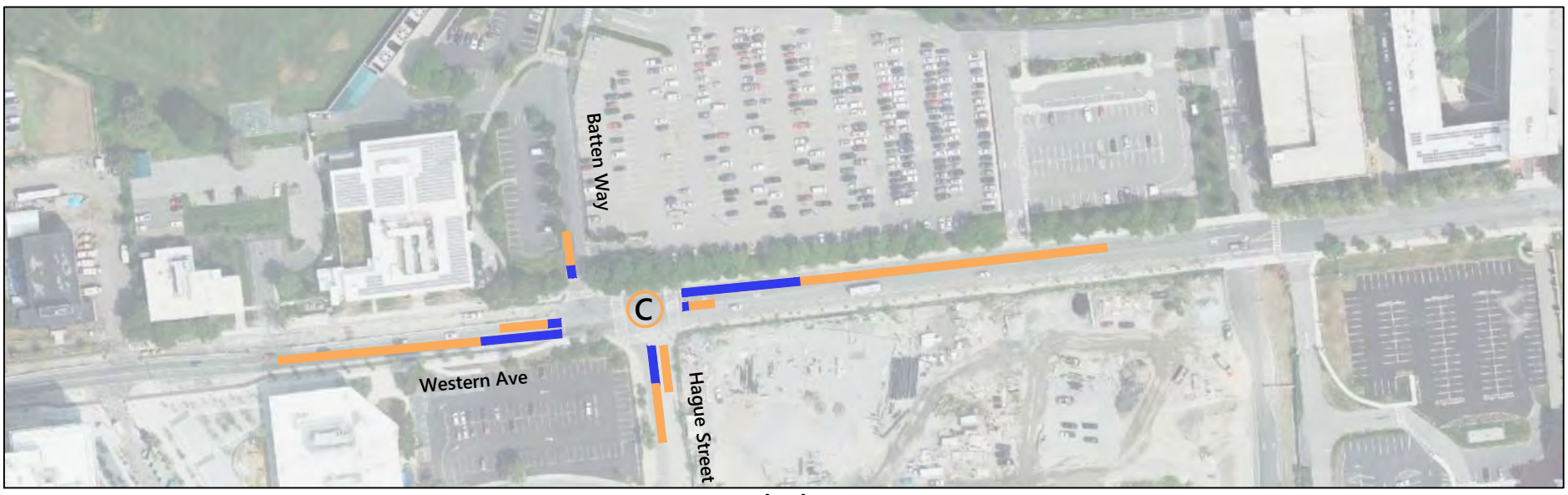
Enterprise Research Campus Project
Boston, MA

Western Ave at Batten Way/ Hague Street

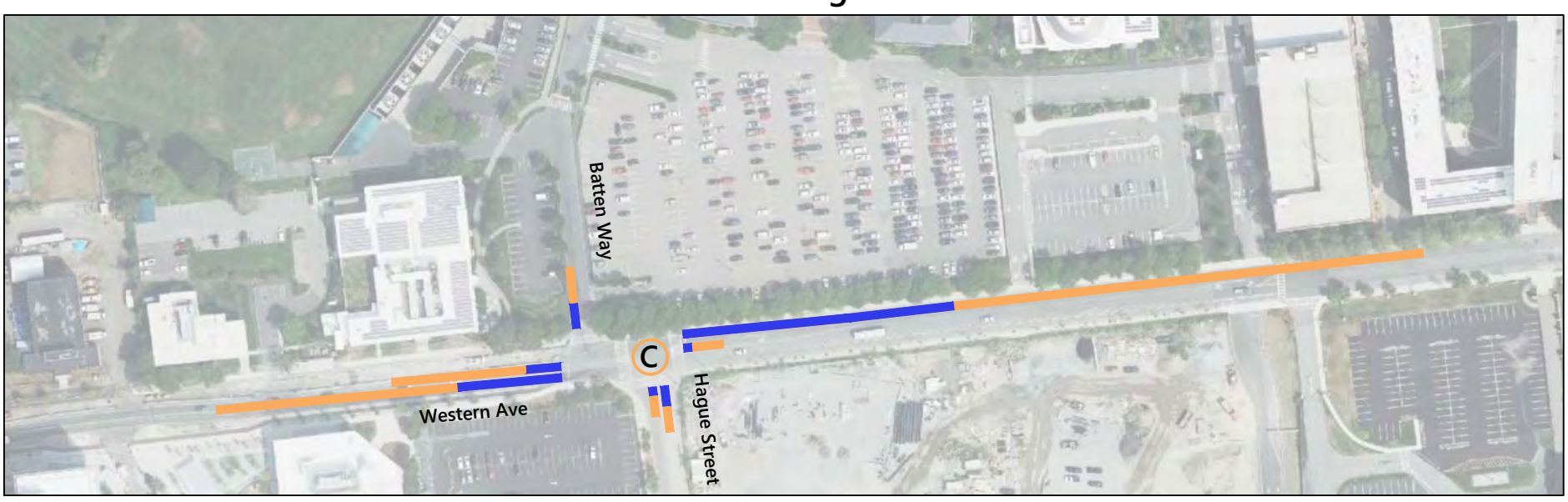
X Overall Intersection Level of Service

50th Percentile Queue

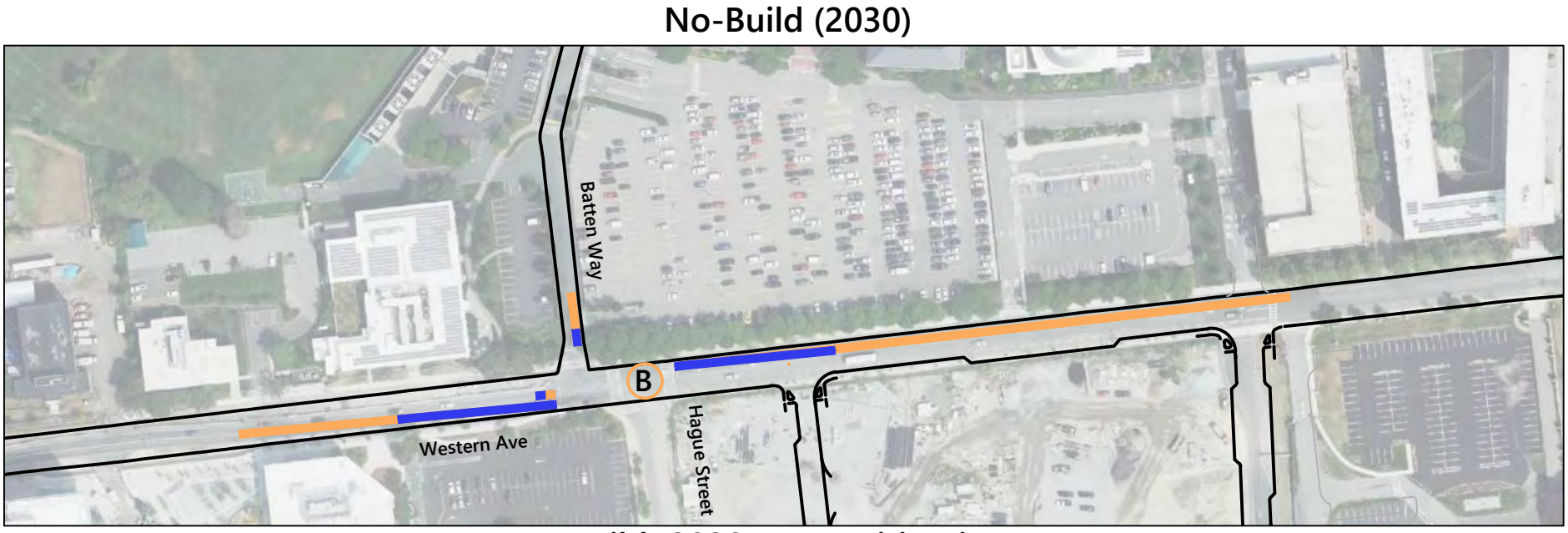
95th Percentile Queue



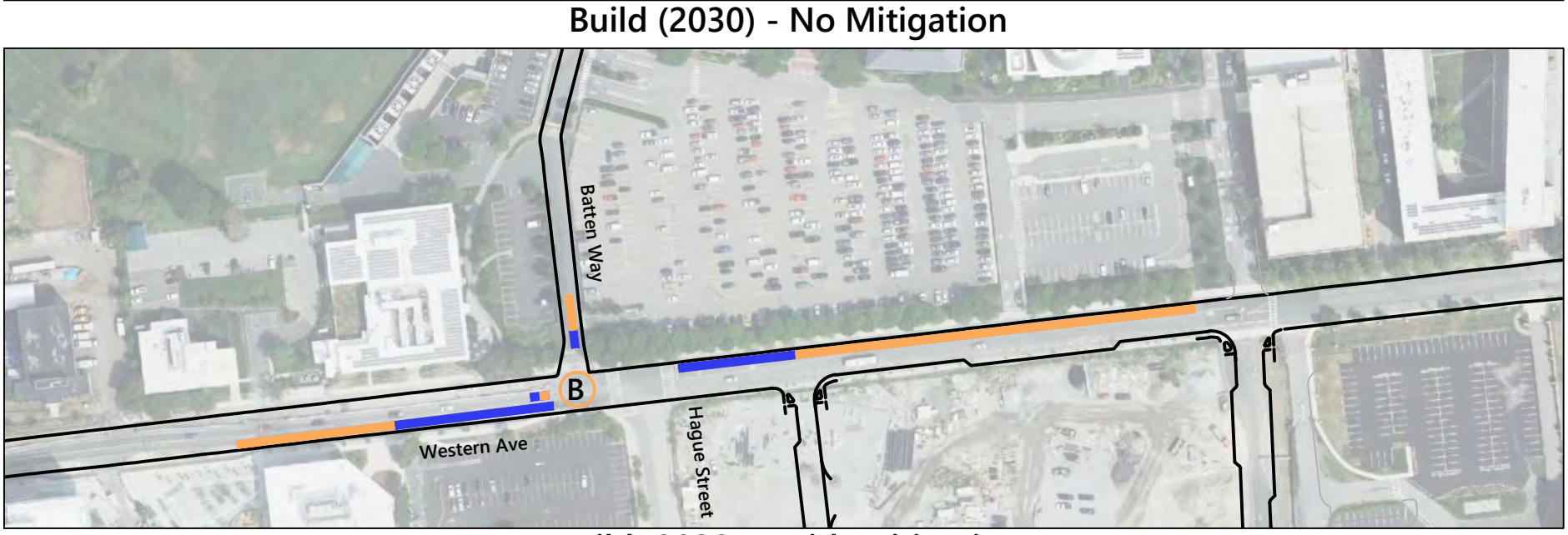
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Morning Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus Project
Boston, MA

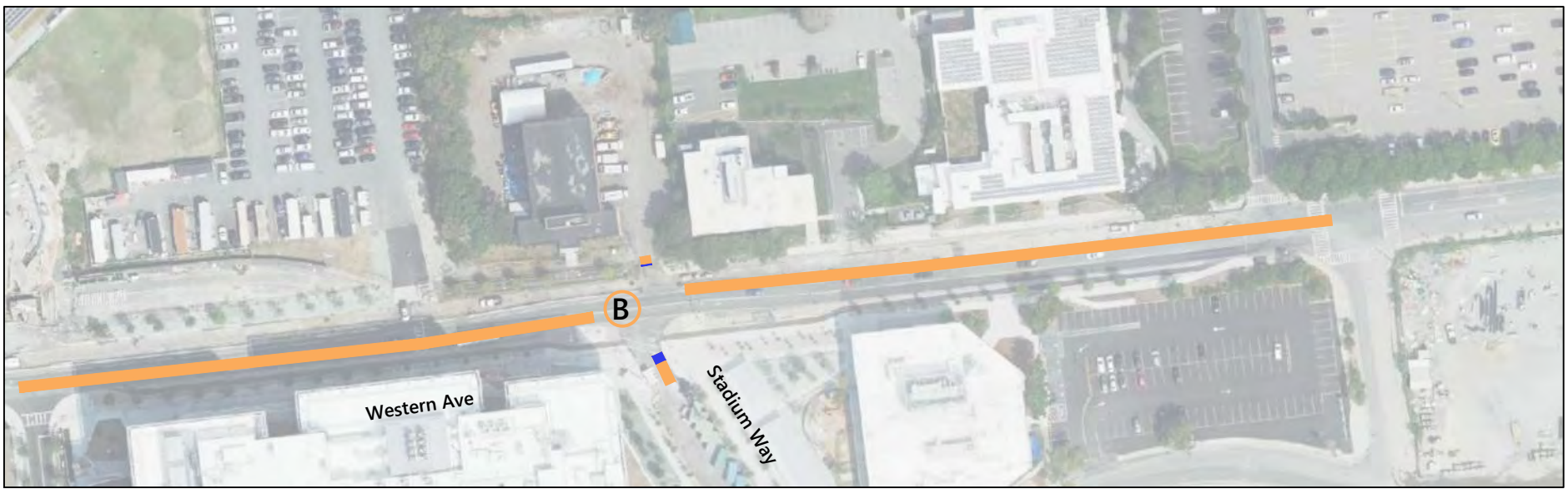
Western Ave at Stadium Way

X Overall Intersection Level of Service

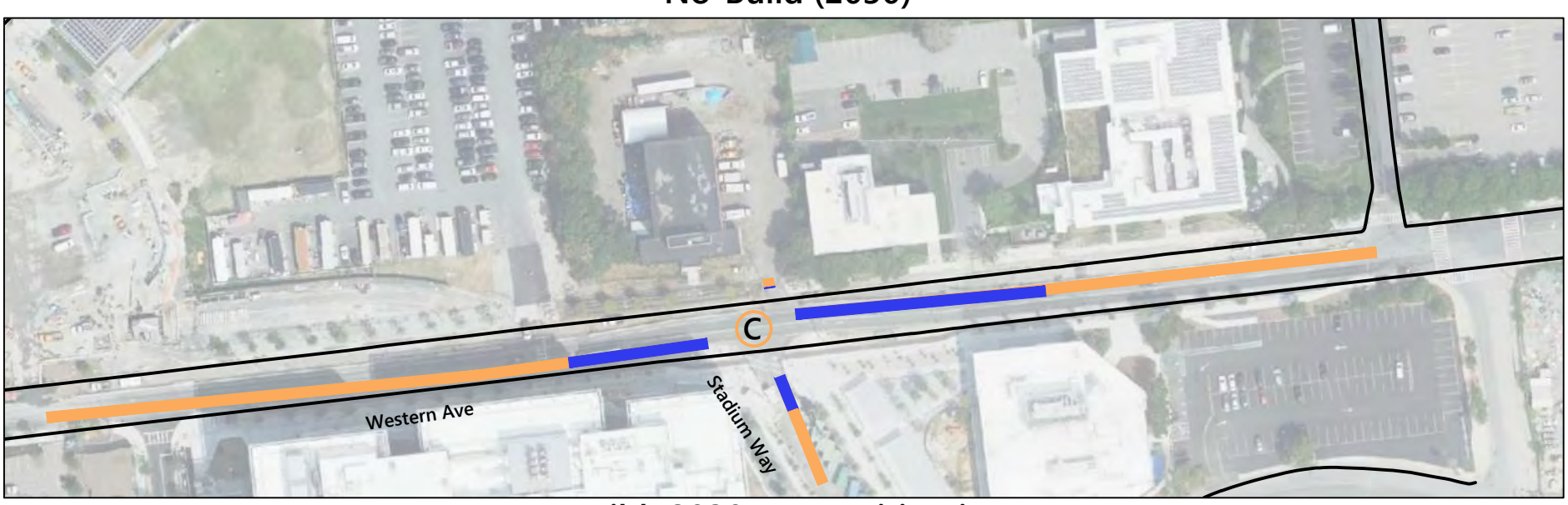
50th Percentile Queue

95th Percentile Queue

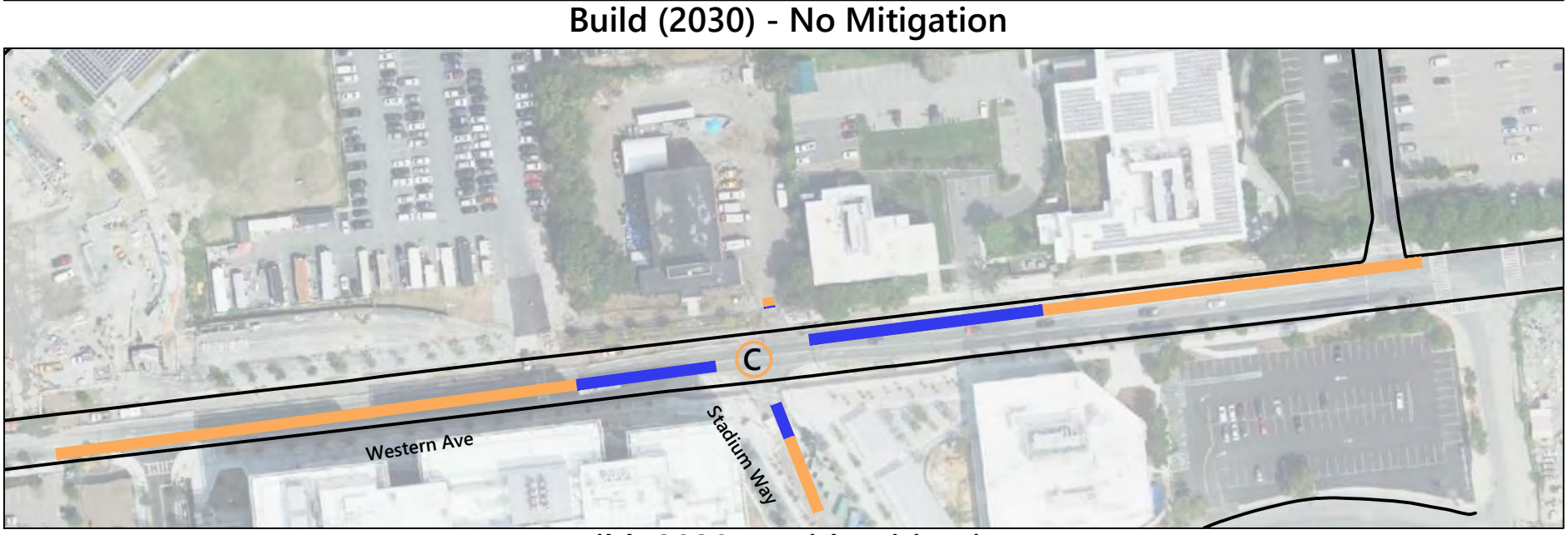
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing Conditions

2030 Conditions: Morning Peak Hour Queue Diagrams

0 75 150 Feet

Enterprise Research Campus Project
Boston, MA

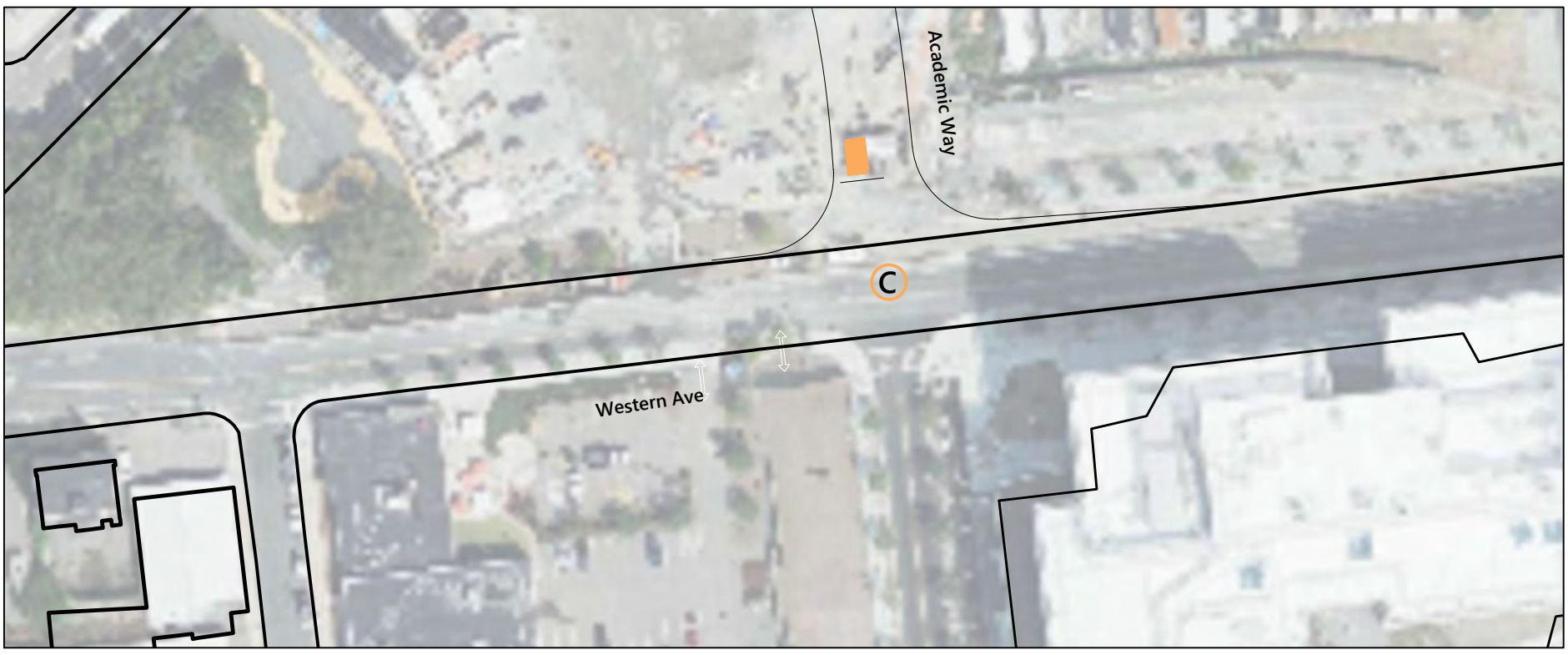
Western Ave at Academic Way

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)

Intersection does not exist under 2021 Existing Conditions

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Academic Way

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Intersection does not exist under 2021 Existing Conditions

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive at DEF Drive

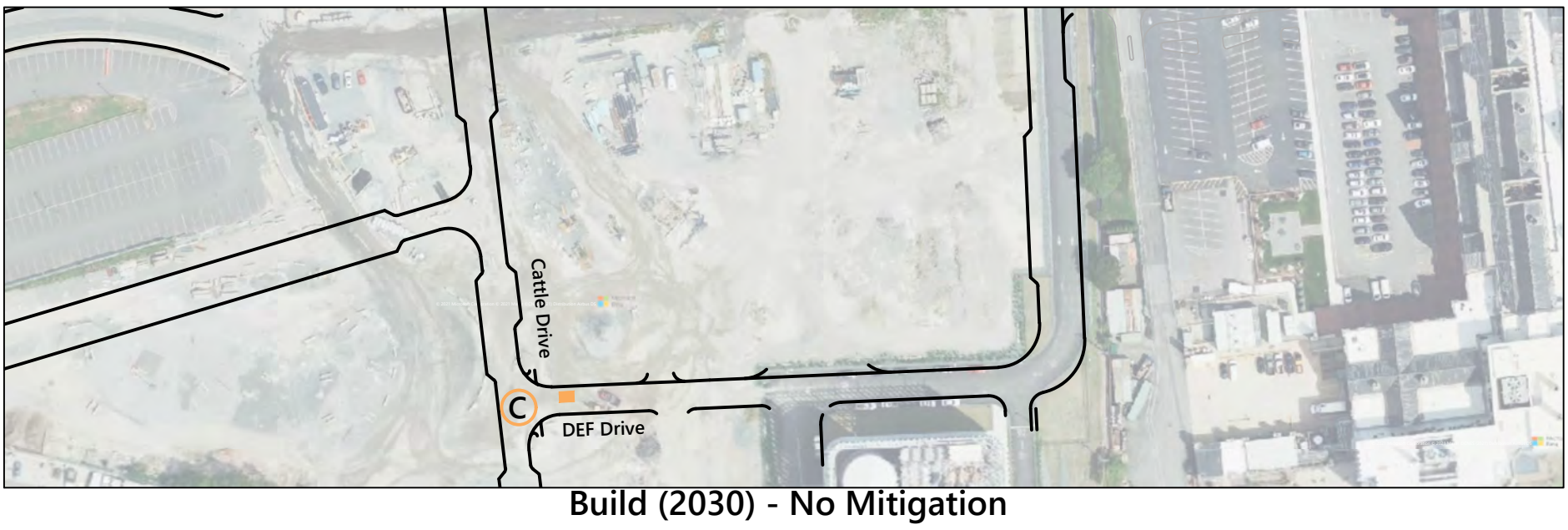
X Overall Intersection Level of Service

50th Percentile Queue

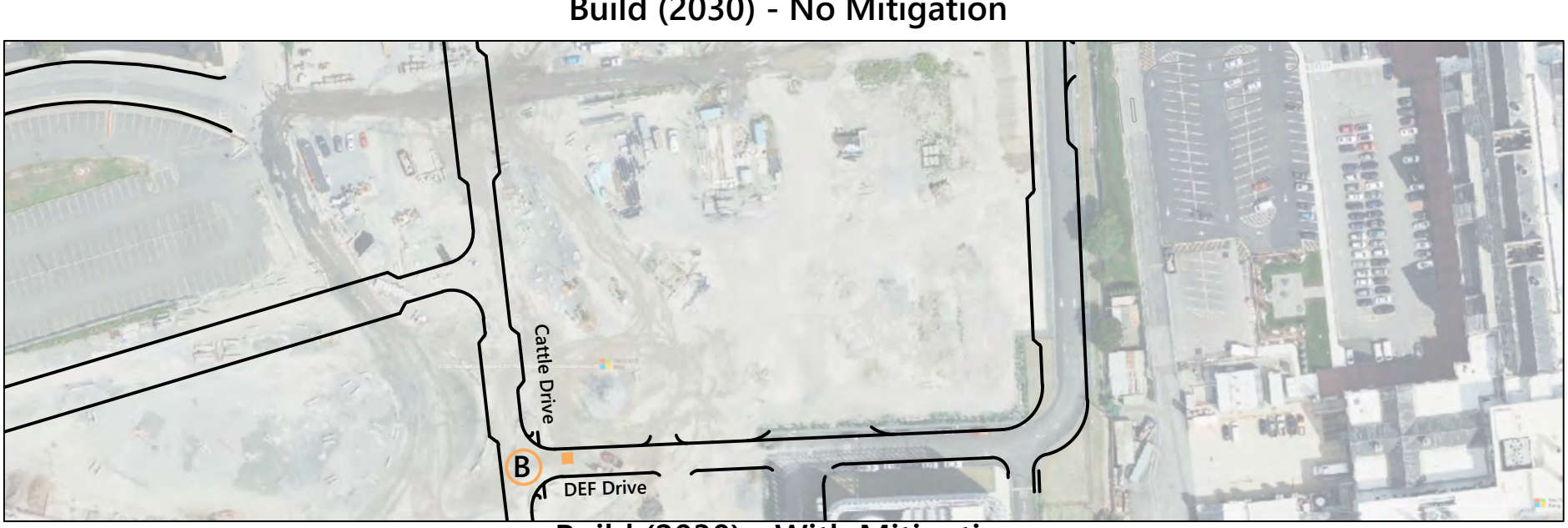
95th Percentile Queue

Existing

No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

2030 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive/ Almy Street at Windom Street

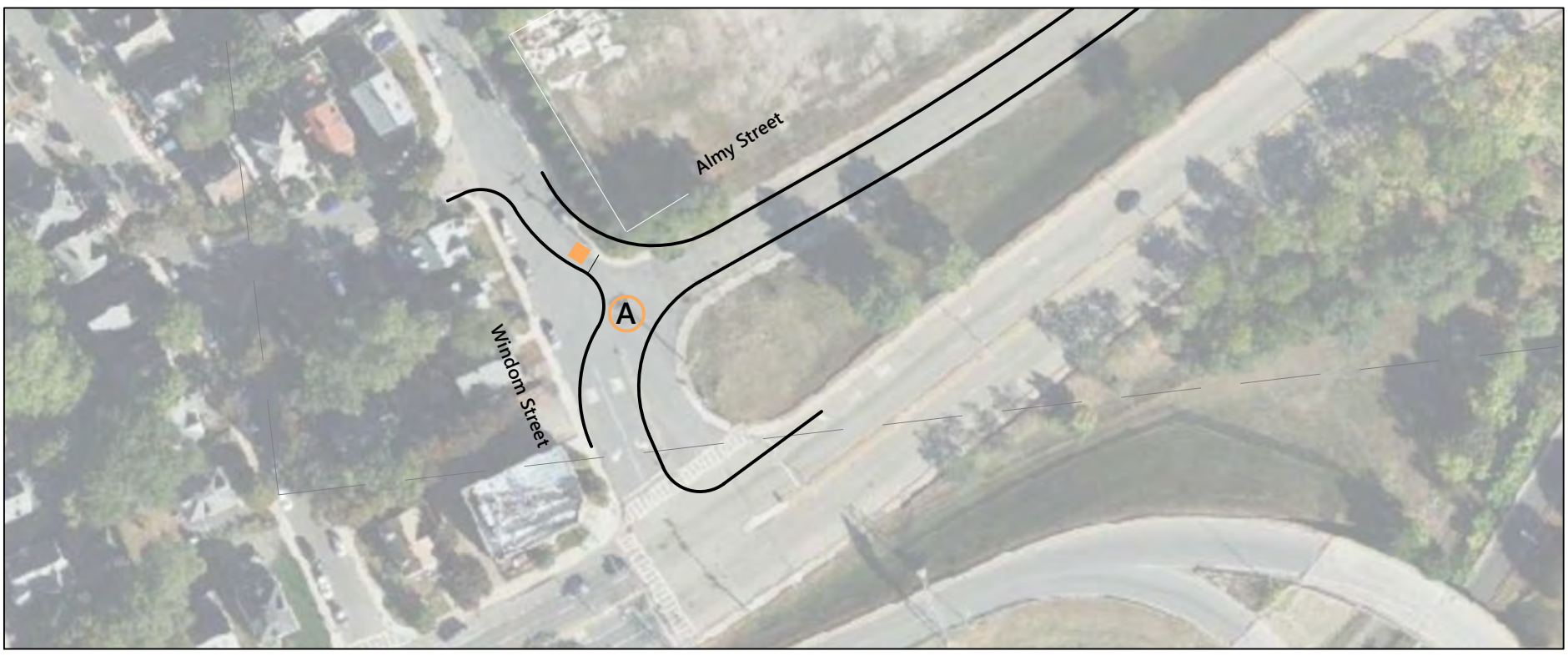
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

Build (2030)

2030 Conditions: Morning Peak Hour Queue Diagrams

0 50 100 Feet

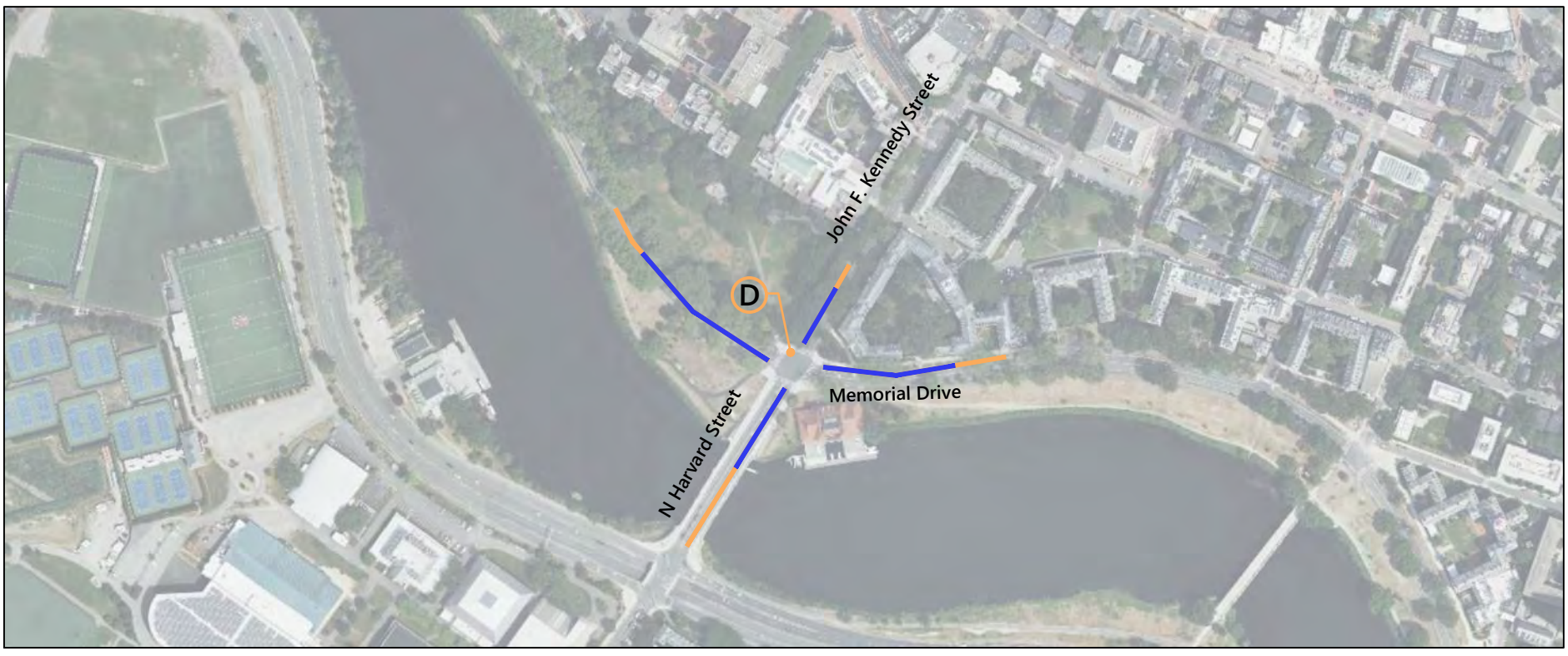
Enterprise Research Campus Project
Boston, MA

John F. Kennedy Street at Memorial Drive

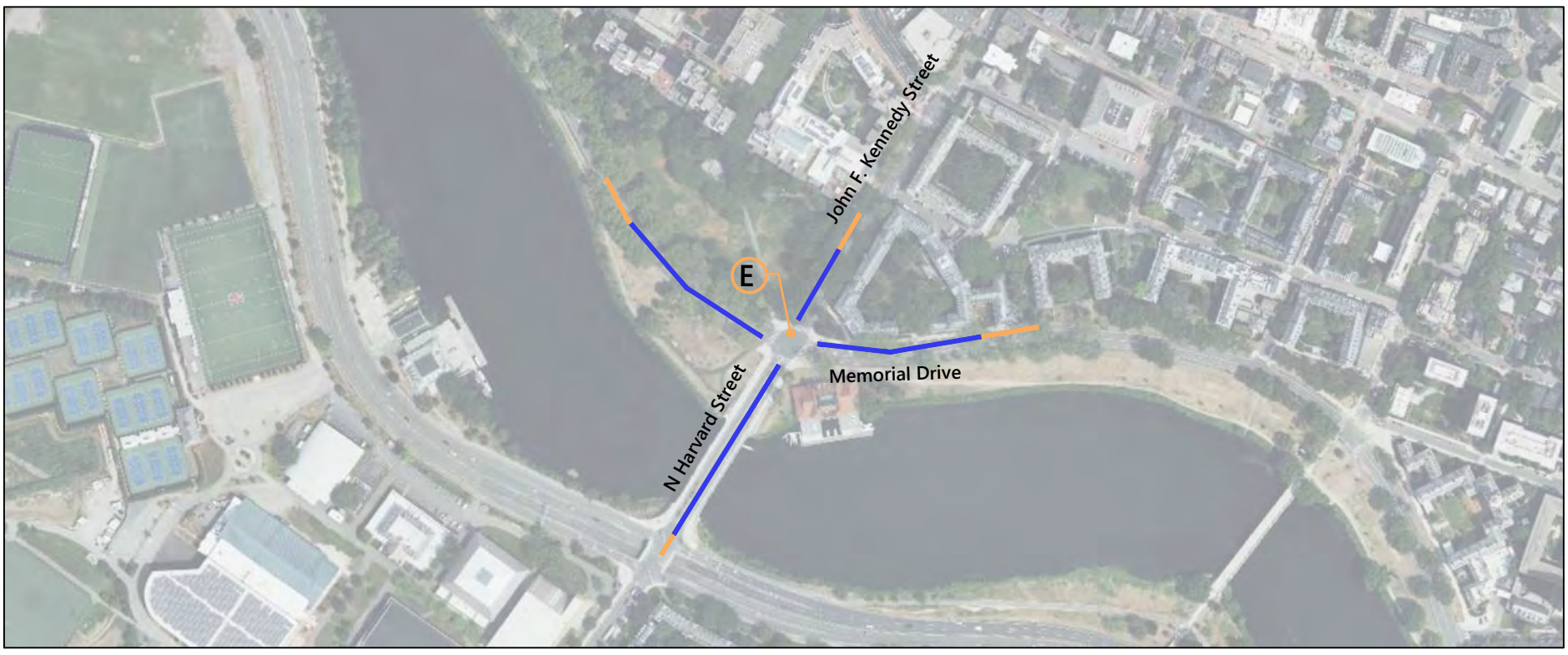
X Overall Intersection Level of Service

50th Percentile Queue

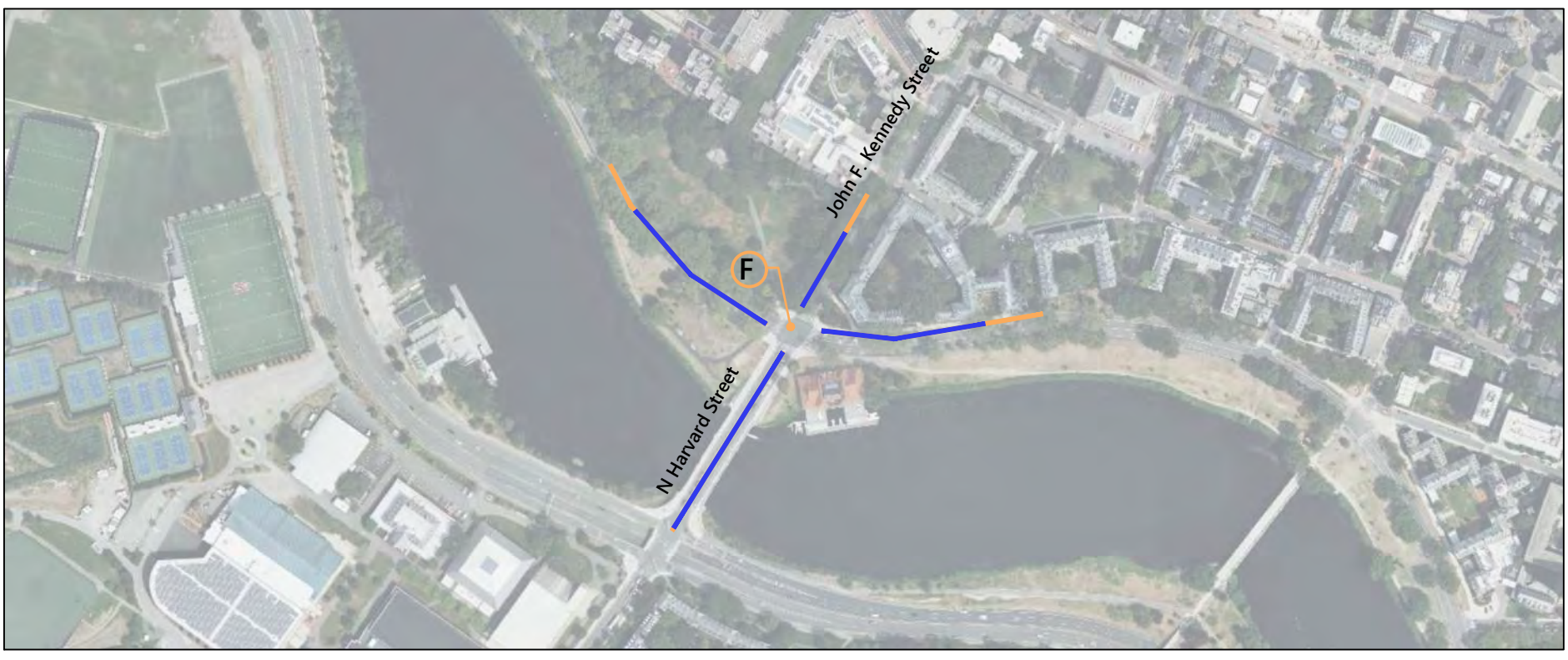
95th Percentile Queue



Existing



No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 200 400 Feet

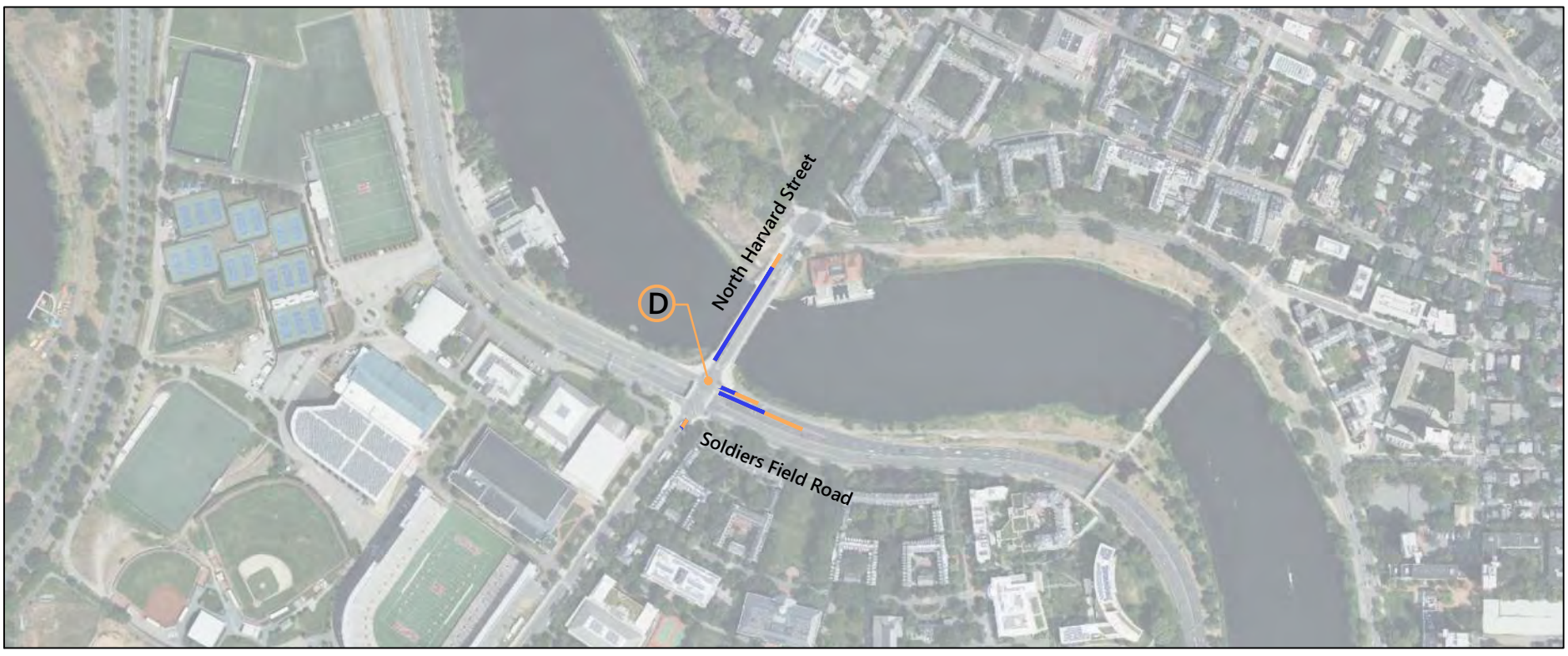
Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road WB

X Overall Intersection Level of Service

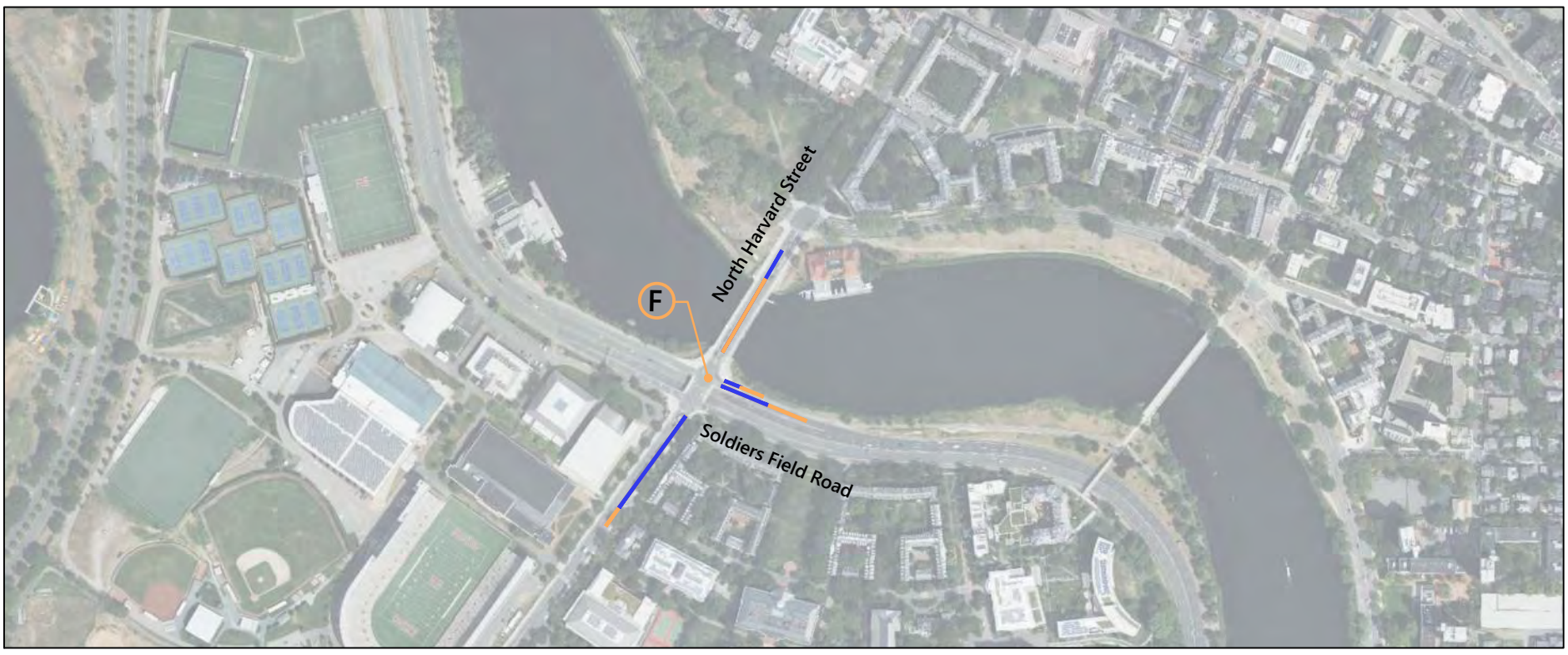
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Soldiers Field Road EB

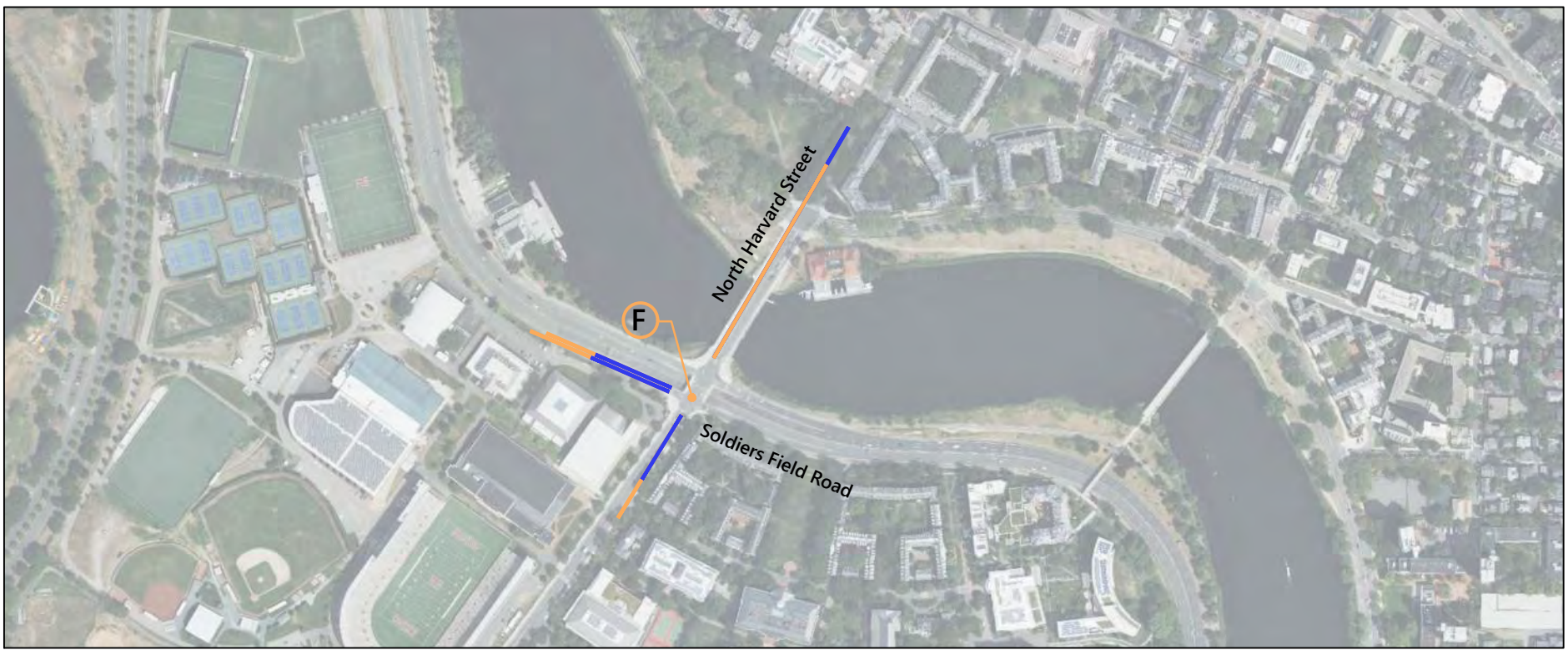
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

Enterprise Research Campus Project
Boston, MA

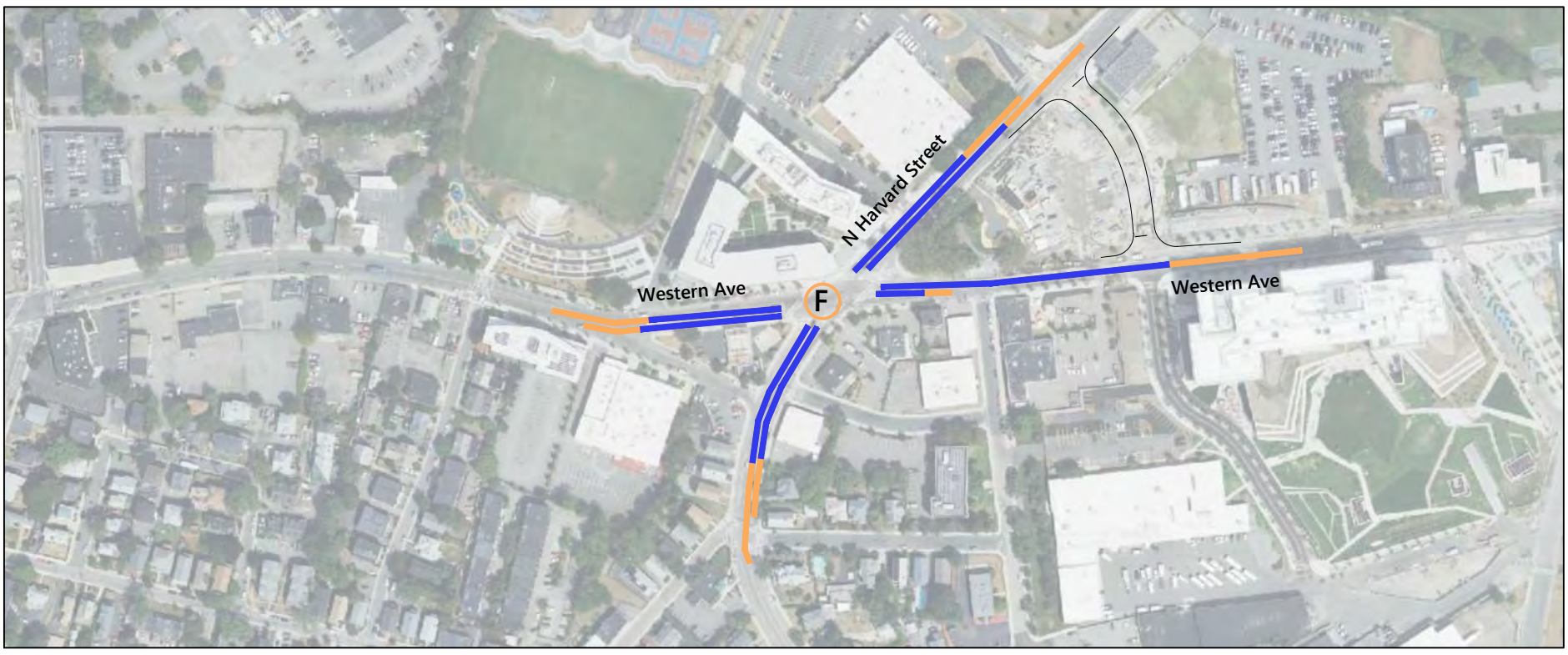
North Harvard Street at Western Ave

X Overall Intersection Level of Service

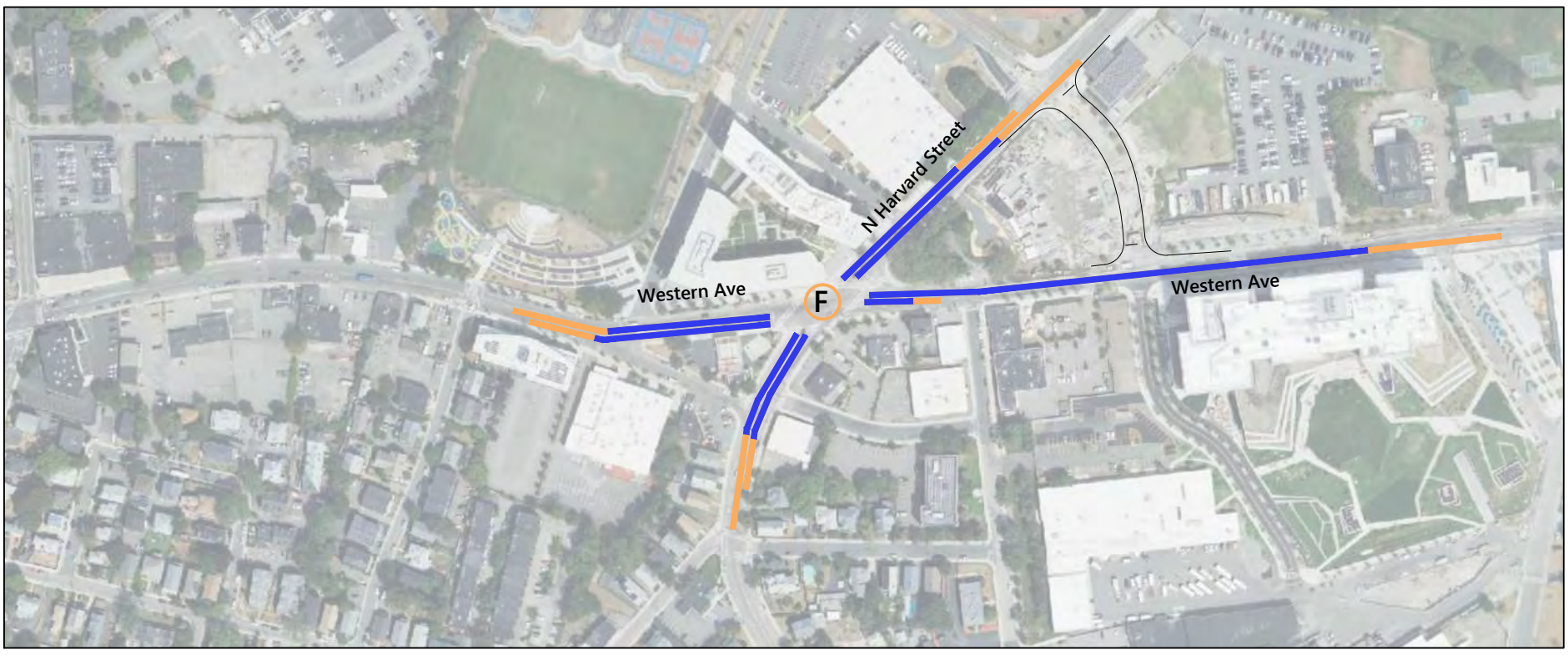
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

North Harvard Street at Franklin St/ Kingsley St

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 150 300 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at North Harvard Street

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

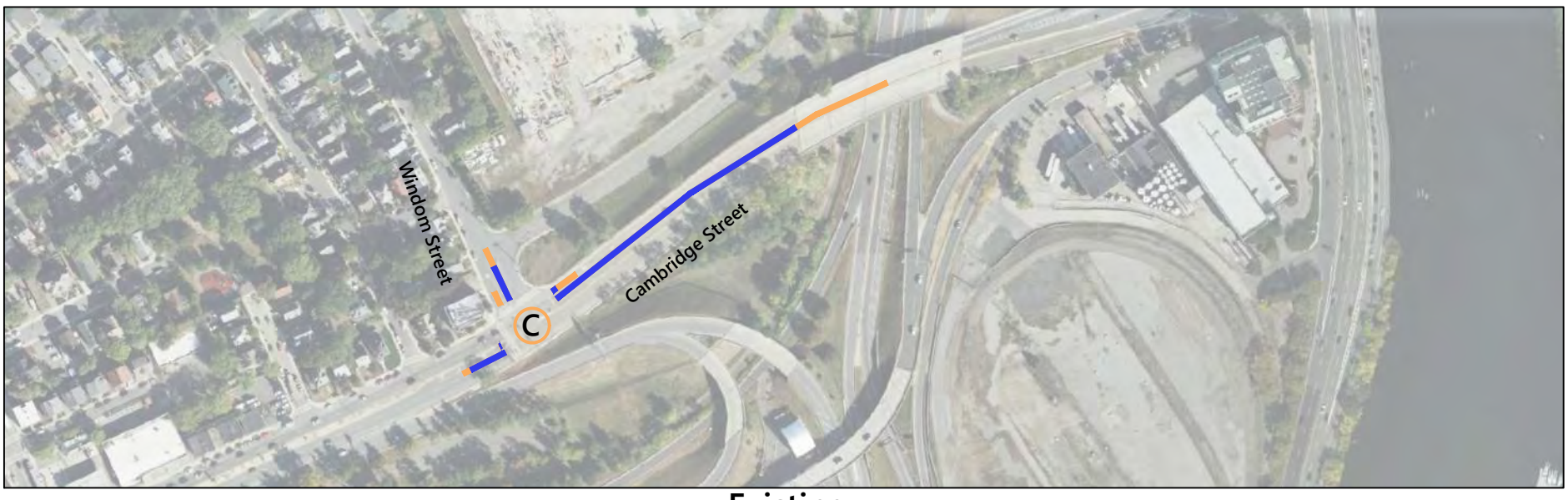
Enterprise Research Campus Project
Boston, MA

Cambridge Street at Windom Street

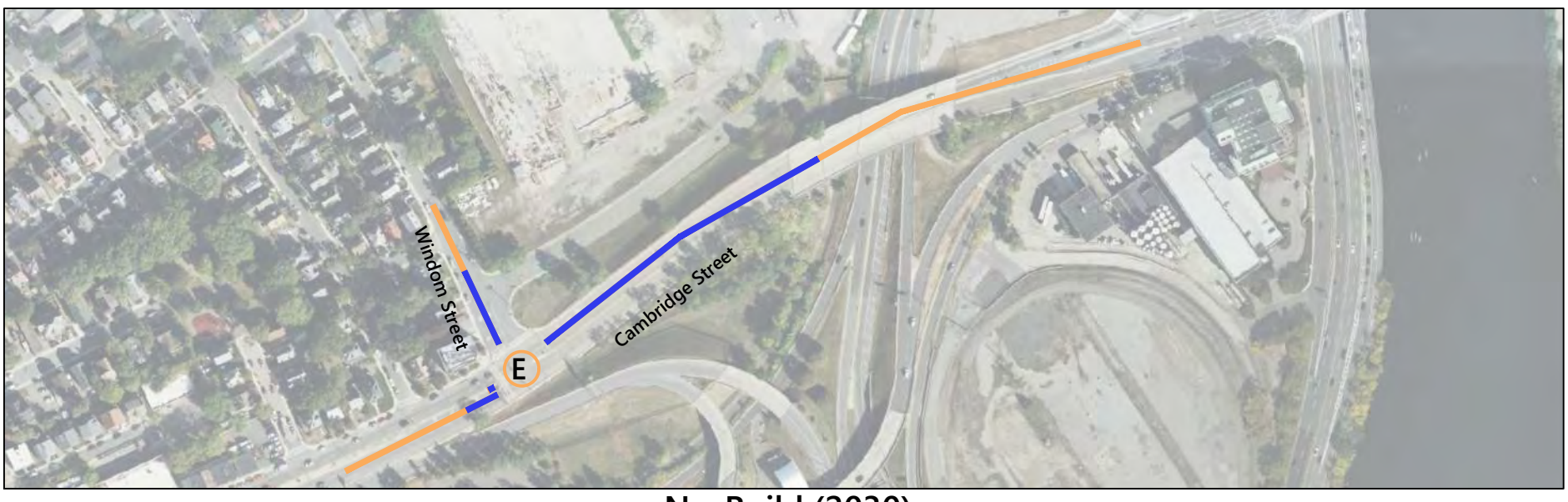
X Overall Intersection Level of Service

50th Percentile Queue

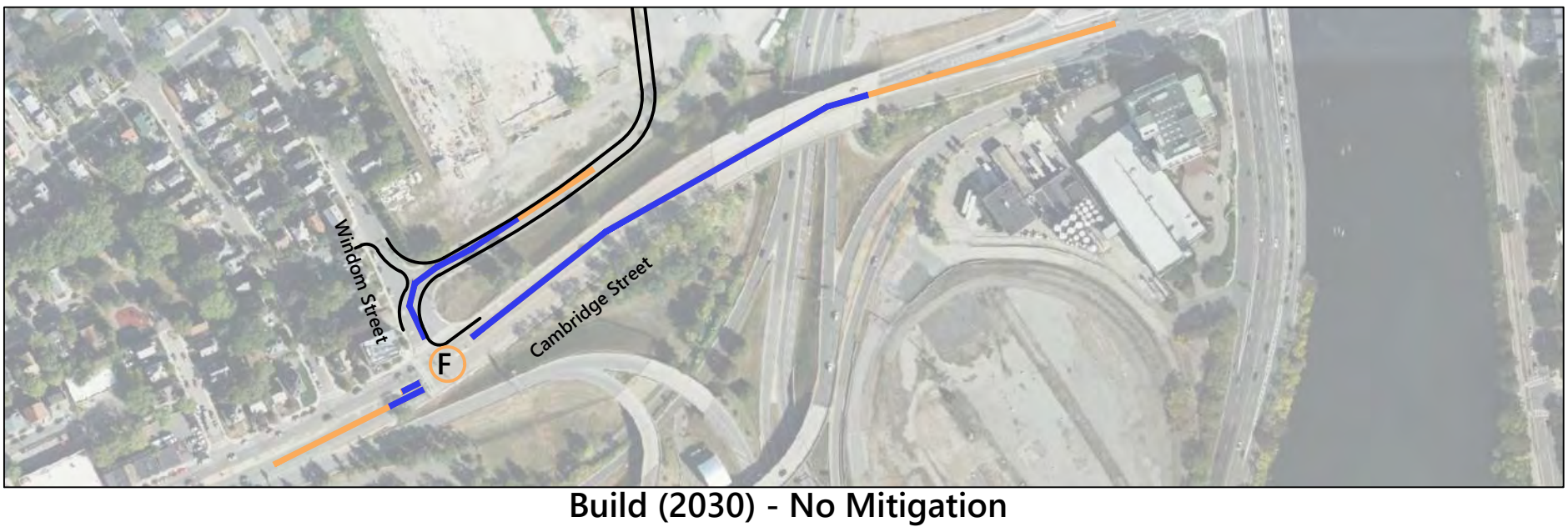
95th Percentile Queue



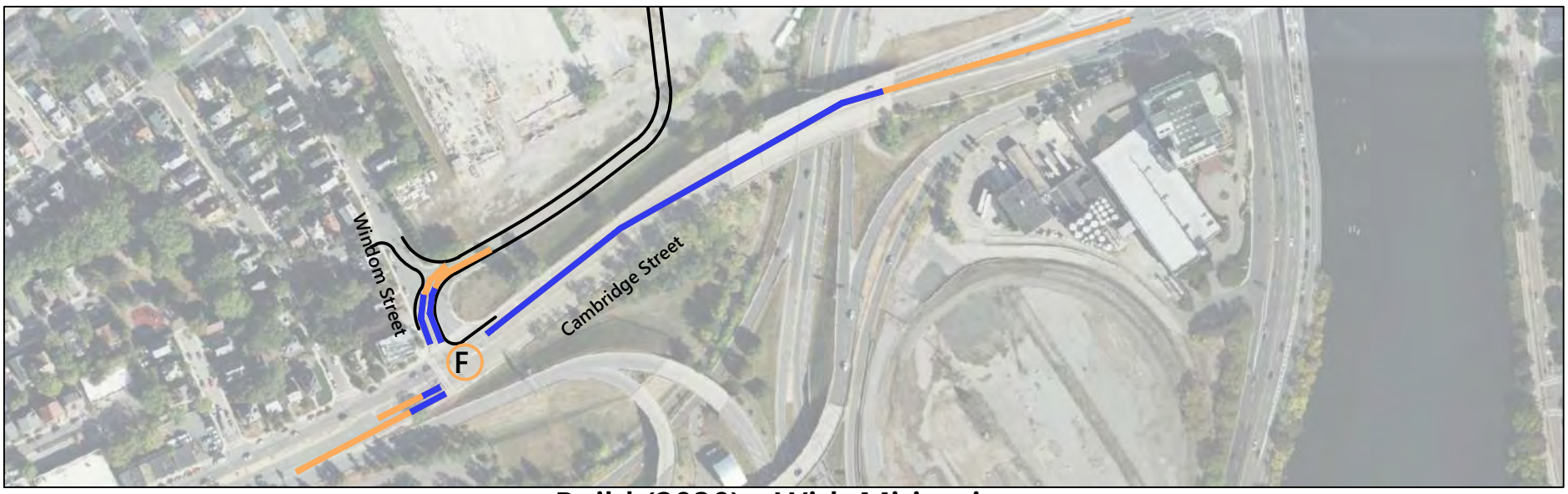
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

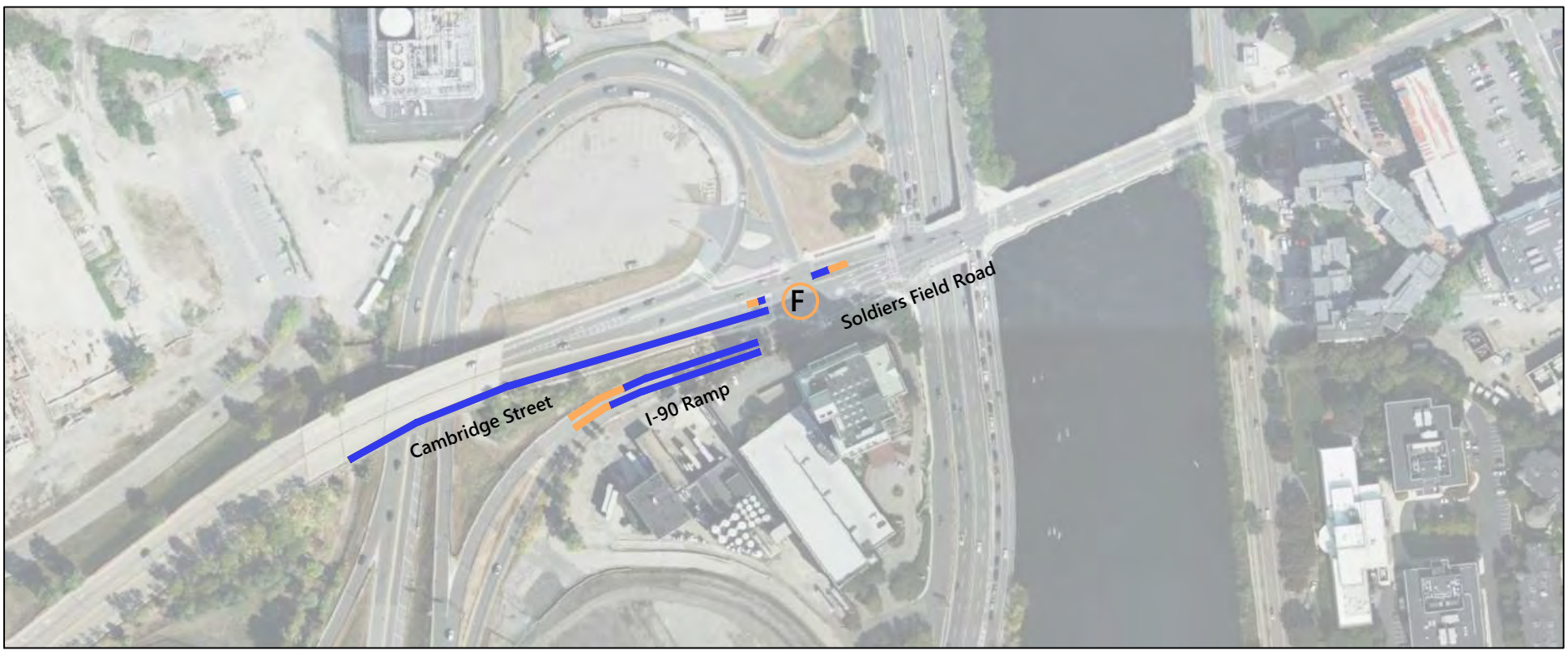
Enterprise Research Campus Project
Boston, MA

Cambridge Street at I-90 Ramps/ Double Tree Hotel

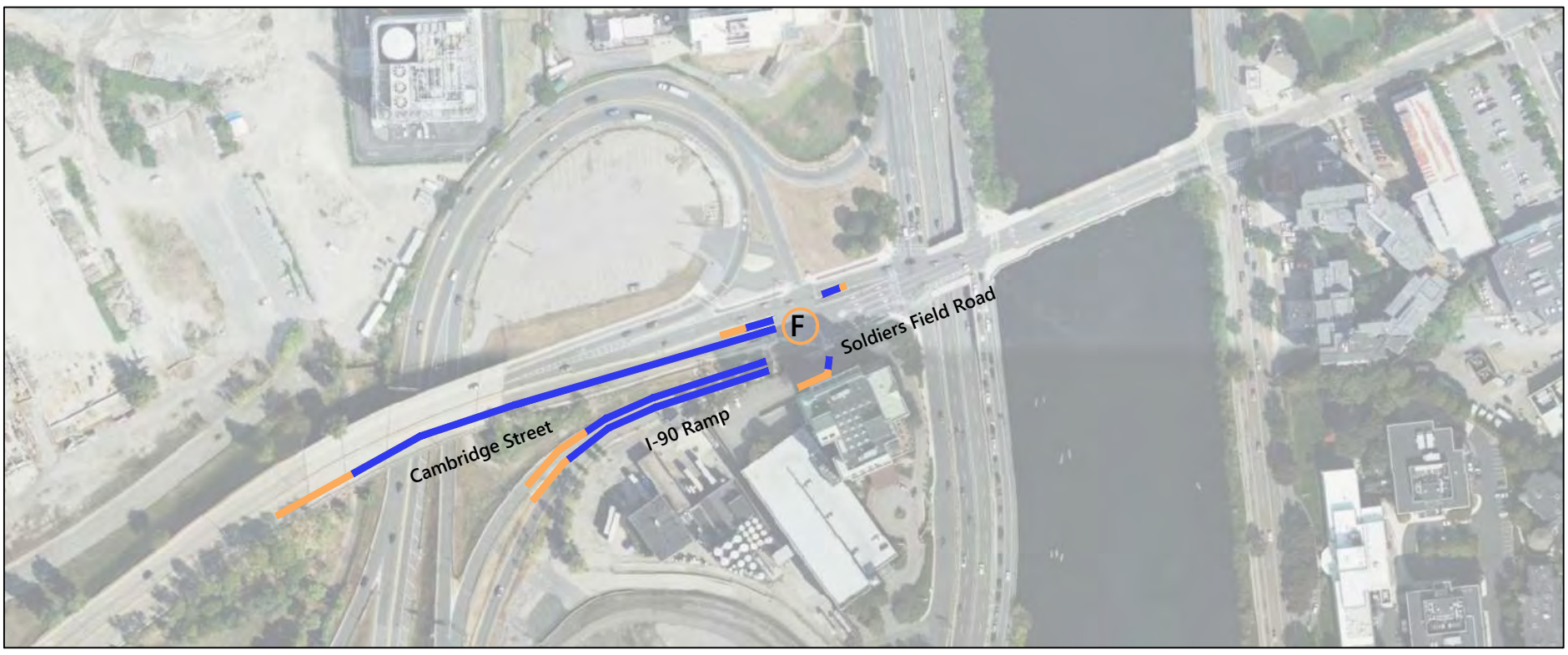
X Overall Intersection Level of Service

50th Percentile Queue

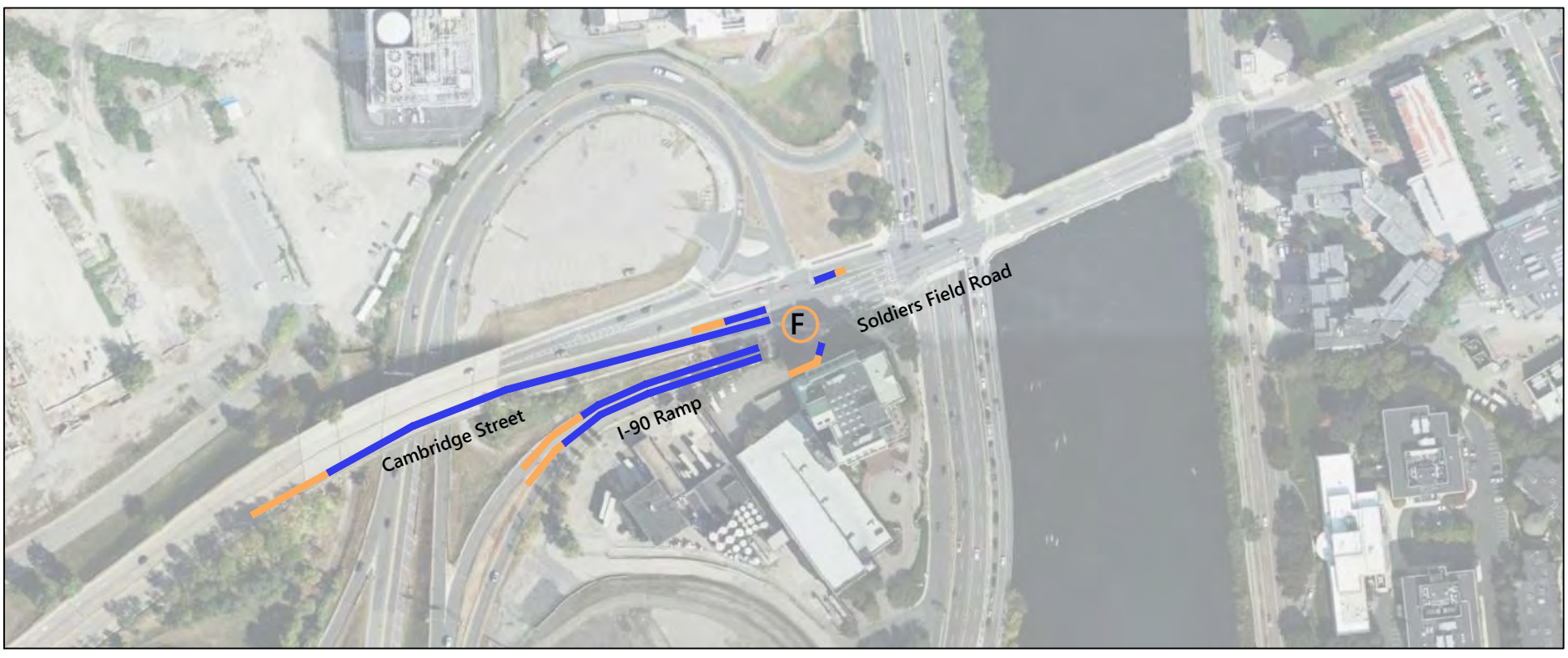
95th Percentile Queue



Existing



No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

Cambridge Street at Soldiers Field Road

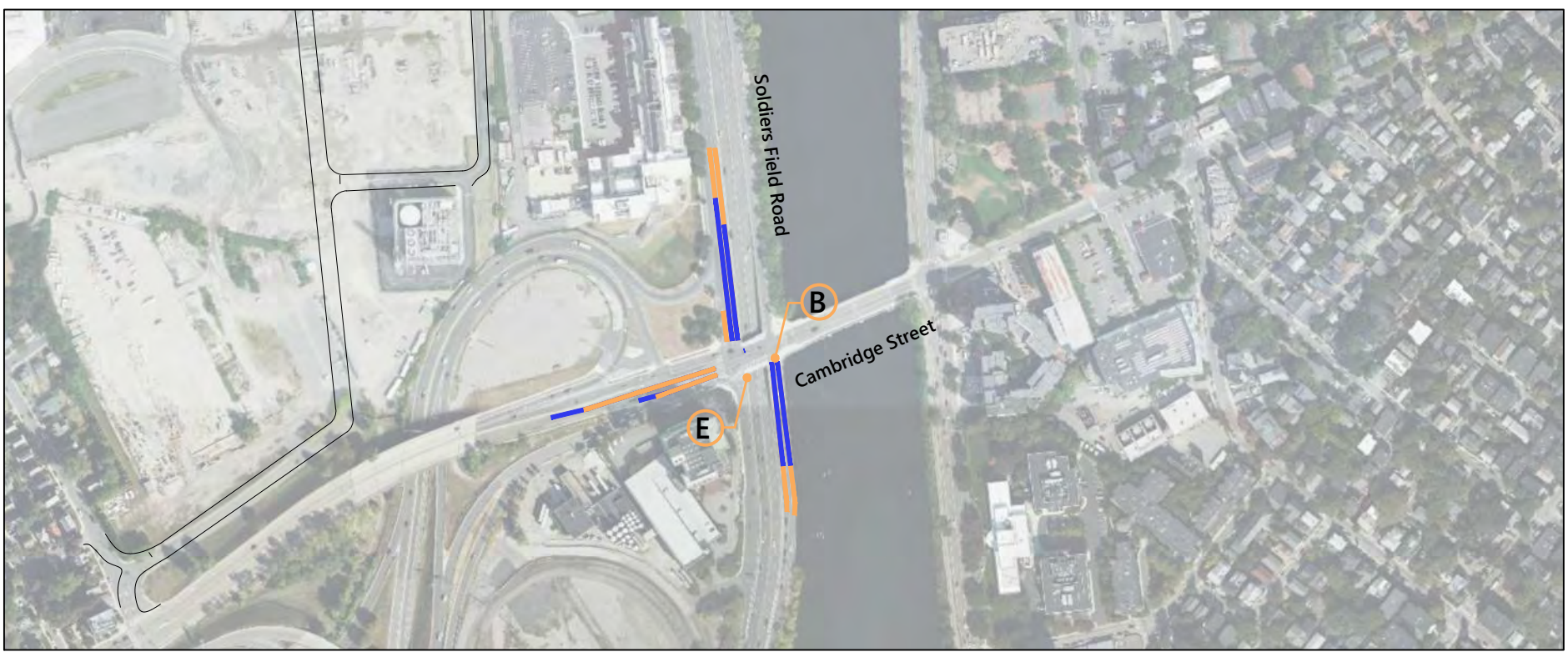
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 200 400 Feet

Enterprise Research Campus Project
Boston, MA

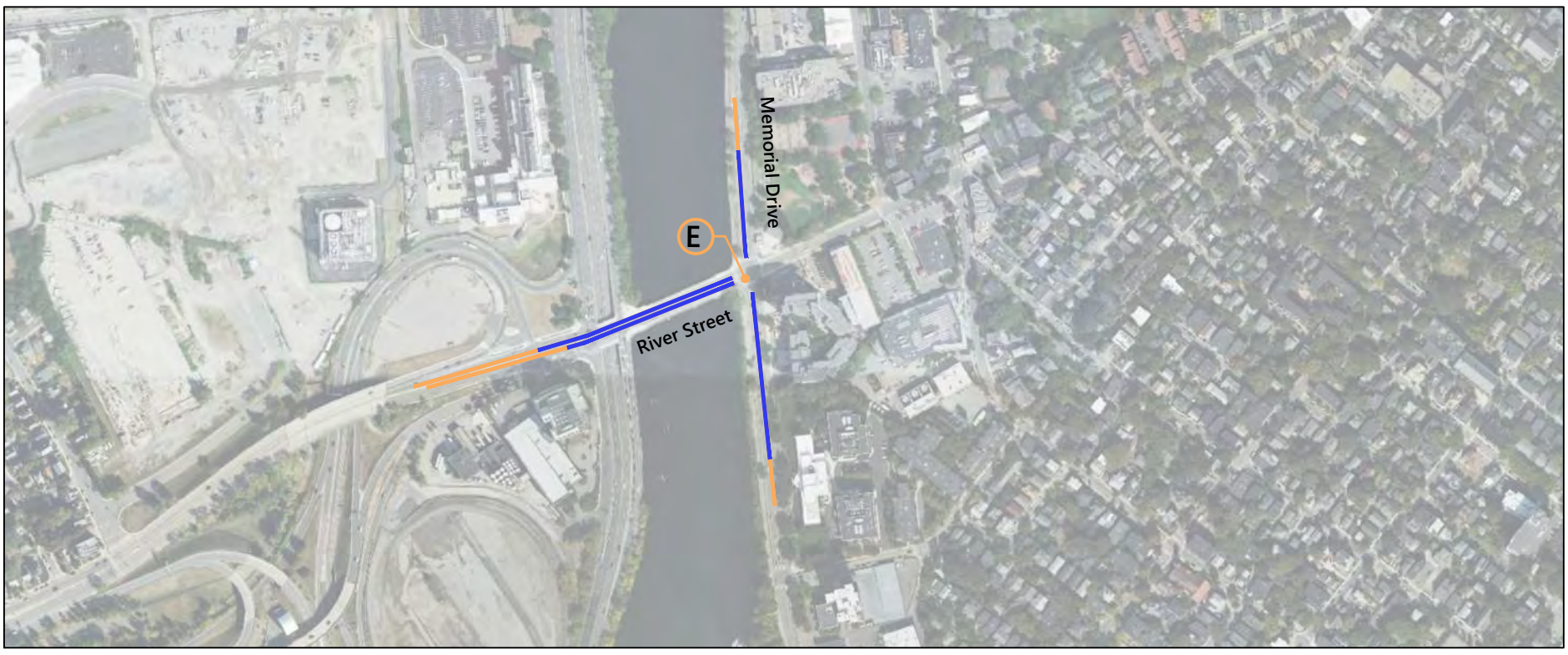
Memorial Drive at River Street

X Overall Intersection Level of Service

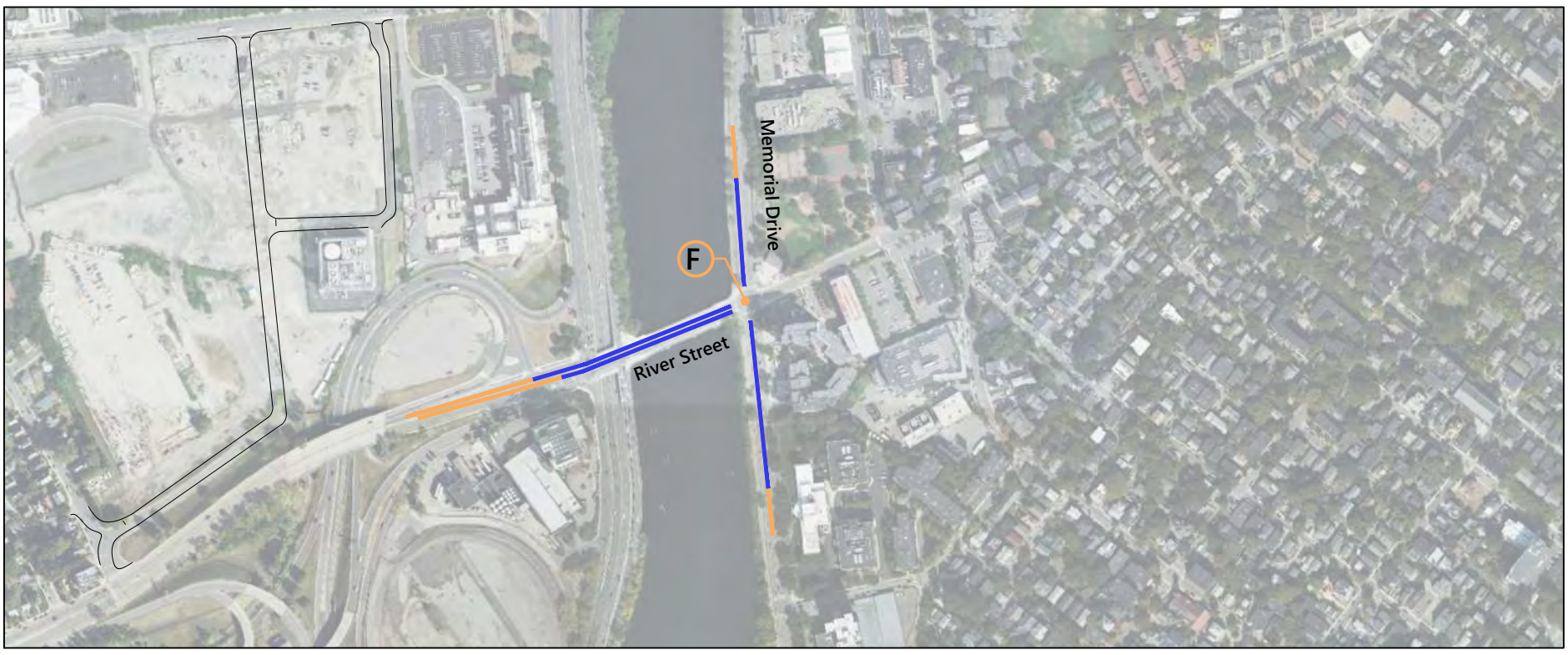
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

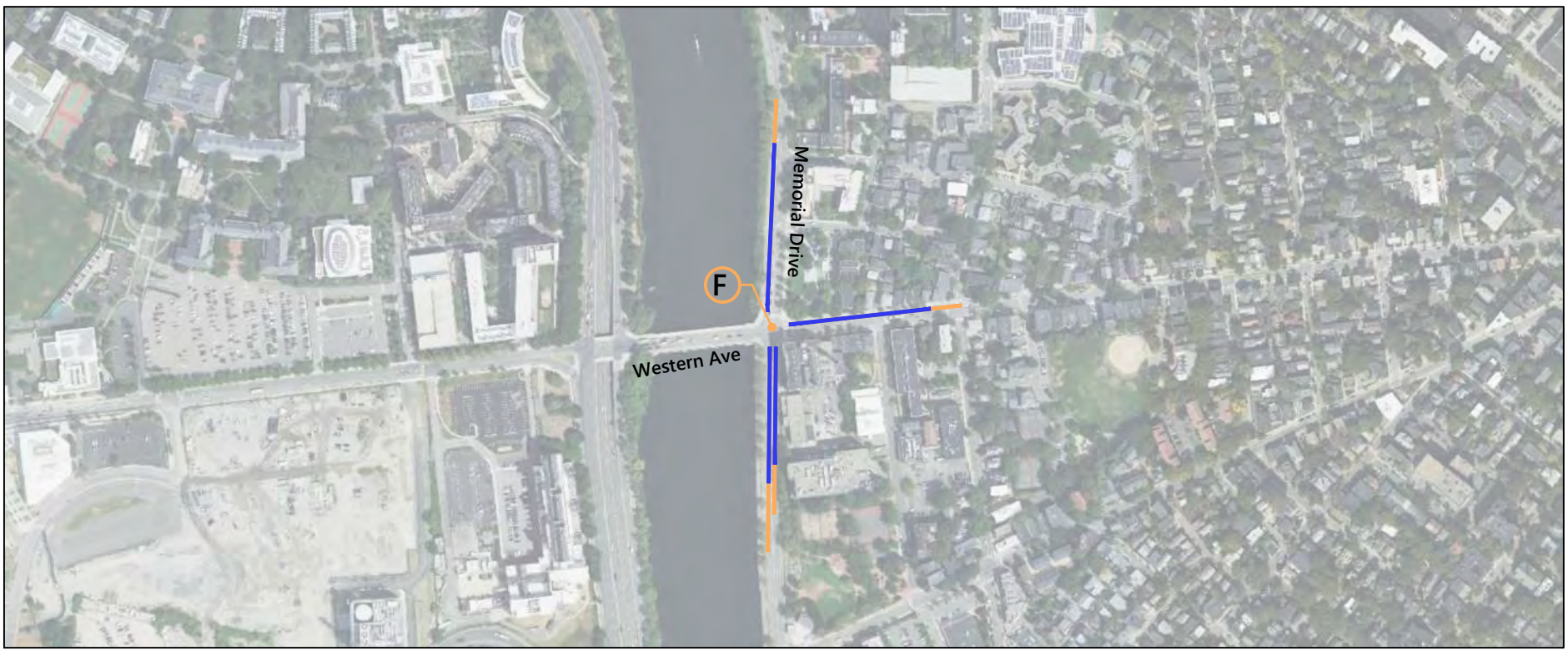
Enterprise Research Campus Project
Boston, MA

Western Ave at Memorial Drive

X Overall Intersection Level of Service

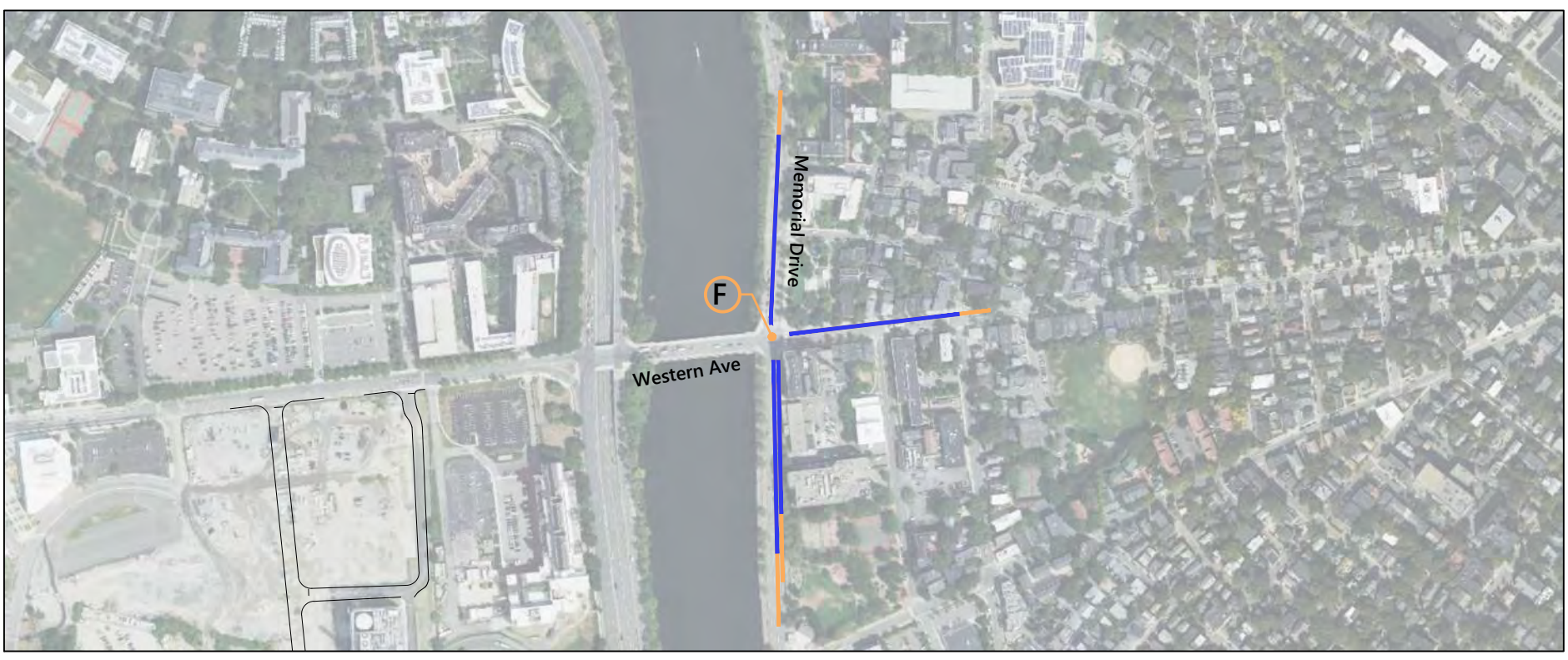
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 250 500 Feet

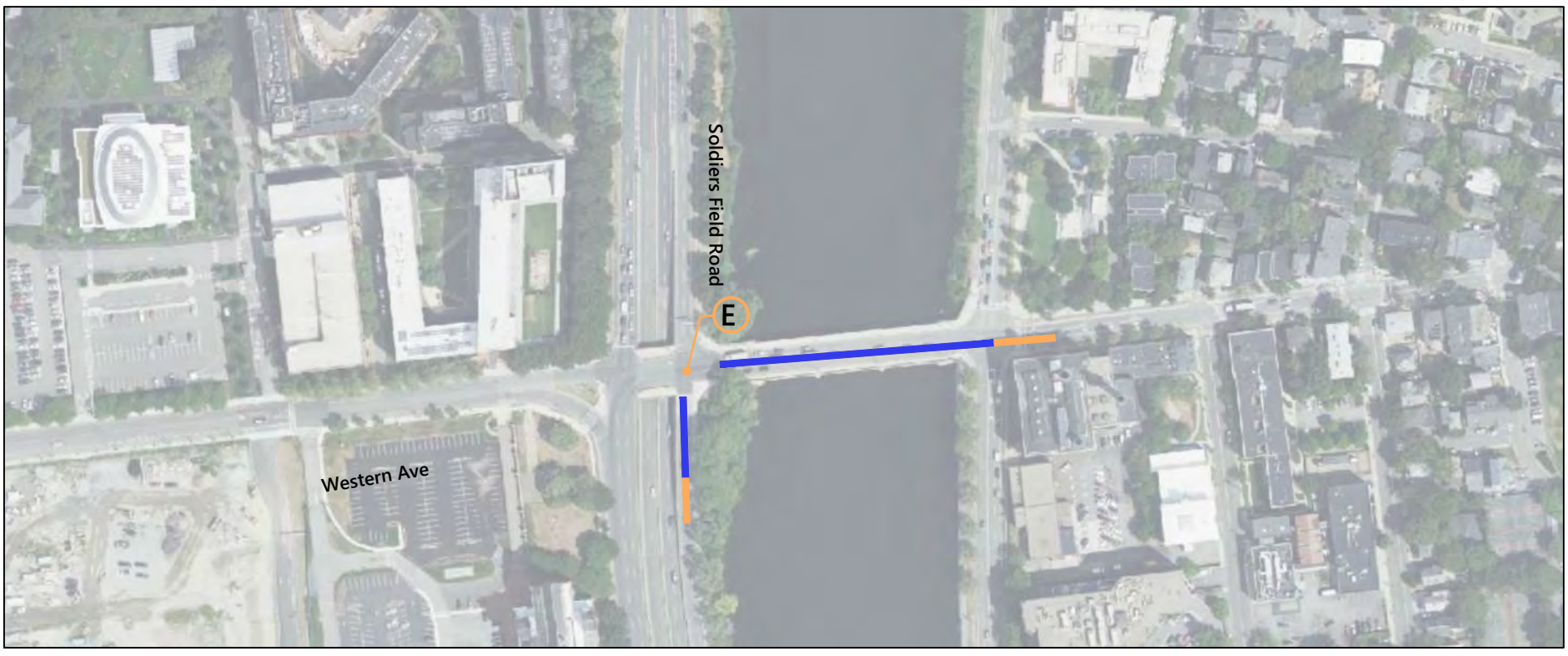
Enterprise Research Campus Project
Boston, MA

Western Ave at Soldiers Field Road WB

X Overall Intersection Level of Service

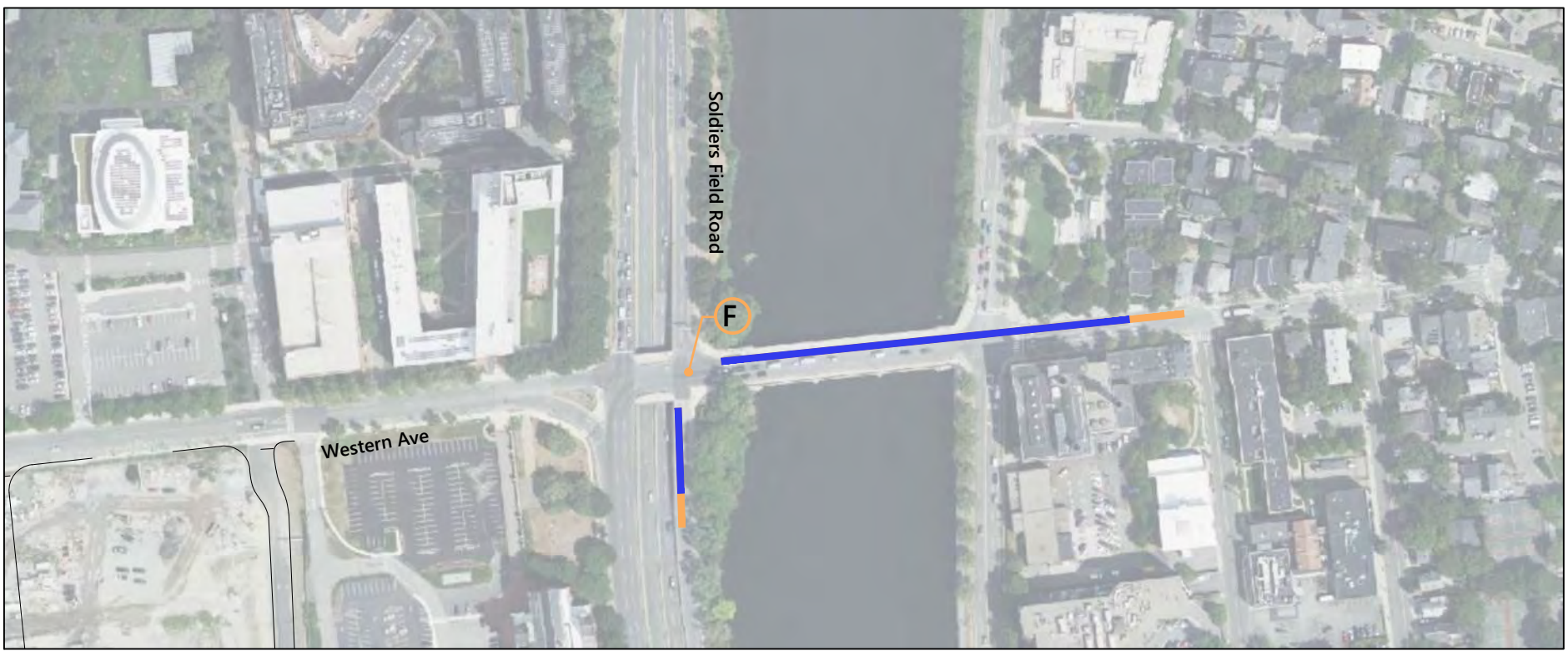
50th Percentile Queue

95th Percentile Queue



Existing

No-Build (2030)



Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

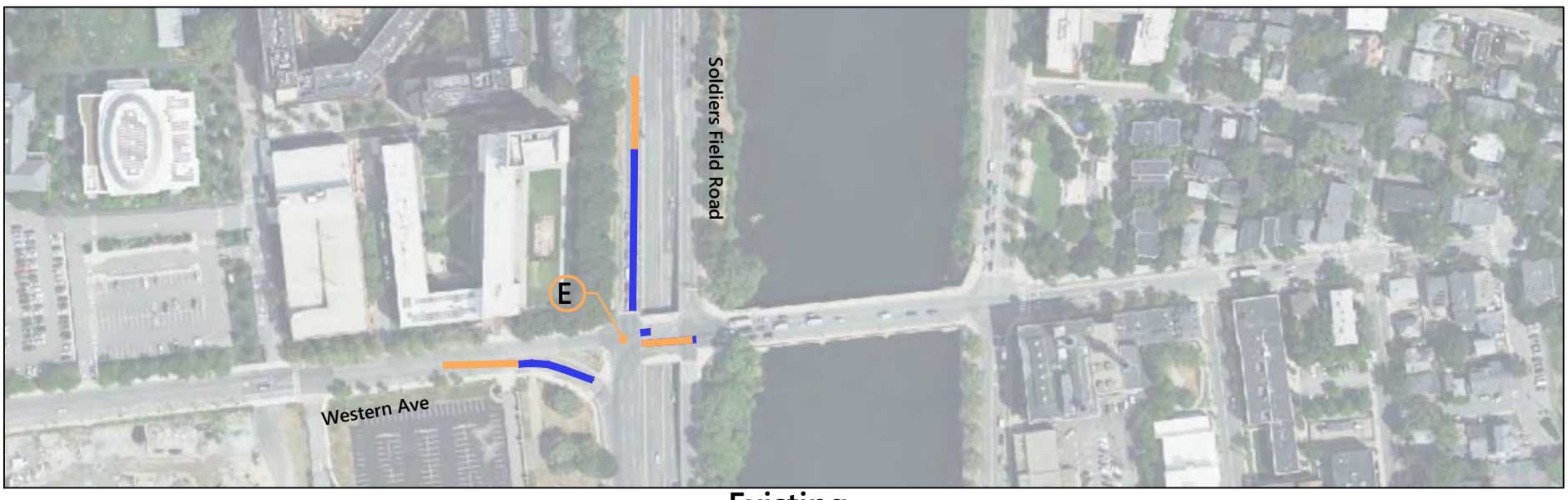
\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2030 Conditions - PM.dwg

Western Ave at Soldiers Field Road EB

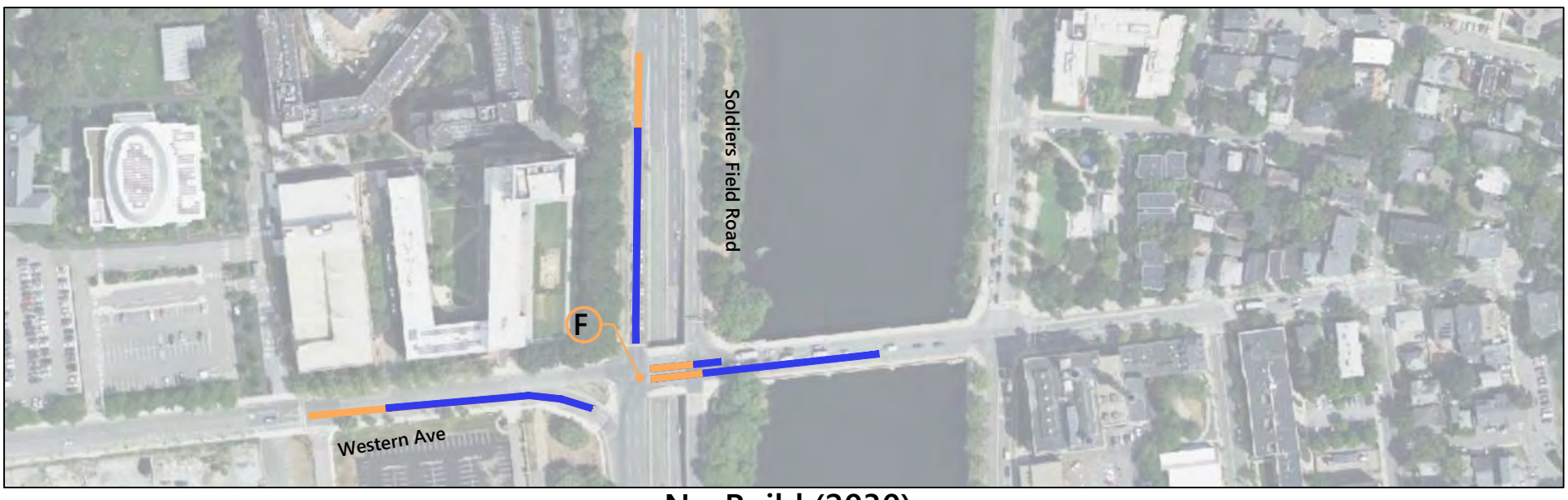
X Overall Intersection Level of Service

50th Percentile Queue

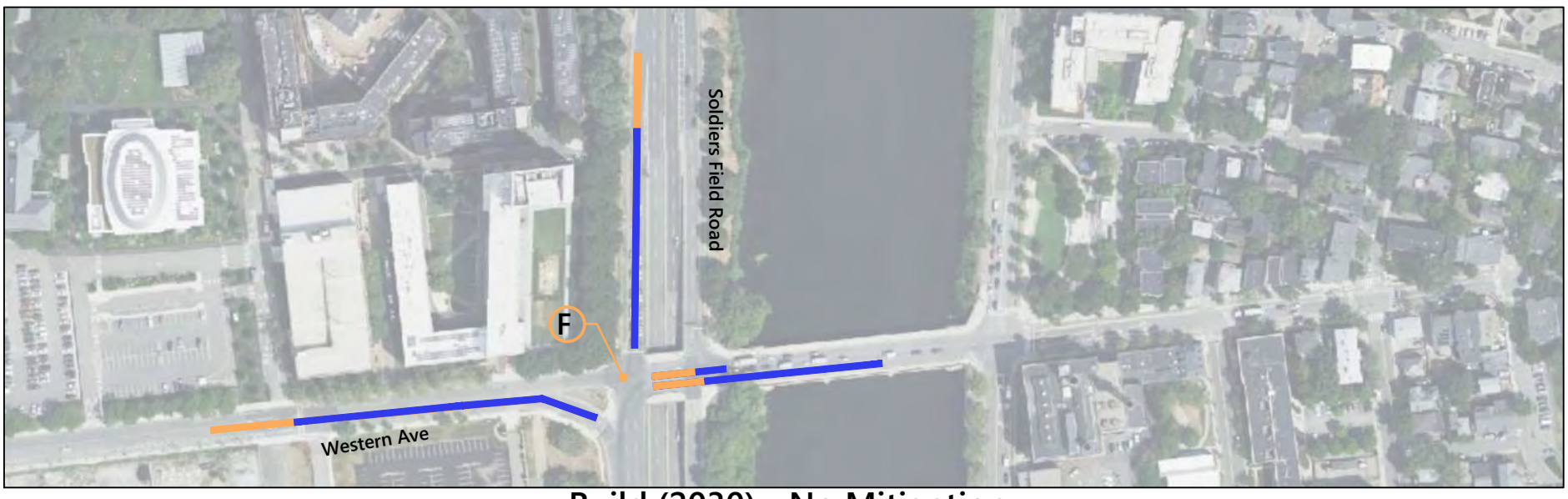
95th Percentile Queue



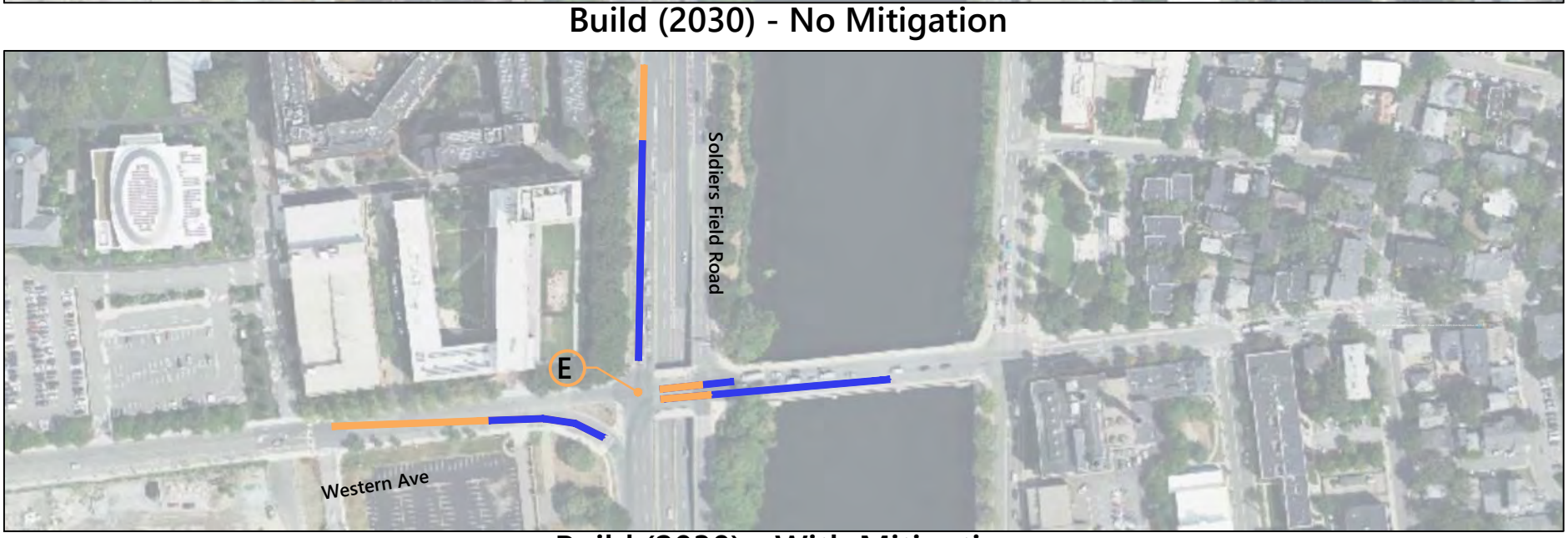
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

2030 Conditions: Evening Peak Hour Queue Diagrams

0 125 250 Feet

Enterprise Research Campus Project
Boston, MA

\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2030 Conditions - PM.dwg

Western Ave at Kresge Way/ East Drive

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Build (2030) - No Mitigation

Build (2030) - With Mitigation

2030 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

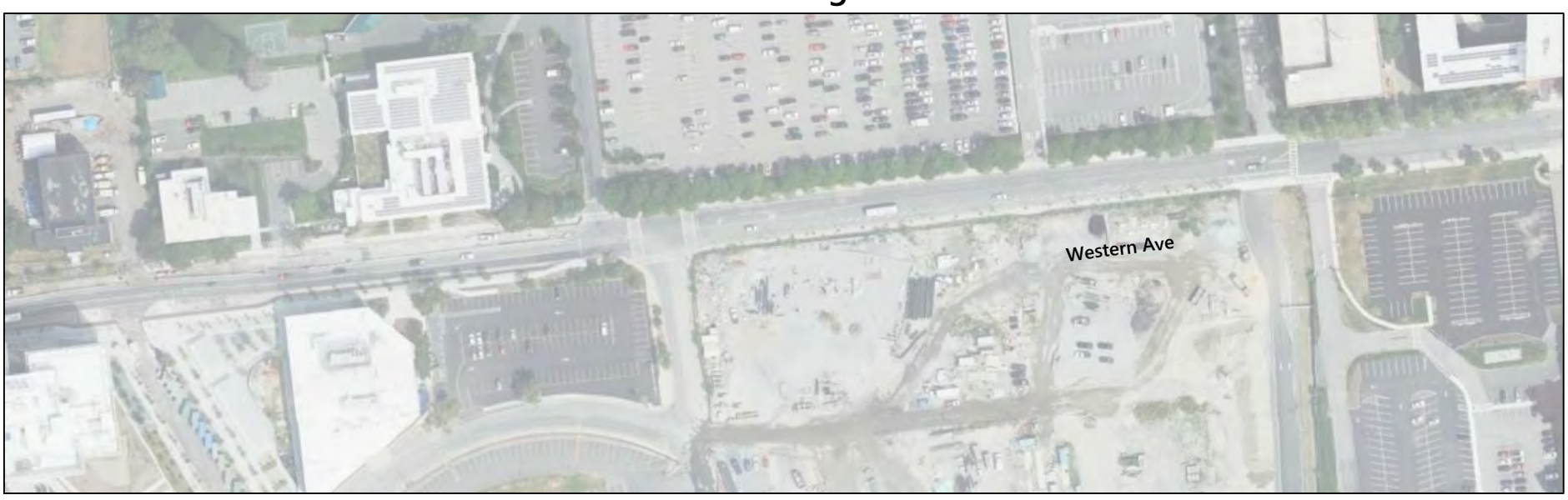
Cattle Drive at Western Ave

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)

Build (2030) - No Mitigation

Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

2030 Conditions: Evening Peak Hour Queue Diagrams

0 100 200 Feet

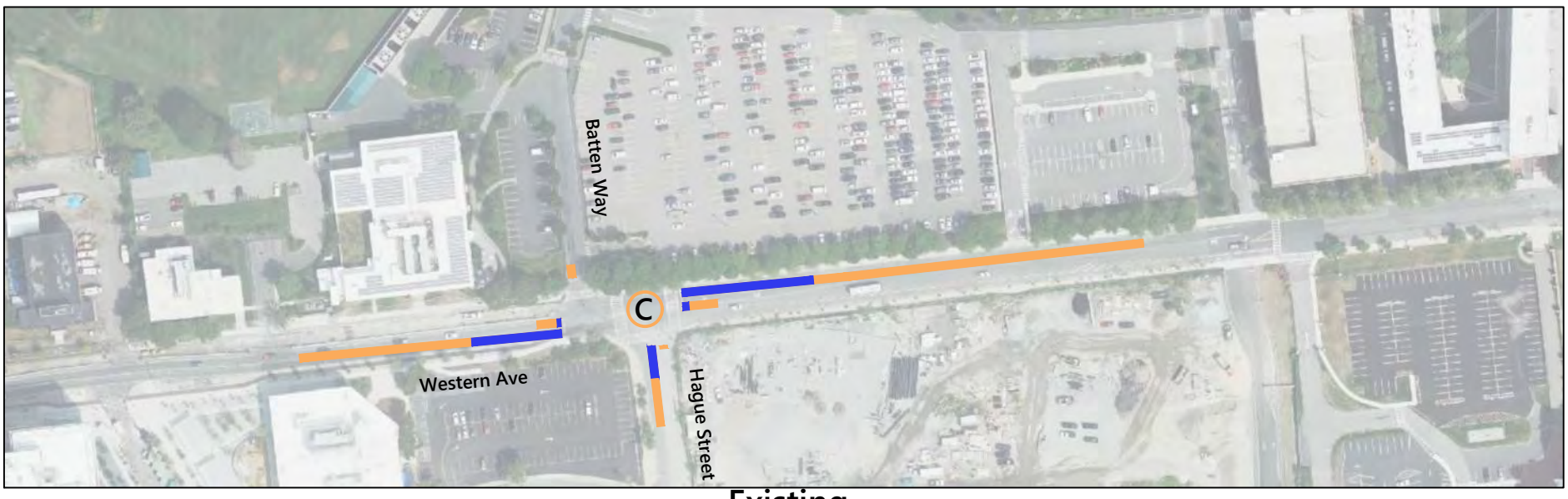
Enterprise Research Campus Project
Boston, MA

Western Ave at Batten Way/ Hague Street

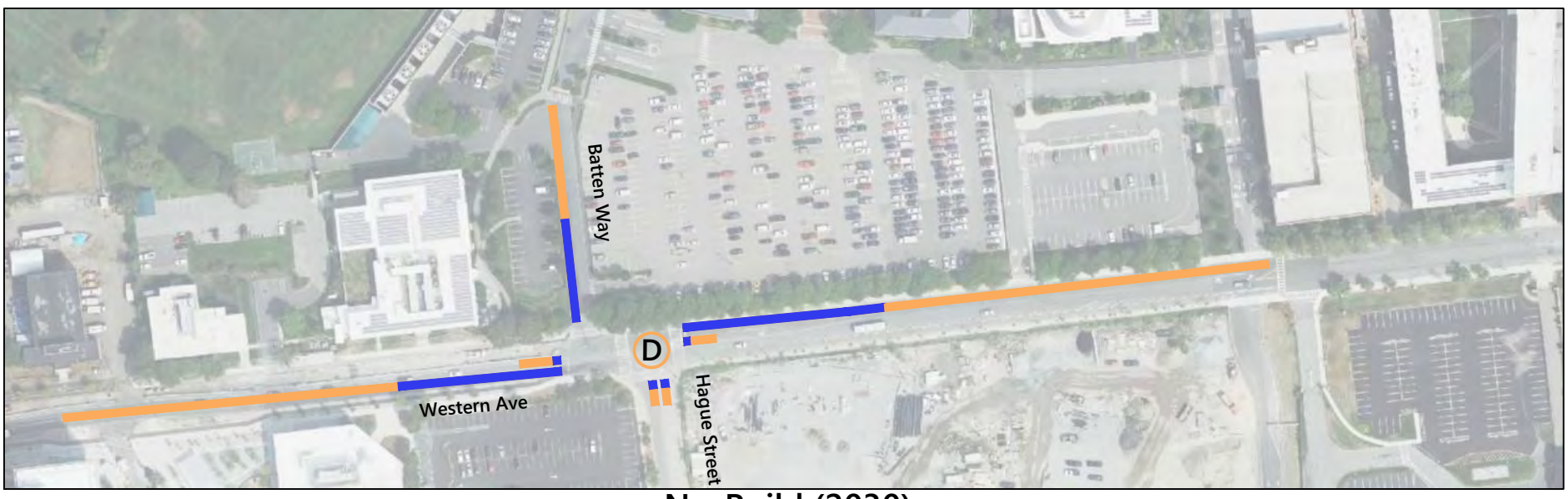
X Overall Intersection Level of Service

50th Percentile Queue

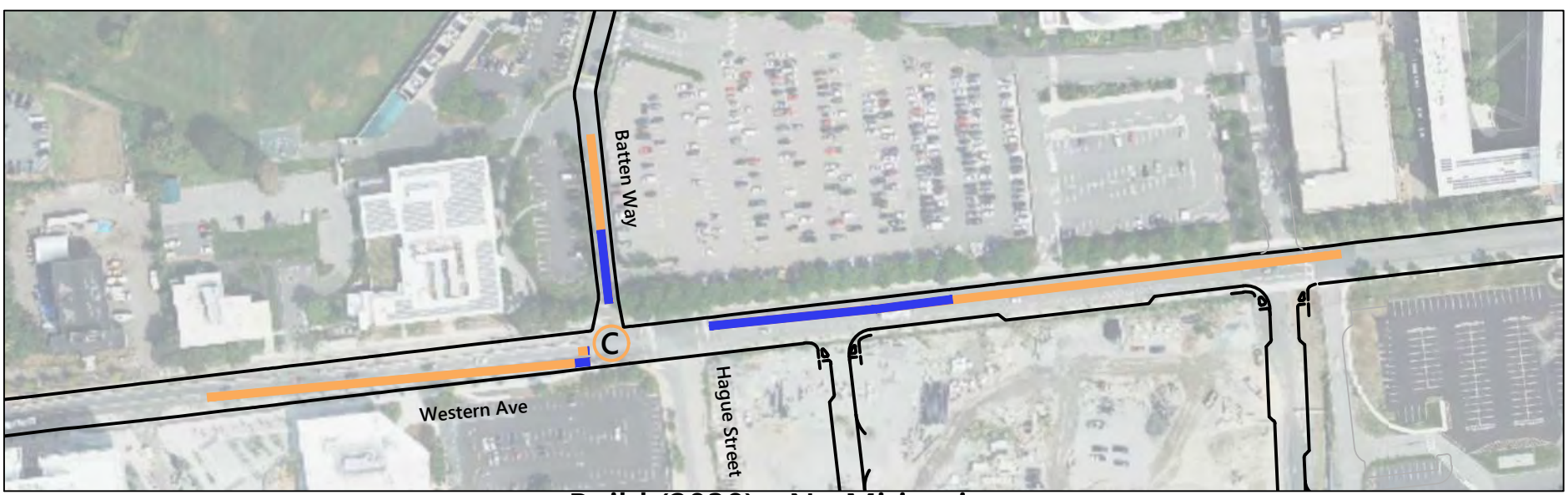
95th Percentile Queue



Existing



No-Build (2030)



Build (2030) - No Mitigation

Build (2030) - With Mitigation

2030 Conditions: Evening Peak Hour Queue Diagrams

0 100 200 Feet

Enterprise Research Campus Project
Boston, MA

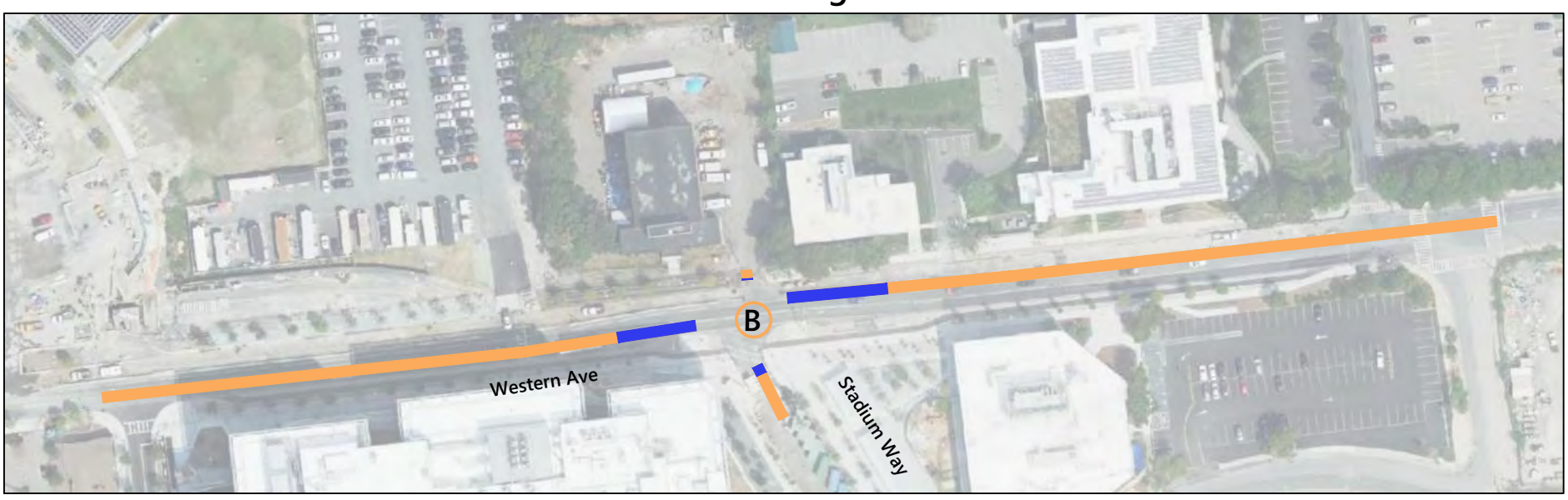
Western Ave at Stadium Way

X Overall Intersection Level of Service

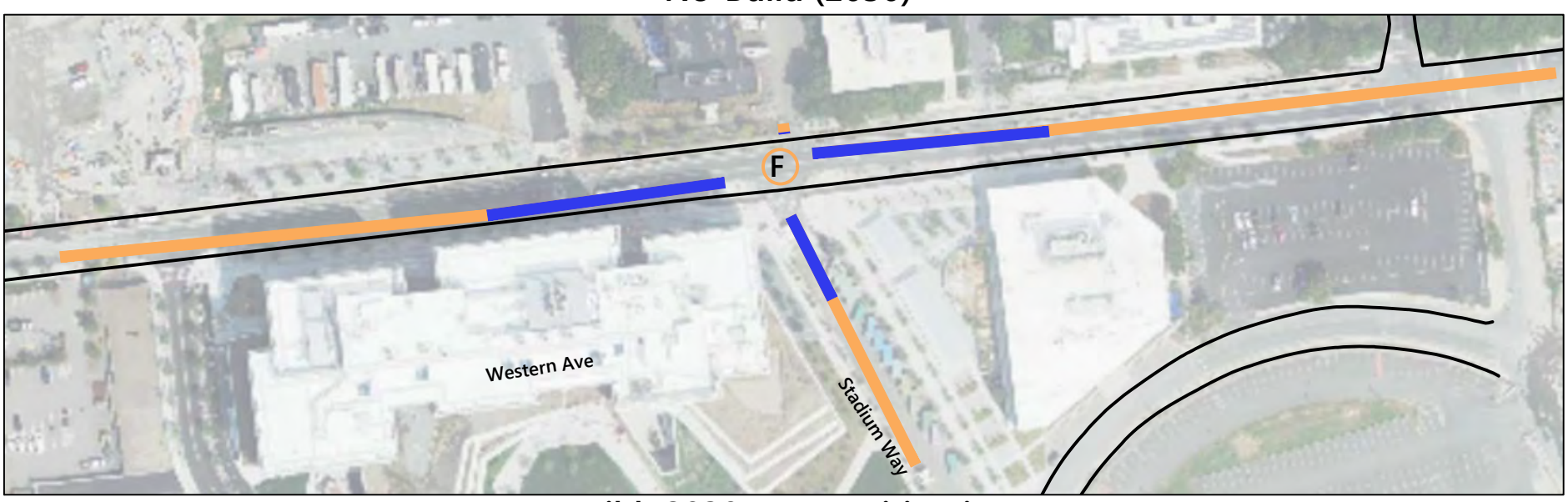
50th Percentile Queue

95th Percentile Queue

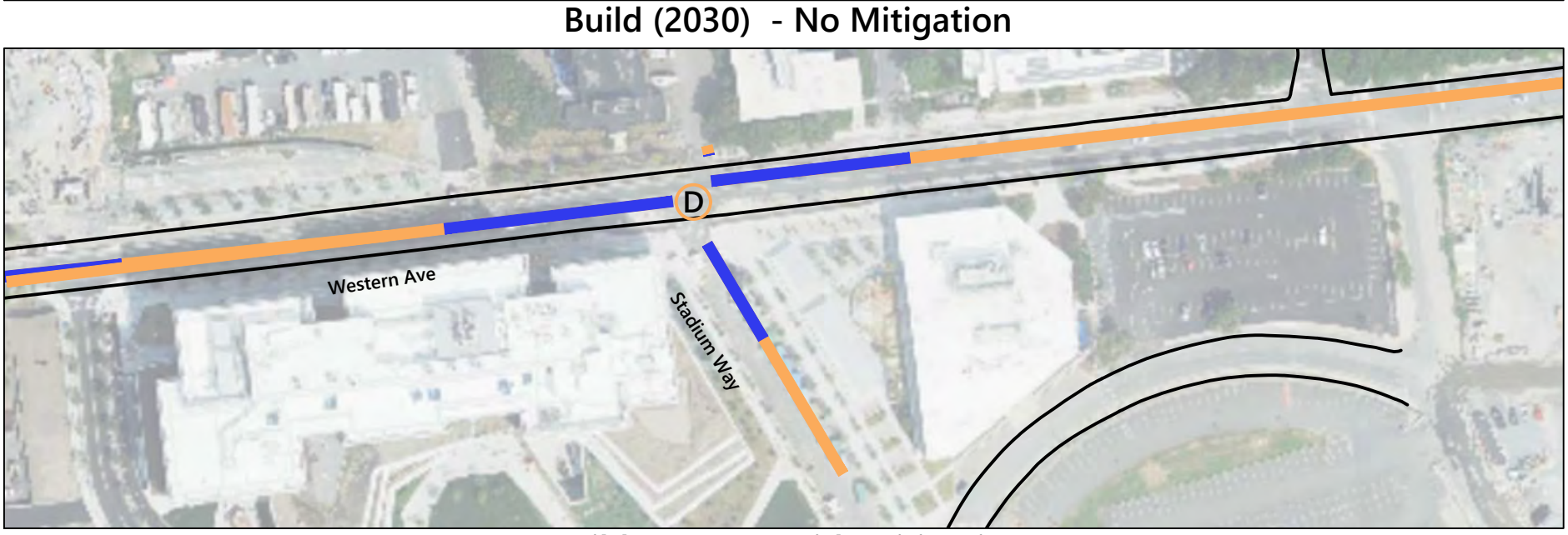
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing Conditions

2030 Conditions: Evening Peak Hour Queue Diagrams

0 75 150 Feet

Enterprise Research Campus Project
Boston, MA

\\vhb\gbl\proj\Boston\15021.00 Harvard ERC\Graphics\FIGURES\DEIR-DPIR\Queues\Harvard ERC_2030 Conditions - PM.dwg

Western Ave at Academic Way

X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)

Intersection does not exist under 2021 Existing Conditions

Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

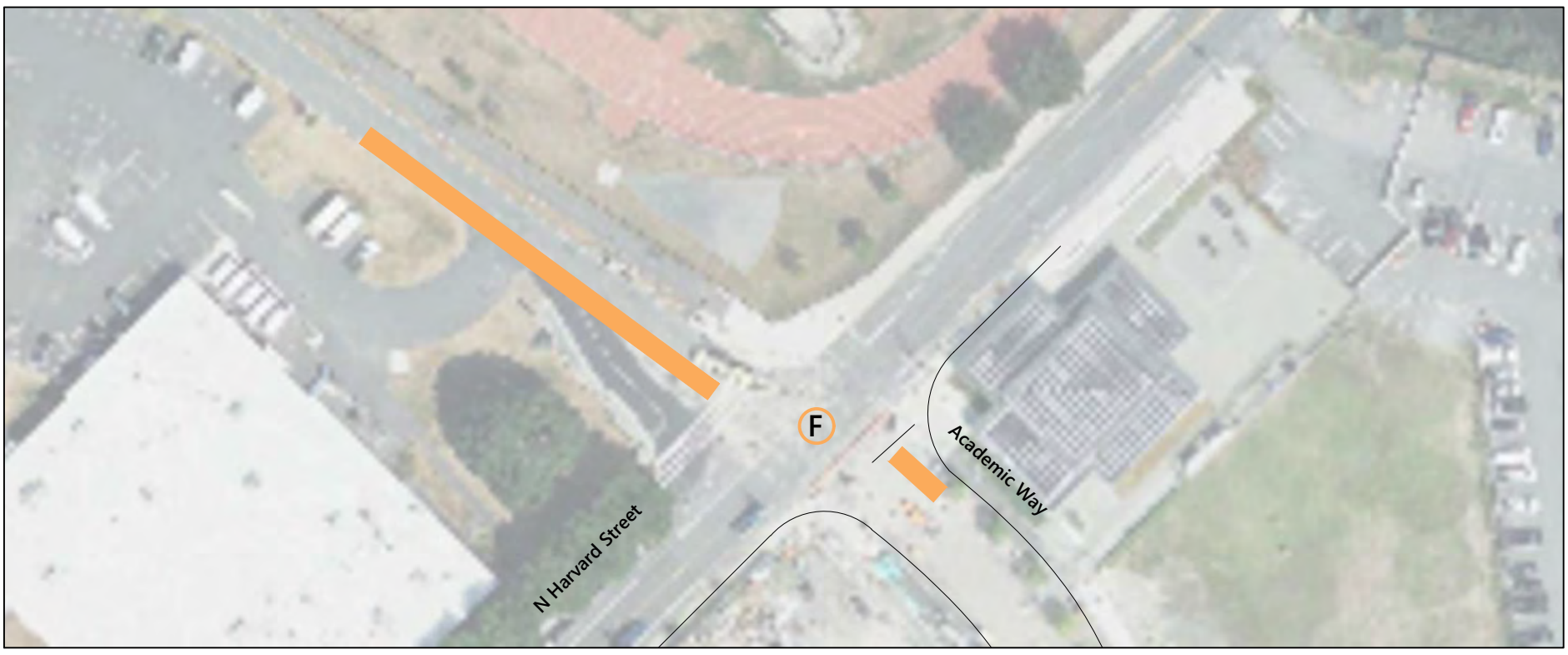
North Harvard Street at Academic Way

X Overall Intersection Level of Service

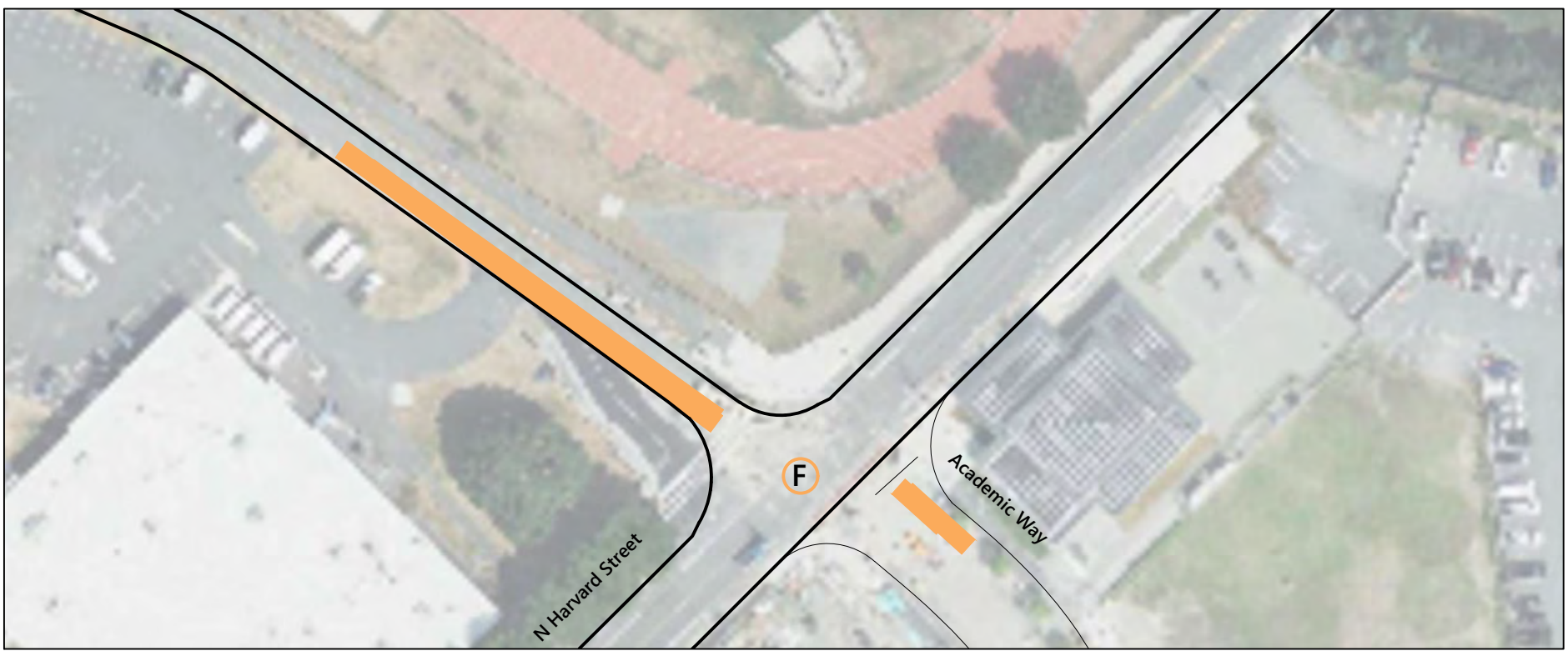
50th Percentile Queue

95th Percentile Queue

Existing



No-Build (2030)



Intersection does not exist under 2021 Existing Conditions

Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 40 80 Feet

Enterprise Research Campus Project
Boston, MA

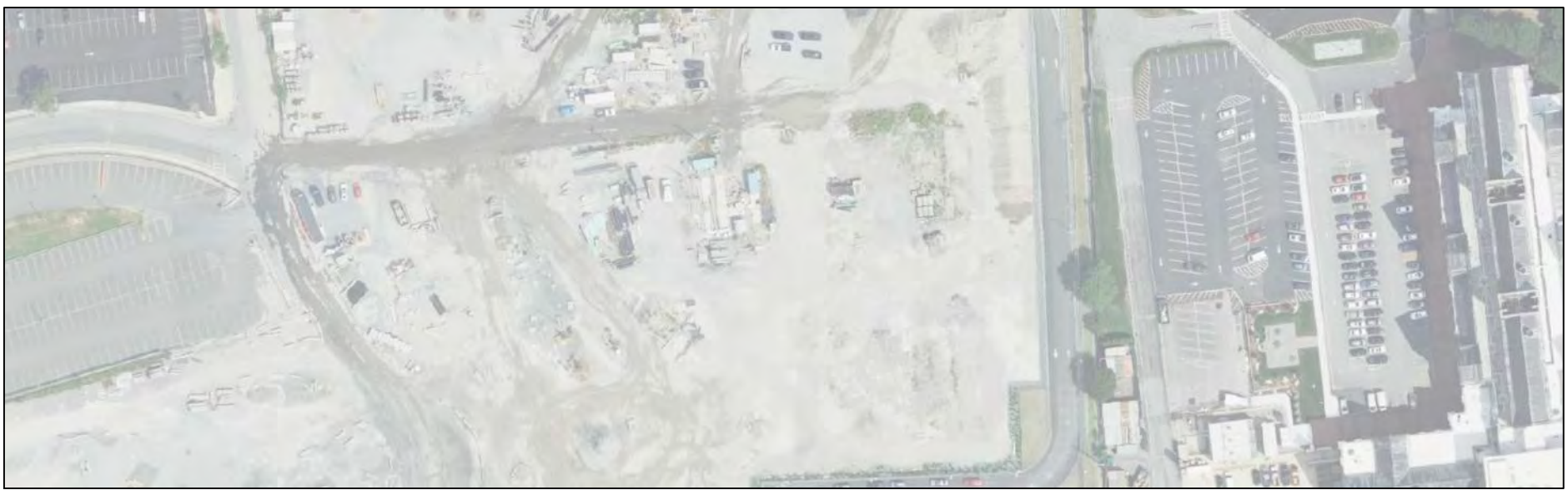
Cattle Drive at DEF Drive

X Overall Intersection Level of Service

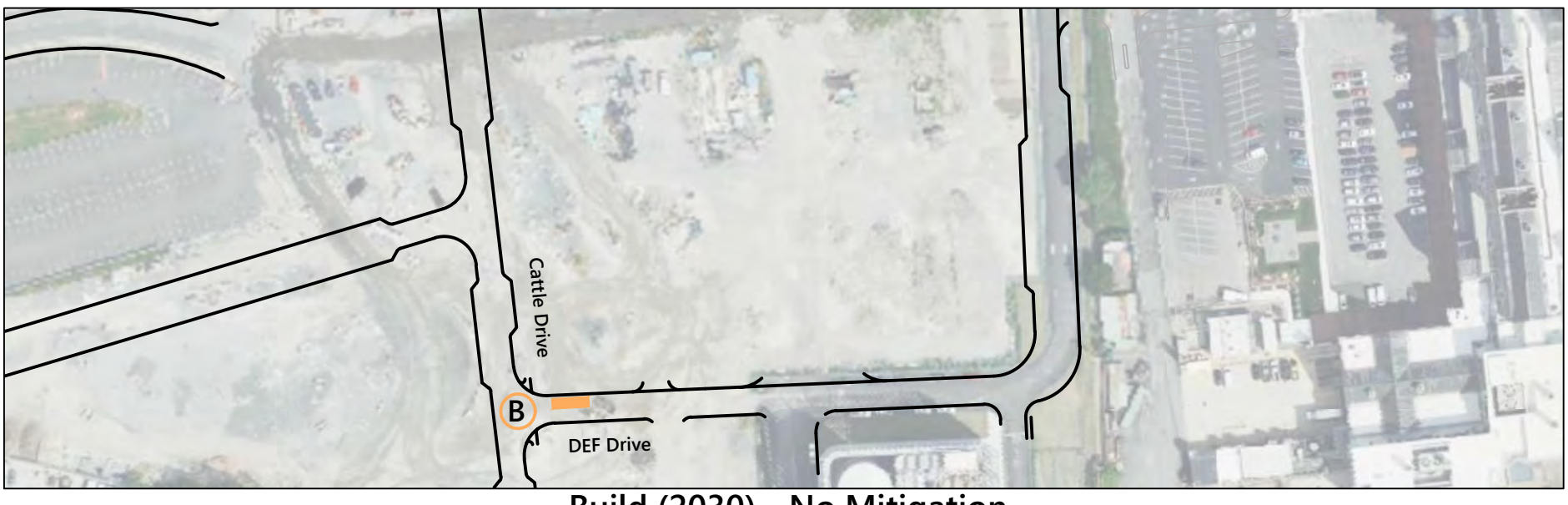
50th Percentile Queue

95th Percentile Queue

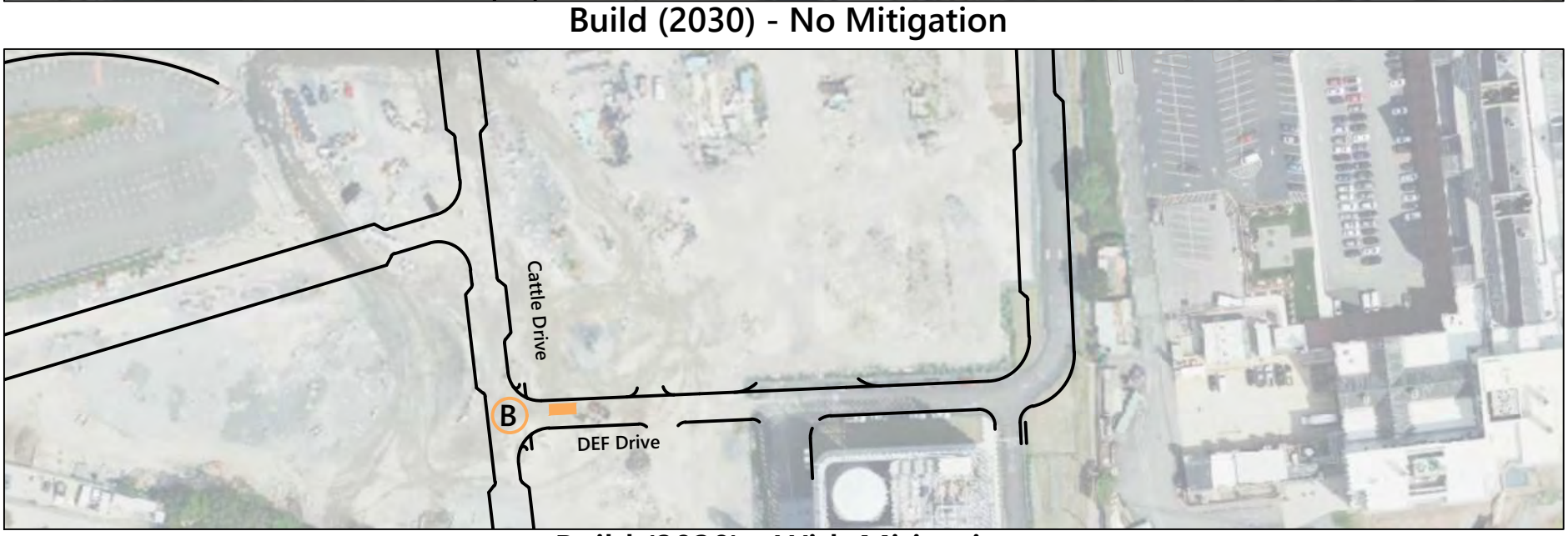
Existing



No-Build (2030)



Build (2030) - No Mitigation



Build (2030) - With Mitigation

Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

2030 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Cattle Drive/ Almy Street at Windom Street

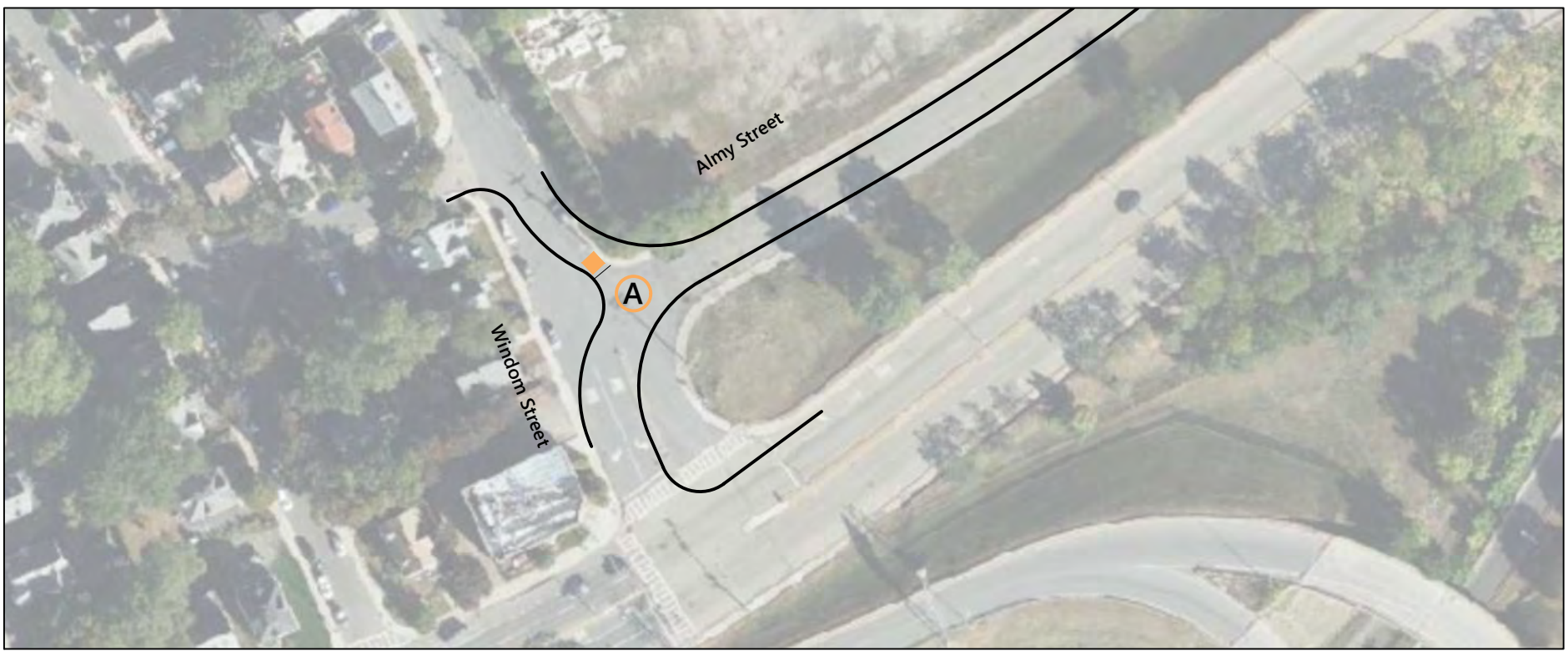
X Overall Intersection Level of Service

50th Percentile Queue

95th Percentile Queue

Existing

No-Build (2030)



Intersection does not exist under 2021 Existing and 2030 No-Build Conditions

Build (2030)

2030 Conditions: Evening Peak Hour Queue Diagrams

0 50 100 Feet

Enterprise Research Campus Project
Boston, MA

Intersection Capacity Analysis Worksheets

2021 Existing Conditions

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1363	747	1017	341
v/c Ratio	1.18	0.60	0.94	0.60
Control Delay	119.2	26.3	39.4	30.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	119.2	26.3	39.4	30.4
Queue Length 50th (ft)	~551	194	210	172
Queue Length 95th (ft)	#685	256	#452	215
Internal Link Dist (ft)	630	2587	542	544
Turn Bay Length (ft)				
Base Capacity (vph)	1156	1236	1078	566
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.18	0.60	0.94	0.60

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	945	350	0	615	95	0	745	180	0	260	2
Future Volume (vph)	0	945	350	0	615	95	0	745	180	0	260	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.95			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.97			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2890			3091			2838			1491	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2890			3091			2838			1491	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.77	0.77	0.77
Adj. Flow (vph)	0	995	368	0	647	100	0	819	198	0	338	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1363	0	0	747	0	0	1017	0	0	341	0
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		40.0			40.0			38.0			38.0	
Effective Green, g (s)		40.0			40.0			38.0			38.0	
Actuated g/C Ratio		0.40			0.40			0.38			0.38	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1156			1236			1078			566	
v/s Ratio Prot		c0.47			0.24			c0.36			0.23	
v/s Ratio Perm												
v/c Ratio		1.18			0.60			0.94			0.60	
Uniform Delay, d1		30.0			23.7			30.0			24.9	
Progression Factor		1.00			1.00			0.77			1.00	
Incremental Delay, d2		89.8			0.6			15.1			4.7	
Delay (s)		119.8			24.3			38.1			29.6	
Level of Service		F			C			D			C	
Approach Delay (s)		119.8			24.3			38.1			29.6	
Approach LOS		F			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	66.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	257	219	580	707
v/c Ratio	1.19	1.05	0.64	1.45
Control Delay	161.1	116.7	32.2	228.3
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	161.1	116.7	32.2	228.5
Queue Length 50th (ft)	~209	~149	163	~573
Queue Length 95th (ft)	#320	#260	194	m#679
Internal Link Dist (ft)		515	2371	98
Turn Bay Length (ft)				
Base Capacity (vph)	216	208	912	488
Starvation Cap Reductn	0	0	0	14
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.19	1.05	0.64	1.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

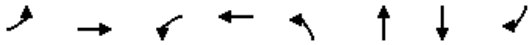
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	321	10	55	0	0	0	0	430	40	397	260	0
Future Volume (vph)	321	10	55	0	0	0	0	430	40	397	260	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.93						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.98	
Frt	1.00	0.95						0.99			1.00	
Flt Protected	0.95	0.97						1.00			0.97	
Satd. Flow (prot)	1543	1373						2772			1481	
Flt Permitted	0.95	0.97						1.00			0.38	
Satd. Flow (perm)	1543	1373						2772			582	
Peak-hour factor, PHF	0.81	0.81	0.81	0.25	0.25	0.25	0.81	0.81	0.81	0.93	0.93	0.93
Adj. Flow (vph)	396	12	68	0	0	0	0	531	49	427	280	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	257	203	0	0	0	0	0	580	0	0	707	0
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	14.0	14.0						33.0			63.0	
Effective Green, g (s)	14.0	14.0						33.0			63.0	
Actuated g/C Ratio	0.14	0.14						0.33			0.63	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	216	192						914			456	
v/s Ratio Prot	c0.17	0.15						0.21			c0.15	
v/s Ratio Perm											c0.82	
v/c Ratio	1.19	1.06						0.63			1.55	
Uniform Delay, d1	43.0	43.0						28.4			18.5	
Progression Factor	1.00	1.00						1.00			1.42	
Incremental Delay, d2	122.0	80.4						3.4			252.2	
Delay (s)	165.0	123.4						31.7			278.4	
Level of Service	F	F						C			F	
Approach Delay (s)		145.8			0.0			31.7			278.4	
Approach LOS		F			A			C			F	

Intersection Summary			
HCM 2000 Control Delay	161.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	181	285	84	373	211	303	189	135
v/c Ratio	0.59	0.49	0.23	0.80	0.80	0.65	0.81	0.43
Control Delay	34.6	38.9	25.1	54.3	59.4	43.2	74.3	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	38.9	25.1	54.3	59.4	43.3	74.3	38.0
Queue Length 50th (ft)	100	206	44	301	143	222	152	87
Queue Length 95th (ft)	#183	320	84	#514	178	260	189	116
Internal Link Dist (ft)		468		1050		175	2371	
Turn Bay Length (ft)	250		175		125			160
Base Capacity (vph)	307	584	397	464	263	561	317	354
Starvation Cap Reductn	0	0	0	0	0	7	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.49	0.21	0.80	0.80	0.55	0.60	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	255	5	80	275	80	160	195	35	20	120	100
Future Volume (vph)	165	255	5	80	275	80	160	195	35	20	120	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.97			1.00	0.89
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.96	1.00			0.98	1.00
Frt	1.00	1.00		1.00	0.97		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1567	1608		1526	1462		1484	1501			1531	1228
Flt Permitted	0.30	1.00		0.51	1.00		0.45	1.00			0.90	1.00
Satd. Flow (perm)	494	1608		818	1462		702	1501			1391	1228
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.76	0.76	0.76	0.74	0.74	0.74
Adj. Flow (vph)	181	280	5	84	289	84	211	257	46	27	162	135
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	181	285	0	84	373	0	211	303	0	0	189	135
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	51.5	41.3		44.5	37.8		29.2	33.2			18.9	29.1
Effective Green, g (s)	51.5	41.3		44.5	37.8		29.2	33.2			18.9	29.1
Actuated g/C Ratio	0.44	0.35		0.38	0.32		0.25	0.28			0.16	0.25
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	308	563		349	469		242	423			223	365
v/s Ratio Prot	c0.05	0.18		0.01	c0.26		c0.08	0.20				0.03
v/s Ratio Perm	c0.21			0.08			c0.14				0.14	0.08
v/c Ratio	0.59	0.51		0.24	0.80		0.87	0.72			0.85	0.37
Uniform Delay, d1	22.9	30.2		24.2	36.5		40.9	38.1			48.0	36.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	1.8	3.2		0.1	13.1		26.6	4.8			23.7	0.2
Delay (s)	24.7	33.4		24.4	49.5		67.5	42.8			71.8	37.0
Level of Service	C	C		C	D		E	D			E	D
Approach Delay (s)		30.1			44.9			52.9			57.3	
Approach LOS		C			D			D			E	

Intersection Summary				
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	29.0	
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	136	28	421	477
v/c Ratio	0.58	0.14	0.50	0.60
Control Delay	27.3	24.3	13.2	16.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.3	24.3	13.2	16.2
Queue Length 50th (ft)	27	7	64	81
Queue Length 95th (ft)	77	27	331	#415
Internal Link Dist (ft)	423	223	1753	102
Turn Bay Length (ft)				
Base Capacity (vph)	406	393	849	790
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.07	0.50	0.60

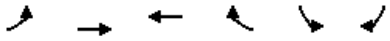
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	0	40	5	10	5	25	350	0	0	355	45
Future Volume (vph)	65	0	40	5	10	5	25	350	0	0	355	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			0.99	
Flpb, ped/bikes		0.95			0.99			1.00			1.00	
Frt		0.95			0.97			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1311			1252			1354			1213	
Flt Permitted		0.80			0.92			0.96			1.00	
Satd. Flow (perm)		1075			1166			1299			1213	
Peak-hour factor, PHF	0.77	0.77	0.77	0.71	0.71	0.71	0.89	0.89	0.89	0.84	0.84	0.84
Adj. Flow (vph)	84	0	52	7	14	7	28	393	0	0	423	54
RTOR Reduction (vph)	0	53	0	0	6	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	83	0	0	22	0	0	421	0	0	477	0
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		5			5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		12.9			12.9			50.6			50.6	
Effective Green, g (s)		12.9			12.9			50.6			50.6	
Actuated g/C Ratio		0.16			0.16			0.63			0.63	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		172			186			815			761	
v/s Ratio Prot											c0.39	
v/s Ratio Perm		c0.08			0.02			0.32				
v/c Ratio		0.48			0.12			0.52			0.63	
Uniform Delay, d1		30.8			29.0			8.3			9.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			0.4			2.3			3.9	
Delay (s)		33.7			29.4			10.6			13.1	
Level of Service		C			C			B			B	
Approach Delay (s)		33.7			29.4			10.6			13.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

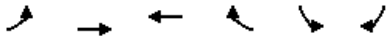


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	151	1615	989	364	382	169
v/c Ratio	0.79	0.91	0.84	0.53	0.81	0.25
Control Delay	73.7	29.5	13.1	4.1	50.5	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.7	29.5	13.1	4.1	50.5	13.8
Queue Length 50th (ft)	103	501	258	45	248	53
Queue Length 95th (ft)	#188	#654	m301	m51	#395	92
Internal Link Dist (ft)		431	869		1753	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	225	1773	1184	692	471	711
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.91	0.84	0.53	0.81	0.24

Intersection Summary

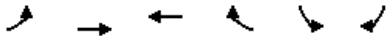
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	145	1550	910	335	340	150
Future Volume (vph)	145	1550	910	335	340	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1417	3025	3020	1260	1547	1338
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1417	3025	3020	1260	1547	1338
Peak-hour factor, PHF	0.96	0.96	0.92	0.92	0.89	0.89
Adj. Flow (vph)	151	1615	989	364	382	169
RTOR Reduction (vph)	0	0	0	198	0	13
Lane Group Flow (vph)	151	1615	989	166	382	156
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	1	6	2		4	1 4
Permitted Phases				2		
Actuated Green, G (s)	14.8	64.5	43.2	43.2	33.5	54.8
Effective Green, g (s)	14.8	64.5	43.2	43.2	33.5	54.8
Actuated g/C Ratio	0.13	0.59	0.39	0.39	0.30	0.50
Clearance Time (s)	6.5	5.5	5.5	5.5	6.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	3.0	
Lane Grp Cap (vph)	190	1773	1186	494	471	666
v/s Ratio Prot	0.11	c0.53	0.33		c0.25	0.12
v/s Ratio Perm				0.13		
v/c Ratio	0.79	0.91	0.83	0.34	0.81	0.23
Uniform Delay, d1	46.1	20.2	30.2	23.4	35.3	15.7
Progression Factor	1.00	1.00	0.28	0.65	1.00	1.00
Incremental Delay, d2	18.9	8.6	3.2	0.8	14.1	0.1
Delay (s)	65.0	28.8	11.7	16.0	49.4	15.8
Level of Service	E	C	B	B	D	B
Approach Delay (s)		31.9	12.9		39.1	
Approach LOS		C	B		D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

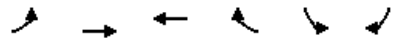


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	16	654	1443	568	306	29
v/c Ratio	0.10	0.33	0.90	0.57	0.74	0.08
Control Delay	10.3	8.0	32.0	3.7	51.5	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	8.0	32.0	3.7	51.5	20.2
Queue Length 50th (ft)	3	78	458	0	202	7
Queue Length 95th (ft)	m4	m103	#594	51	281	29
Internal Link Dist (ft)		869	980		202	
Turn Bay Length (ft)	170			250		80
Base Capacity (vph)	155	1972	1604	988	414	356
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.33	0.90	0.57	0.74	0.08

Intersection Summary

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	595	1385	545	260	25
Future Volume (vph)	15	595	1385	545	260	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	16	16
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1285	2973	2991	1352	1823	1511
Flt Permitted	0.09	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	117	2973	2991	1352	1823	1511
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.85	0.85
Adj. Flow (vph)	16	654	1443	568	306	29
RTOR Reduction (vph)	0	0	0	263	0	13
Lane Group Flow (vph)	16	654	1443	305	306	16
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	pm+pt	NA	NA	Perm	Prot	Prot
Protected Phases	6	1 6	1		5	5
Permitted Phases	1 6			1		
Actuated Green, G (s)	67.0	73.0	59.0	59.0	25.0	25.0
Effective Green, g (s)	67.0	73.0	59.0	59.0	25.0	25.0
Actuated g/C Ratio	0.61	0.66	0.54	0.54	0.23	0.23
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	156	1972	1604	725	414	343
v/s Ratio Prot	0.01	c0.22	c0.48		c0.17	0.01
v/s Ratio Perm	0.05			0.23		
v/c Ratio	0.10	0.33	0.90	0.42	0.74	0.05
Uniform Delay, d1	26.8	8.0	22.8	15.3	39.5	33.2
Progression Factor	1.07	0.97	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2	8.5	1.8	11.2	0.3
Delay (s)	29.3	7.9	31.3	17.0	50.7	33.4
Level of Service	C	A	C	B	D	C
Approach Delay (s)		8.4	27.3		49.2	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

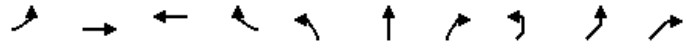
c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	NEL	NER
Lane Group Flow (vph)	11	889	404	142	312	617
v/c Ratio	0.07	1.97	0.33	0.56	0.55	0.54
Control Delay	53.2	475.4	9.2	24.9	32.1	30.1
Queue Delay	0.0	0.7	1.3	4.4	61.0	54.9
Total Delay	53.2	476.1	10.5	29.4	93.1	85.1
Queue Length 50th (ft)	9	~659	4	23	199	220
Queue Length 95th (ft)	29	#793	3	55	287	279
Internal Link Dist (ft)		199	90	45	468	
Turn Bay Length (ft)	100					
Base Capacity (vph)	168	451	1233	252	571	1144
Starvation Cap Reductn	0	0	600	0	0	0
Spillback Cap Reductn	0	31	0	58	320	683
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	2.12	0.64	0.73	1.24	1.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

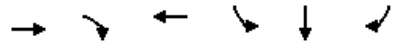
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	10	845	170	145	5	15	85	2	5	820
Future Volume (vph)	10	845	170	145	5	15	85	2	5	820
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.93			0.89			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1177	3160	2964			1490			1378	2544
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1177	3160	2964			1490			1378	2544
Peak-hour factor, PHF	0.95	0.95	0.78	0.78	0.74	0.74	0.74	0.89	0.89	0.89
Adj. Flow (vph)	11	889	218	186	7	20	115	2	6	921
RTOR Reduction (vph)	0	0	107	0	0	104	0	0	0	0
Lane Group Flow (vph)	11	889	297	0	0	39	0	0	312	617
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	20.0	20.0	56.0			14.0			58.0	63.0
Effective Green, g (s)	20.0	20.0	56.0			14.0			58.0	63.0
Actuated g/C Ratio	0.14	0.14	0.40			0.10			0.41	0.45
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	168	451	1185			149			620	1144
v/s Ratio Prot	0.01	c0.28	c0.10			c0.03			0.11	c0.24
v/s Ratio Perm									0.12	
v/c Ratio	0.07	1.97	0.25			0.26			0.50	0.54
Uniform Delay, d1	51.9	60.0	28.0			58.2			31.0	28.0
Progression Factor	1.00	1.00	0.51			1.00			1.00	1.00
Incremental Delay, d2	0.7	445.0	0.0			0.3			0.9	0.6
Delay (s)	52.7	505.0	14.4			58.5			31.9	28.6
Level of Service	D	F	B			E			C	C
Approach Delay (s)		499.5	14.4			58.5			29.7	
Approach LOS		F	B			E			C	

Intersection Summary			
HCM 2000 Control Delay	206.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1571	332	285	242	447	65
v/c Ratio	0.72	0.46	0.31	1.22	1.10	0.21
Control Delay	28.0	9.3	1.1	185.4	127.2	1.6
Queue Delay	48.8	29.6	0.0	0.0	0.0	0.0
Total Delay	76.8	38.9	1.1	185.4	127.2	1.6
Queue Length 50th (ft)	386	109	1	~296	~251	0
Queue Length 95th (ft)	m257	m89	m2	#450	#337	0
Internal Link Dist (ft)	90		6		182	
Turn Bay Length (ft)		100				
Base Capacity (vph)	2167	723	927	198	408	308
Starvation Cap Reductn	961	395	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.30	1.01	0.31	1.22	1.10	0.21

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)	0	1445	305	10	260	0	0	0	0	360	225	55
Future Volume (vph)	0	1445	305	10	260	0	0	0	0	360	225	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4101	1236		3243					1387	2863	1365
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4101	1236		3103					1387	2863	1365
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.25	0.25	0.25	0.85	0.85	0.85
Adj. Flow (vph)	0	1571	332	11	274	0	0	0	0	424	265	65
RTOR Reduction (vph)	0	0	70	0	0	0	0	0	0	0	0	56
Lane Group Flow (vph)	0	1571	262	0	285	0	0	0	0	242	447	9
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		74.0	74.0		58.0					20.0	20.0	20.0
Effective Green, g (s)		74.0	74.0		58.0					20.0	20.0	20.0
Actuated g/C Ratio		0.53	0.53		0.41					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		2167	653		1313					198	409	195
v/s Ratio Prot		c0.38			c0.04					c0.17	0.16	
v/s Ratio Perm			0.21		0.05							0.01
v/c Ratio		0.72	0.40		0.22					1.22	1.09	0.05
Uniform Delay, d1		25.2	19.7		26.4					60.0	60.0	51.8
Progression Factor		1.09	0.84		0.03					1.00	1.00	1.00
Incremental Delay, d2		0.1	0.0		0.1					136.6	71.9	0.0
Delay (s)		27.5	16.6		0.8					196.6	131.9	51.8
Level of Service		C	B		A					F	F	D
Approach Delay (s)		25.6			0.8			0.0			145.8	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	EBR	NBT	SBT
Lane Group Flow (vph)	1120	760	853	995
v/c Ratio	0.84	1.22	0.75	1.07
Control Delay	33.1	138.7	43.7	84.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	33.1	138.7	43.7	84.9
Queue Length 50th (ft)	371	~794	353	~422
Queue Length 95th (ft)	m#785	m#1262	435	#608
Internal Link Dist (ft)	704		451	909
Turn Bay Length (ft)				
Base Capacity (vph)	1339	623	1131	932
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	1.22	0.75	1.07

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)	185	890	730	0	0	0	0	715	70	70	885	0
Future Volume (vph)	185	890	730	0	0	0	0	715	70	70	885	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		1.00	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			1.00	
Satd. Flow (prot)		3128	1454					3092			3129	
Flt Permitted		0.99	1.00					1.00			0.62	
Satd. Flow (perm)		3128	1454					3092			1941	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	193	927	760	0	0	0	0	777	76	73	922	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1120	760	0	0	0	0	848	0	0	995	0
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		56.8	56.8					51.0			63.0	
Effective Green, g (s)		56.8	56.8					51.0			63.0	
Actuated g/C Ratio		0.41	0.41					0.36			0.45	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1269	589					1126			941	
v/s Ratio Prot			c0.52					0.27			c0.06	
v/s Ratio Perm		0.36									c0.42	
v/c Ratio		0.88	1.29					0.75			1.06	
Uniform Delay, d1		38.5	41.6					39.0			38.5	
Progression Factor		0.75	0.75					1.00			1.00	
Incremental Delay, d2		7.0	140.1					2.6			45.7	
Delay (s)		35.9	171.4					41.6			84.2	
Level of Service		D	F					D			F	
Approach Delay (s)		90.7			0.0			41.6			84.2	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	77.7	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.16			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	101.4%	ICU Level of Service	G	
Analysis Period (min)	15			

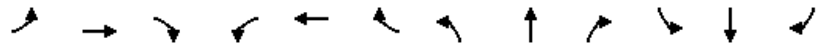
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1180	363	643	1301
v/c Ratio	1.00	1.10	0.66	1.20
Control Delay	69.9	121.4	20.4	131.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	69.9	121.4	20.4	131.2
Queue Length 50th (ft)	~333	~274	314	~636
Queue Length 95th (ft)	#442	#470	446	#748
Internal Link Dist (ft)	706		909	547
Turn Bay Length (ft)				
Base Capacity (vph)	1177	329	978	1088
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	1.10	0.66	1.20

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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	105	910	105	330	585	0	0	900	245
Future Volume (vph)	0	0	0	105	910	105	330	585	0	0	900	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		6.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.98		1.00	1.00			0.96	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4246		1570	1653			2914	
Flt Permitted					1.00		0.08	1.00			1.00	
Satd. Flow (perm)					4246		132	1653			2914	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.91	0.91	0.91	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	111	958	111	363	643	0	0	1023	278
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	0	0	0	1170	0	363	643	0	0	1281	0
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					33.0		71.0	71.0			44.0	
Effective Green, g (s)					33.0		71.0	71.0			44.0	
Actuated g/C Ratio					0.28		0.59	0.59			0.37	
Clearance Time (s)					10.0		6.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1167		329	978			1068	
v/s Ratio Prot					c0.28		c0.19	0.39			c0.44	
v/s Ratio Perm							0.46					
v/c Ratio					1.00		1.10	0.66			1.20	
Uniform Delay, d1					43.5		43.9	16.4			38.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					26.9		80.3	3.5			98.8	
Delay (s)					70.4		124.2	19.8			136.8	
Level of Service					E		F	B			F	
Approach Delay (s)		0.0			70.4			57.5			136.8	
Approach LOS		A			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	91.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	430	899	559	819
v/c Ratio	0.78	0.86	0.54	0.97
Control Delay	35.7	21.0	2.5	55.5
Queue Delay	0.0	38.4	3.1	0.0
Total Delay	35.7	59.3	5.6	55.5
Queue Length 50th (ft)	100	87	6	286
Queue Length 95th (ft)	154	m85	m6	m265
Internal Link Dist (ft)			129	1760
Turn Bay Length (ft)	100			
Base Capacity (vph)	656	1043	1122	840
Starvation Cap Reductn	0	207	444	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.66	1.08	0.82	0.97

Intersection Summary

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)	0	0	400	845	525	0	0	0	0	0	750	45
Future Volume (vph)	0	0	400	845	525	0	0	0	0	0	750	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	15	15	15	12	12	12	12	12	12
Total Lost time (s)			9.0	10.0	10.0						6.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	3399	1791						3216	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	3399	1791						3216	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.25	0.25	0.25	0.97	0.97	0.97
Adj. Flow (vph)	0	0	430	899	559	0	0	0	0	0	773	46
RTOR Reduction (vph)	0	0	116	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	314	899	559	0	0	0	0	0	815	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1	1 2						3	
Permitted Phases												
Actuated Green, G (s)			18.3	30.7	59.0						26.0	
Effective Green, g (s)			18.3	30.7	59.0						26.0	
Actuated g/C Ratio			0.18	0.31	0.59						0.26	
Clearance Time (s)			9.0	10.0							6.0	
Vehicle Extension (s)			2.0	2.0							2.0	
Lane Grp Cap (vph)			435	1043	1056						836	
v/s Ratio Prot			c0.13	c0.26	0.31						c0.25	
v/s Ratio Perm												
v/c Ratio			0.72	0.86	0.53						0.97	
Uniform Delay, d1			38.5	32.7	12.2						36.7	
Progression Factor			1.00	0.51	0.17						1.00	
Incremental Delay, d2			5.0	1.0	0.0						17.4	
Delay (s)			43.4	17.8	2.1						54.1	
Level of Service			D	B	A						D	
Approach Delay (s)		43.4			11.8			0.0			54.1	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	385	25	35	415	120	10	0	15	0	0	0
Future Volume (Veh/h)	85	385	25	35	415	120	10	0	15	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.88	0.88	0.88	0.72	0.72	0.72	0.92	0.92	0.92
Hourly flow rate (vph)	99	448	29	40	472	136	14	0	21	0	0	0
Pedestrians		40						50			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		3						4			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1047			746							
pX, platoon unblocked	0.81						0.81	0.81		0.81	0.81	0.81
vC, conflicting volume	627			527			1370	1418	512	1306	1364	599
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	416			527			1339	1398	512	1259	1331	382
tC, single (s)	4.2			4.2			7.3	6.7	6.4	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.7	4.2	3.5	3.5	4.0	3.3
p0 queue free %	89			96			82	100	96	100	100	100
cM capacity (veh/h)	895			977			76	85	507	99	103	523

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	99	477	648	35
Volume Left	99	0	40	14
Volume Right	0	29	136	21
cSH	895	1700	977	156
Volume to Capacity	0.11	0.28	0.04	0.22
Queue Length 95th (ft)	9	0	3	21
Control Delay (s)	9.5	0.0	1.1	34.7
Lane LOS	A		A	D
Approach Delay (s)	1.6		1.1	34.7
Approach LOS				D

Intersection Summary				
Average Delay			2.3	
Intersection Capacity Utilization			72.7%	ICU Level of Service
Analysis Period (min)			15	

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	67	361	32	474	109	190	60
v/c Ratio	0.22	0.49	0.12	0.64	0.50	0.57	0.35
Control Delay	19.9	20.4	18.7	24.2	41.8	13.3	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	20.4	18.7	24.2	41.8	13.3	30.8
Queue Length 50th (ft)	16	101	7	148	46	0	15
Queue Length 95th (ft)	76	#356	40	#534	121	58	58
Internal Link Dist (ft)		1050		967	51		70
Turn Bay Length (ft)	110		140				
Base Capacity (vph)	300	733	278	735	364	433	344
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.49	0.12	0.64	0.30	0.44	0.17

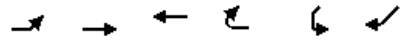
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	305	20	30	390	60	25	70	165	25	5	20
Future Volume (vph)	60	305	20	30	390	60	25	70	165	25	5	20
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.98		0.98	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	
Satd. Flow (prot)	1460	1441		1061	1445			1670	1301		1481	
Flt Permitted	0.38	1.00		0.49	1.00			0.99	1.00		0.98	
Satd. Flow (perm)	590	1441		550	1445			1670	1301		1481	
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.87	0.87	0.87	0.84	0.84	0.84
Adj. Flow (vph)	67	339	22	32	411	63	29	80	190	30	6	24
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	167	0	23	0
Lane Group Flow (vph)	67	361	0	32	474	0	0	109	23	0	37	0
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	37.0	37.0		37.0	37.0			9.5	9.5		4.2	
Effective Green, g (s)	37.0	37.0		37.0	37.0			9.5	9.5		4.2	
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.12	0.12		0.05	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	275	672		256	674			200	155		78	
v/s Ratio Prot		0.25			c0.33			c0.07			c0.03	
v/s Ratio Perm	0.11			0.06					0.02			
v/c Ratio	0.24	0.54		0.12	0.70			0.55	0.15		0.48	
Uniform Delay, d1	12.7	15.1		12.0	16.8			32.9	31.3		36.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.1	3.1		1.0	6.1			1.6	0.2		1.7	
Delay (s)	14.8	18.1		13.0	22.8			34.5	31.4		38.2	
Level of Service	B	B		B	C			C	C		D	
Approach Delay (s)		17.6			22.2			32.5			38.2	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	26.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	855	175	0	0	1755
Future Volume (Veh/h)	0	855	175	0	0	1755
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	929	190	0	0	1908
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.96	
vC, conflicting volume	190				654	95
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	190				565	95
tC, single (s)	4.1				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1389				436	940

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	464	464	95	95	1908
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1908
cSH	1700	1700	1700	1700	940
Volume to Capacity	0.27	0.27	0.06	0.06	2.03
Queue Length 95th (ft)	0	0	0	0	3167
Control Delay (s)	0.0	0.0	0.0	0.0	479.9
Lane LOS					F
Approach Delay (s)	0.0		0.0		479.9
Approach LOS					F

Intersection Summary			
Average Delay	302.5		
Intersection Capacity Utilization	120.2%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	NBL	NBT
Lane Group Flow (vph)	1962	254	321
v/c Ratio	0.62	0.82	1.10
Control Delay	0.5	75.7	126.8
Queue Delay	0.0	0.0	0.0
Total Delay	0.5	75.7	126.8
Queue Length 50th (ft)	0	235	~317
Queue Length 95th (ft)	m0	#355	#485
Internal Link Dist (ft)	6		224
Turn Bay Length (ft)			
Base Capacity (vph)	3166	308	292
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.62	0.82	1.10

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)	150	1655	0	0	0	0	270	75	150	0	0	0
Future Volume (vph)	150	1655	0	0	0	0	270	75	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.92				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.92				
Flt Protected		1.00					0.95	0.99				
Satd. Flow (prot)		4346					1543	1309				
Flt Permitted		1.00					0.95	0.99				
Satd. Flow (perm)		4346					1543	1309				
Peak-hour factor, PHF	0.92	0.92	0.92	0.25	0.25	0.25	0.86	0.86	0.86	0.25	0.25	0.25
Adj. Flow (vph)	163	1799	0	0	0	0	314	87	174	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	30	0	0	0	0
Lane Group Flow (vph)	0	1962	0	0	0	0	254	291	0	0	0	0
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		99.0					28.0	28.0				
Effective Green, g (s)		99.0					28.0	28.0				
Actuated g/C Ratio		0.71					0.20	0.20				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		3073					308	261				
v/s Ratio Prot		c0.45					0.16	c0.22				
v/s Ratio Perm												
v/c Ratio		0.64					0.82	1.11				
Uniform Delay, d1		10.9					53.6	56.0				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.2					16.9	89.6				
Delay (s)		0.2					70.6	145.6				
Level of Service		A					E	F				
Approach Delay (s)		0.2			0.0			112.5			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	77	247	927	656
v/c Ratio	0.82	0.57	0.56	0.91
Control Delay	95.3	10.8	2.2	31.0
Queue Delay	73.3	0.0	0.7	49.8
Total Delay	168.6	10.8	2.9	80.7
Queue Length 50th (ft)	50	20	7	340
Queue Length 95th (ft)	m65	m28	m6	m389
Internal Link Dist (ft)	273		98	542
Turn Bay Length (ft)				
Base Capacity (vph)	94	631	1647	718
Starvation Cap Reductn	0	0	377	0
Spillback Cap Reductn	36	0	0	308
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.33	0.39	0.73	1.60

Intersection Summary

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)	0	0	0	67	2	220	46	705	0	0	590	20
Future Volume (vph)	0	0	0	67	2	220	46	705	0	0	590	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			1.00	
Flt Protected					0.95	1.00		1.00			1.00	
Satd. Flow (prot)					1576	1405		2897			1527	
Flt Permitted					0.95	1.00		0.87			1.00	
Satd. Flow (perm)					1576	1405		2542			1527	
Peak-hour factor, PHF	0.25	0.25	0.25	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	75	2	247	57	870	0	0	634	22
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	0	77	40	0	927	0	0	655	0
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	16.0		63.0			47.0	
Effective Green, g (s)					6.0	16.0		57.0			47.0	
Actuated g/C Ratio					0.06	0.16		0.57			0.47	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	224		1448			717	
v/s Ratio Prot					c0.05	0.03					c0.43	
v/s Ratio Perm								c0.36				
v/c Ratio					0.82	0.18		0.64			0.91	
Uniform Delay, d1					46.5	36.3		14.6			24.6	
Progression Factor					1.48	2.03		0.15			0.83	
Incremental Delay, d2					19.7	0.1		0.4			8.9	
Delay (s)					88.6	73.8		2.5			29.3	
Level of Service					F	E		A			C	
Approach Delay (s)		0.0			77.3			2.5			29.3	
Approach LOS		A			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	NBT
Lane Group Flow (vph)	1579	262
v/c Ratio	1.18	0.47
Control Delay	121.7	38.5
Queue Delay	0.2	0.0
Total Delay	121.9	38.5
Queue Length 50th (ft)	~447	78
Queue Length 95th (ft)	#588	106
Internal Link Dist (ft)	682	1076
Turn Bay Length (ft)		
Base Capacity (vph)	1337	696
Starvation Cap Reductn	0	0
Spillback Cap Reductn	53	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.23	0.38

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1260	225	110	115	0	0	0	0
Future Volume (vph)	0	0	0	0	1260	225	110	115	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					10.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.98				
Satd. Flow (prot)					4284			3029				
Flt Permitted					1.00			0.98				
Satd. Flow (perm)					4284			3029				
Peak-hour factor, PHF	0.25	0.25	0.25	0.94	0.94	0.94	0.86	0.86	0.86	0.25	0.25	0.25
Adj. Flow (vph)	0	0	0	0	1340	239	128	134	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1555	0	0	262	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					30.7			18.3				
Effective Green, g (s)					30.7			18.3				
Actuated g/C Ratio					0.31			0.18				
Clearance Time (s)					10.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1315			554				
v/s Ratio Prot					c0.36							
v/s Ratio Perm								0.09				
v/c Ratio					1.18			0.47				
Uniform Delay, d1					34.6			36.5				
Progression Factor					1.00			1.00				
Incremental Delay, d2					90.3			0.2				
Delay (s)					125.0			36.8				
Level of Service					F			D				
Approach Delay (s)		0.0			125.0			36.8			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	112.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1122	1058	1032	336
v/c Ratio	1.06	0.90	0.95	0.52
Control Delay	77.6	41.9	41.5	25.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	77.6	41.9	41.5	25.8
Queue Length 50th (ft)	~416	331	232	158
Queue Length 95th (ft)	#547	#460	#463	225
Internal Link Dist (ft)	561	2687	694	566
Turn Bay Length (ft)				
Base Capacity (vph)	1056	1171	1086	641
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.06	0.90	0.95	0.52

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	715	295	0	900	105	0	655	305	0	270	15
Future Volume (vph)	0	715	295	0	900	105	0	655	305	0	270	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.89			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.95			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2857			3168			2652			1564	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2857			3168			2652			1564	
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.93	0.93	0.93	0.85	0.85	0.85
Adj. Flow (vph)	0	794	328	0	947	111	0	704	328	0	318	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1122	0	0	1058	0	0	1032	0	0	336	0
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			56
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		37.0			37.0			41.0			41.0	
Effective Green, g (s)		37.0			37.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1057			1172			1087			641	
v/s Ratio Prot		c0.39			0.33			c0.39			0.21	
v/s Ratio Perm												
v/c Ratio		1.06			0.90			0.95			0.52	
Uniform Delay, d1		31.5			29.8			28.5			22.2	
Progression Factor		1.00			1.00			0.90			1.00	
Incremental Delay, d2		45.5			9.6			14.5			3.1	
Delay (s)		77.0			39.4			40.1			25.2	
Level of Service		E			D			D			C	
Approach Delay (s)		77.0			39.4			40.1			25.2	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	50.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	235	255	540	720
v/c Ratio	1.39	1.49	0.58	1.16
Control Delay	243.3	279.5	30.9	90.3
Queue Delay	0.0	0.0	0.1	0.2
Total Delay	243.3	279.5	30.9	90.6
Queue Length 50th (ft)	~210	~221	141	~141
Queue Length 95th (ft)	#368	#389	203	m#222
Internal Link Dist (ft)		515	2371	98
Turn Bay Length (ft)				
Base Capacity (vph)	169	171	952	623
Starvation Cap Reductn	0	0	0	21
Spillback Cap Reductn	0	0	27	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.39	1.49	0.58	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

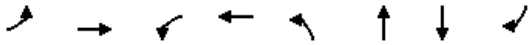
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	326	20	95	0	0	0	0	435	35	252	425	0
Future Volume (vph)	326	20	95	0	0	0	0	435	35	252	425	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.89						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.98	
Frt	1.00	0.94						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1320						2887			1530	
Flt Permitted	0.95	0.98						1.00			0.50	
Satd. Flow (perm)	1543	1320						2887			776	
Peak-hour factor, PHF	0.90	0.90	0.90	0.25	0.25	0.25	0.87	0.87	0.87	0.94	0.94	0.94
Adj. Flow (vph)	362	22	106	0	0	0	0	500	40	268	452	0
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	235	229	0	0	0	0	0	540	0	0	720	0
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	11.0	11.0						32.5			66.0	
Effective Green, g (s)	11.0	11.0						32.5			66.0	
Actuated g/C Ratio	0.11	0.11						0.32			0.66	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	169	145						938			598	
v/s Ratio Prot	0.15	c0.17						0.19			c0.14	
v/s Ratio Perm											c0.66	
v/c Ratio	1.39	1.58						0.58			1.20	
Uniform Delay, d1	44.5	44.5						28.0			17.0	
Progression Factor	1.00	1.00						1.00			0.78	
Incremental Delay, d2	207.8	291.6						2.6			96.6	
Delay (s)	252.3	336.1						30.6			109.9	
Level of Service	F	F						C			F	
Approach Delay (s)		295.9			0.0			30.6			109.9	
Approach LOS		F			A			C			F	

Intersection Summary			
HCM 2000 Control Delay	137.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	120	190	140	579	191	236	330	222
v/c Ratio	0.78	0.33	0.34	1.04	1.04	0.44	0.93	0.66
Control Delay	63.7	40.8	30.5	96.2	120.0	43.3	91.2	54.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	40.8	30.5	96.2	120.0	43.3	91.2	54.8
Queue Length 50th (ft)	76	149	89	~674	~165	190	332	180
Queue Length 95th (ft)	#186	223	139	#896	#293	272	#501	259
Internal Link Dist (ft)		468		1050		175	2371	
Turn Bay Length (ft)	250		175		125			160
Base Capacity (vph)	159	577	419	558	184	570	386	345
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.33	0.33	1.04	1.04	0.41	0.85	0.64

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	165	10	125	445	70	170	185	25	20	270	195
Future Volume (vph)	110	165	10	125	445	70	170	185	25	20	270	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98			1.00	0.81
Flpb, ped/bikes	1.00	1.00		0.96	1.00		0.98	1.00			0.99	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1576	1665		1543	1620		1551	1624			1660	1163
Flt Permitted	0.09	1.00		0.57	1.00		0.21	1.00			0.96	1.00
Satd. Flow (perm)	149	1665		932	1620		350	1624			1603	1163
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	120	179	11	140	500	79	191	208	28	23	307	222
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	190	0	140	579	0	191	236	0	0	330	222
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	60.9	51.2		60.1	50.8		42.7	46.7			32.5	42.2
Effective Green, g (s)	60.9	51.2		60.1	50.8		42.7	46.7			32.5	42.2
Actuated g/C Ratio	0.41	0.34		0.40	0.34		0.29	0.31			0.22	0.28
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	154	572		414	553		182	509			350	376
v/s Ratio Prot	c0.05	0.11		0.02	c0.36		c0.07	0.15				0.04
v/s Ratio Perm	0.27			0.12			c0.23				0.21	0.15
v/c Ratio	0.78	0.33		0.34	1.05		1.05	0.46			0.94	0.59
Uniform Delay, d1	34.8	36.1		29.2	49.0		49.8	41.0			57.2	45.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	19.9	1.6		0.2	51.1		80.4	0.2			33.1	1.7
Delay (s)	54.7	37.7		29.4	100.1		130.2	41.2			90.3	47.5
Level of Service	D	D		C	F		F	D			F	D
Approach Delay (s)		44.3			86.4			81.0			73.1	
Approach LOS		D			F			F			E	

Intersection Summary				
HCM 2000 Control Delay	75.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	148.8	Sum of lost time (s)	29.0	
Intersection Capacity Utilization	86.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	82	42	332	665
v/c Ratio	0.61	0.16	0.28	0.62
Control Delay	22.3	23.2	7.6	14.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.3	23.2	7.6	14.2
Queue Length 50th (ft)	0	7	0	0
Queue Length 95th (ft)	0	36	194	#586
Internal Link Dist (ft)	373	179	1731	122
Turn Bay Length (ft)				
Base Capacity (vph)	135	776	1179	1081
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.05	0.28	0.62

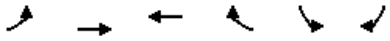
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	0	30	15	10	5	15	280	0	0	525	60
Future Volume (vph)	30	0	30	15	10	5	15	280	0	0	525	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		4.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.76			0.98			1.00			0.99	
Flpb, ped/bikes		0.90			0.94			1.00			1.00	
Frt		0.93			0.98			1.00			0.99	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		955			1267			1480			1323	
Flt Permitted		0.98			0.98			0.96			1.00	
Satd. Flow (perm)		955			1267			1431			1323	
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	41	0	41	21	14	7	17	315	0	0	597	68
RTOR Reduction (vph)	0	82	0	0	7	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	35	0	0	332	0	0	665	0
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	D.Pm	NA		Perm	NA		Perm	NA			NA	
Protected Phases					5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		0.0			3.4			41.9			41.9	
Effective Green, g (s)		0.0			3.4			41.9			41.9	
Actuated g/C Ratio		0.00			0.05			0.68			0.68	
Clearance Time (s)					5.0			5.0			5.0	
Vehicle Extension (s)					4.0			4.0			4.0	
Lane Grp Cap (vph)		0			69			967			894	
v/s Ratio Prot											c0.50	
v/s Ratio Perm					0.03			0.23				
v/c Ratio		0.00			0.51			0.34			0.74	
Uniform Delay, d1		31.0			28.5			4.2			6.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			8.3			1.0			5.6	
Delay (s)		31.0			36.8			5.2			12.1	
Level of Service		C			D			A			B	
Approach Delay (s)		31.0			36.8			5.2			12.1	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



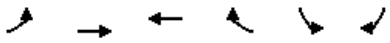
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	233	1270	1344	317	343	292
v/c Ratio	0.98	0.65	1.05	0.47	0.83	0.44
Control Delay	100.4	14.7	44.5	3.8	57.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.4	14.7	44.5	3.8	57.1	20.8
Queue Length 50th (ft)	166	272	~563	42	229	127
Queue Length 95th (ft)	#319	335	m#604	m42	#374	197
Internal Link Dist (ft)		431	869		1731	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	238	1949	1286	670	412	669
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.65	1.05	0.47	0.83	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

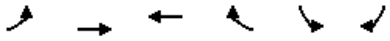
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	207	1130	1210	285	305	260
Future Volume (vph)	207	1130	1210	285	305	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.5	6.5
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.92	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1501	3085	3110	1303	1593	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1501	3085	3110	1303	1593	1391
Peak-hour factor, PHF	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	233	1270	1344	317	343	292
RTOR Reduction (vph)	0	0	0	132	0	6
Lane Group Flow (vph)	233	1270	1344	185	343	286
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	1	6	2		4	1 4
Permitted Phases				2		
Actuated Green, G (s)	17.5	69.5	45.5	45.5	28.5	52.5
Effective Green, g (s)	17.5	69.5	45.5	45.5	28.5	52.5
Actuated g/C Ratio	0.16	0.63	0.41	0.41	0.26	0.48
Clearance Time (s)	6.5	5.5	5.5	5.5	6.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	3.0	
Lane Grp Cap (vph)	238	1949	1286	538	412	663
v/s Ratio Prot	c0.16	0.41	c0.43		c0.22	0.21
v/s Ratio Perm				0.14		
v/c Ratio	0.98	0.65	1.05	0.34	0.83	0.43
Uniform Delay, d1	46.1	12.7	32.2	22.0	38.5	18.9
Progression Factor	1.00	1.00	0.41	0.41	1.00	1.00
Incremental Delay, d2	51.6	1.7	28.6	0.6	17.6	0.2
Delay (s)	97.7	14.4	41.7	9.7	56.1	19.1
Level of Service	F	B	D	A	E	B
Approach Delay (s)		27.3	35.6		39.1	
Approach LOS		C	D		D	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

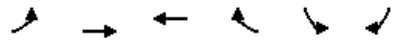


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	18	761	1614	380	120	82
v/c Ratio	0.11	0.38	0.97	0.43	0.29	0.19
Control Delay	7.4	6.1	40.9	3.7	37.4	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	6.1	40.9	3.7	37.4	8.7
Queue Length 50th (ft)	3	73	552	10	70	0
Queue Length 95th (ft)	m4	m89	#743	56	107	28
Internal Link Dist (ft)		869	980		202	
Turn Bay Length (ft)	170			250		80
Base Capacity (vph)	168	2012	1668	887	418	437
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.38	0.97	0.43	0.29	0.19

Intersection Summary

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	685	1485	350	95	65
Future Volume (vph)	16	685	1485	350	95	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	16	16
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1516	3032	3110	1354	1841	1647
Flt Permitted	0.07	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	108	3032	3110	1354	1841	1647
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.79	0.79
Adj. Flow (vph)	18	761	1614	380	120	82
RTOR Reduction (vph)	0	0	0	161	0	63
Lane Group Flow (vph)	18	761	1614	219	120	19
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	pm+pt	NA	NA	Perm	Prot	Prot
Protected Phases	6	1 6	1		5	5
Permitted Phases	1 6			1		
Actuated Green, G (s)	67.0	73.0	59.0	59.0	25.0	25.0
Effective Green, g (s)	67.0	73.0	59.0	59.0	25.0	25.0
Actuated g/C Ratio	0.61	0.66	0.54	0.54	0.23	0.23
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	168	2012	1668	726	418	374
v/s Ratio Prot	0.01	c0.25	c0.52		c0.07	0.01
v/s Ratio Perm	0.06			0.16		
v/c Ratio	0.11	0.38	0.97	0.30	0.29	0.05
Uniform Delay, d1	32.8	8.3	24.6	14.1	35.1	33.2
Progression Factor	0.66	0.68	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.4	15.6	1.1	1.7	0.3
Delay (s)	22.5	6.0	40.2	15.2	36.9	33.5
Level of Service	C	A	D	B	D	C
Approach Delay (s)		6.4	35.4		35.5	
Approach LOS		A	D		D	

Intersection Summary				
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

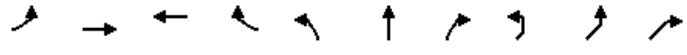
c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	NEL	NER
Lane Group Flow (vph)	13	975	428	120	346	688
v/c Ratio	0.05	1.78	0.29	0.66	0.53	0.57
Control Delay	49.2	392.5	1.3	37.7	30.8	30.4
Queue Delay	0.0	0.0	0.6	5.6	64.4	57.1
Total Delay	49.2	392.5	1.9	43.2	95.2	87.4
Queue Length 50th (ft)	10	~697	0	27	221	249
Queue Length 95th (ft)	27	#698	0	54	319	316
Internal Link Dist (ft)		199	90	45	468	
Turn Bay Length (ft)	100					
Base Capacity (vph)	278	547	1487	182	659	1197
Starvation Cap Reductn	0	0	689	0	0	0
Spillback Cap Reductn	0	0	0	28	458	832
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	1.78	0.54	0.78	1.72	1.88

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.



Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	10	770	230	185	5	15	65	5	2	935
Future Volume (vph)	10	770	230	185	5	15	65	5	2	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.93			0.90			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1624	3191	2984			1529			1443	2619
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1624	3191	2984			1529			1443	2619
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.71	0.71	0.71	0.91	0.91	0.91
Adj. Flow (vph)	13	975	237	191	7	21	92	5	2	1027
RTOR Reduction (vph)	0	0	100	0	0	84	0	0	0	0
Lane Group Flow (vph)	13	975	328	0	0	36	0	0	346	688
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	24.0	24.0	66.4			9.0			59.0	64.0
Effective Green, g (s)	24.0	24.0	66.4			9.0			59.0	64.0
Actuated g/C Ratio	0.17	0.17	0.47			0.06			0.42	0.46
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	278	547	1415			98			659	1197
v/s Ratio Prot	0.01	c0.31	c0.11			c0.02			0.08	c0.26
v/s Ratio Perm									0.16	
v/c Ratio	0.05	1.78	0.23			0.37			0.53	0.57
Uniform Delay, d1	48.4	58.0	21.7			62.8			30.8	28.0
Progression Factor	1.00	1.00	0.06			1.00			1.00	1.00
Incremental Delay, d2	0.3	359.4	0.0			0.8			1.0	0.8
Delay (s)	48.8	417.4	1.4			63.6			31.8	28.8
Level of Service	D	F	A			E			C	C
Approach Delay (s)		412.6	1.4			63.6			29.8	
Approach LOS		F	A			E			C	

Intersection Summary			
HCM 2000 Control Delay	173.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1463	420	288	239	459	169
v/c Ratio	0.76	0.63	0.27	1.17	1.09	0.51
Control Delay	24.2	13.8	1.2	167.8	125.0	13.2
Queue Delay	49.6	57.0	0.0	0.0	0.0	0.0
Total Delay	73.8	70.8	1.2	167.8	125.0	13.2
Queue Length 50th (ft)	317	160	2	~284	~257	0
Queue Length 95th (ft)	m255	m143	2	#443	#351	58
Internal Link Dist (ft)	90		6		182	
Turn Bay Length (ft)		100				
Base Capacity (vph)	1918	665	1112	204	421	333
Starvation Cap Reductn	964	322	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.53	1.22	0.26	1.17	1.09	0.51

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)	0	1375	395	10	270	0	0	0	0	360	240	145
Future Volume (vph)	0	1375	395	10	270	0	0	0	0	360	240	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4223	1260		3243					1429	2951	1319
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4223	1260		3103					1429	2951	1319
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.25	0.25	0.25	0.86	0.86	0.86
Adj. Flow (vph)	0	1463	420	10	278	0	0	0	0	419	279	169
RTOR Reduction (vph)	0	0	93	0	0	0	0	0	0	0	0	145
Lane Group Flow (vph)	0	1463	327	0	288	0	0	0	0	239	459	24
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		63.6	63.6		59.0					20.0	20.0	20.0
Effective Green, g (s)		63.6	63.6		59.0					20.0	20.0	20.0
Actuated g/C Ratio		0.45	0.45		0.42					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		1918	572		1346					204	421	188
v/s Ratio Prot		c0.35			c0.06					c0.17	0.16	
v/s Ratio Perm			0.26		0.03							0.02
v/c Ratio		0.76	0.57		0.21					1.17	1.09	0.13
Uniform Delay, d1		31.9	28.1		25.8					60.0	60.0	52.4
Progression Factor		0.73	0.77		0.03					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.1		0.1					117.0	70.4	0.1
Delay (s)		23.6	21.8		0.8					177.0	130.4	52.5
Level of Service		C	C		A					F	F	D
Approach Delay (s)		23.2			0.8			0.0			128.1	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	51.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	56.4%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	EBR	NBT	SBT
Lane Group Flow (vph)	1123	527	937	846
v/c Ratio	0.88	0.89	0.78	0.94
Control Delay	40.1	48.7	42.7	52.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	40.1	48.7	42.7	52.3
Queue Length 50th (ft)	531	480	385	284
Queue Length 95th (ft)	#874	#887	471	#398
Internal Link Dist (ft)	871		483	927
Turn Bay Length (ft)				
Base Capacity (vph)	1274	591	1227	908
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.88	0.89	0.76	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	775	490	0	0	0	0	865	35	80	690	0
Future Volume (vph)	270	775	490	0	0	0	0	865	35	80	690	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		0.99	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			0.99	
Satd. Flow (prot)		3134	1454					3120			3124	
Flt Permitted		0.99	1.00					1.00			0.56	
Satd. Flow (perm)		3134	1454					3120			1754	
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	290	833	527	0	0	0	0	901	36	88	758	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1123	527	0	0	0	0	935	0	0	846	0
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		53.7	53.7					54.1			66.1	
Effective Green, g (s)		53.7	53.7					54.1			66.1	
Actuated g/C Ratio		0.38	0.38					0.39			0.47	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1202	557					1205			906	
v/s Ratio Prot			c0.36					0.30			c0.05	
v/s Ratio Perm		0.36									c0.39	
v/c Ratio		0.93	0.95					0.78			0.93	
Uniform Delay, d1		41.5	41.8					37.6			34.9	
Progression Factor		0.83	0.83					1.00			1.00	
Incremental Delay, d2		11.9	22.9					2.9			15.9	
Delay (s)		46.1	57.4					40.6			50.8	
Level of Service		D	E					D			D	
Approach Delay (s)		49.7			0.0			40.6			50.8	
Approach LOS		D			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	98.3%	ICU Level of Service	F	
Analysis Period (min)	15			

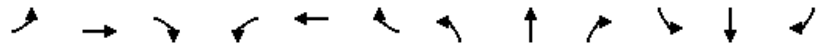
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1321	495	723	1118
v/c Ratio	1.17	1.21	0.72	1.15
Control Delay	125.0	153.6	21.5	114.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	125.0	153.6	21.5	114.6
Queue Length 50th (ft)	~444	~425	366	~525
Queue Length 95th (ft)	#542	#640	522	#663
Internal Link Dist (ft)	994		927	733
Turn Bay Length (ft)				
Base Capacity (vph)	1131	408	1005	973
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.17	1.21	0.72	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

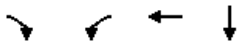
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	95	1050	110	465	680	0	0	695	345
Future Volume (vph)	0	0	0	95	1050	110	465	680	0	0	695	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		5.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.93	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4345		1570	1653			2774	
Flt Permitted					1.00		0.09	1.00			1.00	
Satd. Flow (perm)					4345		141	1653			2774	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	100	1105	116	495	723	0	0	747	371
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	26	0
Lane Group Flow (vph)	0	0	0	0	1311	0	495	723	0	0	1092	0
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						82
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					31.0		74.0	73.0			41.0	
Effective Green, g (s)					31.0		74.0	73.0			41.0	
Actuated g/C Ratio					0.26		0.62	0.61			0.34	
Clearance Time (s)					10.0		5.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1122		408	1005			947	
v/s Ratio Prot					c0.30		c0.27	0.44			0.39	
v/s Ratio Perm							c0.48					
v/c Ratio					1.17		1.21	0.72			1.15	
Uniform Delay, d1					44.5		39.1	16.4			39.5	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					85.8		116.6	4.4			80.9	
Delay (s)					130.3		155.7	20.8			120.4	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			130.3			75.6			120.4	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	109.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	516	970	545	687
v/c Ratio	1.00	0.73	0.45	1.20
Control Delay	66.7	12.4	1.2	138.9
Queue Delay	0.0	4.6	2.4	0.0
Total Delay	66.7	17.0	3.6	138.9
Queue Length 50th (ft)	120	84	15	~251
Queue Length 95th (ft)	#238	m78	m16	#365
Internal Link Dist (ft)			180	1744
Turn Bay Length (ft)	100			
Base Capacity (vph)	518	1334	1212	574
Starvation Cap Reductn	0	289	518	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	0.93	0.79	1.20

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)	0	0	470	960	540	0	0	0	0	0	625	35
Future Volume (vph)	0	0	470	960	540	0	0	0	0	0	625	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	15	15	15	12	12	12	12	12	12
Total Lost time (s)			9.0	10.0	10.0						6.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3432	1881						3212	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3432	1881						3212	
Peak-hour factor, PHF	0.91	0.91	0.91	0.99	0.99	0.99	0.88	0.88	0.88	0.96	0.96	0.96
Adj. Flow (vph)	0	0	516	970	545	0	0	0	0	0	651	36
RTOR Reduction (vph)	0	0	133	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	383	970	545	0	0	0	0	0	683	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	3%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1	1 2						3	
Permitted Phases												
Actuated Green, G (s)			14.0	35.0	59.0						16.0	
Effective Green, g (s)			14.0	35.0	59.0						16.0	
Actuated g/C Ratio			0.16	0.39	0.66						0.18	
Clearance Time (s)			9.0	10.0							6.0	
Vehicle Extension (s)			2.0	2.0							2.0	
Lane Grp Cap (vph)			384	1334	1233						571	
v/s Ratio Prot			c0.15	c0.28	0.29						c0.21	
v/s Ratio Perm												
v/c Ratio			1.00	0.73	0.44						1.20	
Uniform Delay, d1			38.0	23.4	7.5						37.0	
Progression Factor			1.00	0.51	0.13						1.00	
Incremental Delay, d2			44.6	0.3	0.0						104.4	
Delay (s)			82.6	12.2	1.0						141.4	
Level of Service			F	B	A						F	
Approach Delay (s)		82.6			8.2			0.0			141.4	
Approach LOS		F			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	56.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	92.0%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	430	15	20	500	55	15	0	40	0	0	0
Future Volume (Veh/h)	30	430	15	20	500	55	15	0	40	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.79	0.79	0.79	0.92	0.92	0.92
Hourly flow rate (vph)	38	544	19	22	543	60	19	0	51	0	0	0
Pedestrians		59						77			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		5						6			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1047			695							
pX, platoon unblocked	0.85			0.91			0.89	0.89	0.91	0.89	0.89	0.85
vC, conflicting volume	622			640			1382	1372	630	1307	1352	651
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	468			556			1145	1134	546	1061	1111	502
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			97			85	100	89	100	100	100
cM capacity (veh/h)	926			832			125	160	457	146	165	466

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	38	563	625	70
Volume Left	38	0	22	19
Volume Right	0	19	60	51
cSH	926	1700	832	266
Volume to Capacity	0.04	0.33	0.03	0.26
Queue Length 95th (ft)	3	0	2	26
Control Delay (s)	9.1	0.0	0.7	23.3
Lane LOS	A		A	C
Approach Delay (s)	0.6		0.7	23.3
Approach LOS				C

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	61.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	24	405	37	526	96	102	134
v/c Ratio	0.10	0.57	0.14	0.75	0.48	0.35	0.49
Control Delay	18.4	22.4	18.7	28.3	41.5	4.8	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	22.4	18.7	28.3	41.5	4.8	11.3
Queue Length 50th (ft)	5	113	8	165	40	0	0
Queue Length 95th (ft)	30	329	44	#580	101	4	16
Internal Link Dist (ft)		1050		967	51		70
Turn Bay Length (ft)	110		140				
Base Capacity (vph)	234	706	256	704	330	375	428
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.57	0.14	0.75	0.29	0.27	0.31

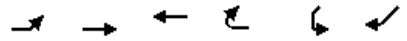
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	330	10	35	460	35	55	25	85	50	0	50
Future Volume (vph)	20	330	10	35	460	35	55	25	85	50	0	50
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.97	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1502	1517		1202	1515			1653	1241		1500	
Flt Permitted	0.32	1.00		0.44	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	504	1517		552	1515			1653	1241		1500	
Peak-hour factor, PHF	0.84	0.84	0.84	0.94	0.94	0.94	0.83	0.83	0.83	0.75	0.75	0.75
Adj. Flow (vph)	24	393	12	37	489	37	66	30	102	67	0	67
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	90	0	123	0
Lane Group Flow (vph)	24	405	0	37	526	0	0	96	12	0	11	0
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	35.9	35.9		35.9	35.9			9.4	9.4		6.6	
Effective Green, g (s)	35.9	35.9		35.9	35.9			9.4	9.4		6.6	
Actuated g/C Ratio	0.44	0.44		0.44	0.44			0.12	0.12		0.08	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	224	674		245	673			192	144		122	
v/s Ratio Prot		0.27			c0.35			c0.06			c0.01	
v/s Ratio Perm	0.05			0.07					0.01			
v/c Ratio	0.11	0.60		0.15	0.78			0.50	0.08		0.09	
Uniform Delay, d1	13.1	17.0		13.3	19.1			33.4	31.8		34.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.0	3.9		1.3	8.8			0.7	0.1		0.1	
Delay (s)	14.0	20.9		14.6	27.8			34.2	31.9		34.4	
Level of Service	B	C		B	C			C	C		C	
Approach Delay (s)		20.5			27.0			33.0			34.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	26.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	780	240	0	0	1595
Future Volume (Veh/h)	0	780	240	0	0	1595
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.91	0.91
Hourly flow rate (vph)	0	848	261	0	0	1753
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.94	
vC, conflicting volume	261				685	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	261				527	130
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1308				450	895

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	424	424	130	130	1753
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1753
cSH	1700	1700	1700	1700	895
Volume to Capacity	0.25	0.25	0.08	0.08	1.96
Queue Length 95th (ft)	0	0	0	0	2827
Control Delay (s)	0.0	0.0	0.0	0.0	448.6
Lane LOS					F
Approach Delay (s)	0.0		0.0		448.6
Approach LOS					F

Intersection Summary			
Average Delay	274.8		
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	NBL	NBT
Lane Group Flow (vph)	1846	234	232
v/c Ratio	0.64	0.55	0.56
Control Delay	0.5	48.7	42.3
Queue Delay	0.0	0.0	0.0
Total Delay	0.5	48.7	42.3
Queue Length 50th (ft)	0	189	160
Queue Length 95th (ft)	m0	284	254
Internal Link Dist (ft)	6		224
Turn Bay Length (ft)			
Base Capacity (vph)	2901	440	426
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.64	0.53	0.54

Intersection Summary

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)	315	1420	0	0	0	0	280	60	115	0	0	0
Future Volume (vph)	315	1420	0	0	0	0	280	60	115	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.98				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.93				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4436					1543	1405				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4436					1543	1405				
Peak-hour factor, PHF	0.94	0.94	0.94	0.25	0.25	0.25	0.97	0.97	1.00	0.86	0.86	0.86
Adj. Flow (vph)	335	1511	0	0	0	0	289	62	115	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	1846	0	0	0	0	234	207	0	0	0	0
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		88.6					38.4	38.4				
Effective Green, g (s)		88.6					38.4	38.4				
Actuated g/C Ratio		0.63					0.27	0.27				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		2807					423	385				
v/s Ratio Prot		c0.42					c0.15	0.15				
v/s Ratio Perm												
v/c Ratio		0.66					0.55	0.54				
Uniform Delay, d1		16.2					43.5	43.2				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.2					1.9	1.8				
Delay (s)		0.2					45.4	45.1				
Level of Service		A					D	D				
Approach Delay (s)		0.2			0.0			45.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	162	341	875	601
v/c Ratio	1.72	0.76	0.62	0.78
Control Delay	396.8	21.0	6.3	19.8
Queue Delay	14.2	0.0	1.2	8.9
Total Delay	411.0	21.0	7.5	28.7
Queue Length 50th (ft)	~153	45	28	226
Queue Length 95th (ft)	#282	124	m24	m355
Internal Link Dist (ft)	273		98	694
Turn Bay Length (ft)				
Base Capacity (vph)	94	504	1401	775
Starvation Cap Reductn	0	0	300	0
Spillback Cap Reductn	37	0	0	144
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.84	0.68	0.79	0.95

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)	0	0	0	137	10	310	111	650	0	0	540	25
Future Volume (vph)	0	0	0	137	10	310	111	650	0	0	540	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		0.98			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.96	1.00		0.99			1.00	
Satd. Flow (prot)					1579	1405		2959			1547	
Flt Permitted					0.96	1.00		0.75			1.00	
Satd. Flow (perm)					1579	1405		2225			1547	
Peak-hour factor, PHF	0.25	0.25	0.25	0.91	0.91	0.91	0.87	0.87	0.87	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	151	11	341	128	747	0	0	574	27
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	162	134	0	875	0	0	600	0
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	17.4		61.6			50.0	
Effective Green, g (s)					6.0	17.4		55.6			50.0	
Actuated g/C Ratio					0.06	0.17		0.56			0.50	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	244		1237			773	
v/s Ratio Prot					c0.10	0.10					c0.39	
v/s Ratio Perm								c0.39				
v/c Ratio					1.72	0.55		0.71			0.78	
Uniform Delay, d1					47.0	37.7		16.2			20.4	
Progression Factor					1.00	1.00		0.46			0.71	
Incremental Delay, d2					366.1	1.3		0.6			4.4	
Delay (s)					413.1	39.1		8.1			19.0	
Level of Service					F	D		A			B	
Approach Delay (s)		0.0			159.5			8.1			19.0	
Approach LOS		A			F			A			B	

Intersection Summary				
HCM 2000 Control Delay	49.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	WBT	NBT
Lane Group Flow (vph)	1878	426
v/c Ratio	1.08	0.85
Control Delay	72.7	54.6
Queue Delay	1.3	0.0
Total Delay	74.0	54.6
Queue Length 50th (ft)	~428	125
Queue Length 95th (ft)	#525	#197
Internal Link Dist (ft)	904	1076
Turn Bay Length (ft)		
Base Capacity (vph)	1742	500
Starvation Cap Reductn	0	0
Spillback Cap Reductn	5	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.08	0.85

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1425	435	75	300	0	0	0	0
Future Volume (vph)	0	0	0	0	1425	435	75	300	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					10.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.96			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					4323			3217				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					4323			3217				
Peak-hour factor, PHF	0.25	0.25	0.25	0.99	0.99	0.99	0.88	0.88	0.88	0.25	0.25	0.25
Adj. Flow (vph)	0	0	0	0	1439	439	85	341	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	61	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1817	0	0	426	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					35.0			14.0				
Effective Green, g (s)					35.0			14.0				
Actuated g/C Ratio					0.39			0.16				
Clearance Time (s)					10.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1681			500				
v/s Ratio Prot					c0.42							
v/s Ratio Perm								0.13				
v/c Ratio					1.08			0.85				
Uniform Delay, d1					27.5			37.0				
Progression Factor					1.00			1.00				
Incremental Delay, d2					47.4			12.7				
Delay (s)					74.9			49.7				
Level of Service					E			D				
Approach Delay (s)		0.0			74.9			49.7			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM 2000 Control Delay	70.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Capacity Analysis Worksheets

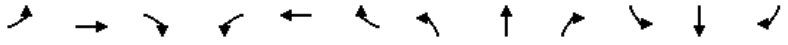
2025 No Build Conditions

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1429	782	1087	410
v/c Ratio	1.24	0.63	1.00	0.72
Control Delay	143.2	26.9	51.5	35.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	143.2	26.9	51.5	35.2
Queue Length 50th (ft)	~597	206	~229	220
Queue Length 95th (ft)	#733	271	#503	338
Internal Link Dist (ft)	630	2587	542	544
Turn Bay Length (ft)				
Base Capacity (vph)	1155	1236	1082	568
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.24	0.63	1.00	0.72

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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	960	355	0	625	95	0	815	185	0	375	2
Future Volume (vph)	0	960	355	0	625	95	0	815	185	0	375	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.95			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.97			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2890			3093			2850			1495	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2890			3093			2850			1495	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1043	386	0	679	103	0	886	201	0	408	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1429	0	0	782	0	0	1087	0	0	410	0
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		40.0			40.0			38.0			38.0	
Effective Green, g (s)		40.0			40.0			38.0			38.0	
Actuated g/C Ratio		0.40			0.40			0.38			0.38	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1156			1237			1083			568	
v/s Ratio Prot		c0.49			0.25			c0.38			0.27	
v/s Ratio Perm												
v/c Ratio		1.24			0.63			1.00			0.72	
Uniform Delay, d1		30.0			24.1			31.0			26.5	
Progression Factor		1.00			1.00			0.77			1.00	
Incremental Delay, d2		113.9			0.8			25.8			7.7	
Delay (s)		143.9			24.9			49.6			34.2	
Level of Service		F			C			D			C	
Approach Delay (s)		143.9			24.9			49.6			34.2	
Approach LOS		F			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	79.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

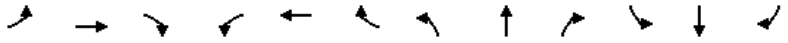
Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	241	315	576	834
v/c Ratio	1.12	1.44	0.63	1.63
Control Delay	137.0	252.8	32.0	306.6
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	137.0	252.8	32.0	306.8
Queue Length 50th (ft)	~186	~258	162	~783
Queue Length 95th (ft)	#347	#440	221	m#644
Internal Link Dist (ft)		515	1850	98
Turn Bay Length (ft)				
Base Capacity (vph)	216	218	917	511
Starvation Cap Reductn	0	0	0	14
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.12	1.44	0.63	1.68

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)	341	10	160	0	0	0	0	490	40	402	365	0
Future Volume (vph)	341	10	160	0	0	0	0	490	40	402	365	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.98	
Frt	1.00	0.92						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.97	
Satd. Flow (prot)	1543	1241						2786			1480	
Flt Permitted	0.95	0.98						1.00			0.41	
Satd. Flow (perm)	1543	1241						2786			623	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	371	11	174	0	0	0	0	533	43	437	397	0
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	241	270	0	0	0	0	0	576	0	0	834	0
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	14.0	14.0						33.0			63.0	
Effective Green, g (s)	14.0	14.0						33.0			63.0	
Actuated g/C Ratio	0.14	0.14						0.33			0.63	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	216	173						919			478	
v/s Ratio Prot	0.16	c0.22						0.21			c0.17	
v/s Ratio Perm											c0.92	
v/c Ratio	1.12	1.56						0.63			1.74	
Uniform Delay, d1	43.0	43.0						28.3			18.5	
Progression Factor	1.00	1.00						1.00			1.42	
Incremental Delay, d2	95.8	279.2						3.2			335.9	
Delay (s)	138.8	322.2						31.5			362.2	
Level of Service	F	F						C			F	
Approach Delay (s)		242.7			0.0			31.5			362.2	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	231.5	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.97			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	90.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	217	343	87	337	239	402	163	228
v/c Ratio	0.70	0.61	0.28	0.71	0.79	0.86	0.55	0.66
Control Delay	41.5	43.4	26.5	49.2	56.1	58.0	52.7	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	43.4	26.5	49.2	56.1	58.0	52.7	46.5
Queue Length 50th (ft)	129	271	47	270	165	328	126	159
Queue Length 95th (ft)	#249	#422	85	#423	#306	#526	203	245
Internal Link Dist (ft)		468		512		175	441	
Turn Bay Length (ft)	250		175		125			160
Base Capacity (vph)	311	561	338	474	302	506	342	366
Starvation Cap Reductn	0	0	0	0	0	1	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	0.26	0.71	0.79	0.80	0.48	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	305	10	80	300	10	220	245	125	5	145	210
Future Volume (vph)	200	305	10	80	300	10	220	245	125	5	145	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.94			1.00	0.89
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.95	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1565	1603		1532	1544		1470	1409			1586	1231
Flt Permitted	0.33	1.00		0.42	1.00		0.54	1.00			0.98	1.00
Satd. Flow (perm)	542	1603		671	1544		839	1409			1562	1231
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	332	11	87	326	11	239	266	136	5	158	228
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	217	343	0	87	337	0	239	402	0	0	163	228
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	51.1	40.9		44.1	37.4		32.6	36.6			22.4	32.6
Effective Green, g (s)	51.1	40.9		44.1	37.4		32.6	36.6			22.4	32.6
Actuated g/C Ratio	0.42	0.34		0.36	0.31		0.27	0.30			0.19	0.27
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	315	541		292	477		279	426			289	392
v/s Ratio Prot	0.06	0.21		0.02	0.22		0.07	c0.29				c0.05
v/s Ratio Perm	c0.23			0.09			0.16				0.10	0.14
v/c Ratio	0.69	0.63		0.30	0.71		0.86	0.94			0.56	0.58
Uniform Delay, d1	26.2	33.7		26.3	36.9		40.7	41.2			44.9	38.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	4.9	5.6		0.2	8.5		21.2	29.3			1.5	1.4
Delay (s)	31.1	39.3		26.5	45.5		61.9	70.5			46.4	39.7
Level of Service	C	D		C	D		E	E			D	D
Approach Delay (s)		36.1			41.6			67.3			42.5	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	121.0	Sum of lost time (s)	29.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	125	21	614	483
v/c Ratio	0.55	0.11	0.70	0.61
Control Delay	26.1	25.0	18.2	16.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.1	25.0	18.2	16.0
Queue Length 50th (ft)	23	6	114	80
Queue Length 95th (ft)	90	29	#623	#471
Internal Link Dist (ft)	423	223	1753	102
Turn Bay Length (ft)				
Base Capacity (vph)	402	392	874	794
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.05	0.70	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	540	0	0	385	60
Future Volume (vph)	75	0	40	5	10	5	25	540	0	0	385	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			0.98	
Flpb, ped/bikes		0.94			0.99			1.00			1.00	
Frt		0.95			0.97			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1309			1251			1358			1204	
Flt Permitted		0.79			0.93			0.97			1.00	
Satd. Flow (perm)		1067			1175			1321			1204	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	43	5	11	5	27	587	0	0	418	65
RTOR Reduction (vph)	0	53	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	72	0	0	17	0	0	614	0	0	483	0
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		5			5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		12.3			12.3			51.6			51.6	
Effective Green, g (s)		12.3			12.3			51.6			51.6	
Actuated g/C Ratio		0.15			0.15			0.64			0.64	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		161			178			840			766	
v/s Ratio Prot											0.40	
v/s Ratio Perm		c0.07			0.01			c0.46				
v/c Ratio		0.44			0.09			0.73			0.63	
Uniform Delay, d1		31.3			29.6			10.0			9.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			0.3			5.6			3.9	
Delay (s)		33.9			29.9			15.6			12.9	
Level of Service		C			C			B			B	
Approach Delay (s)		33.9			29.9			15.6			12.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

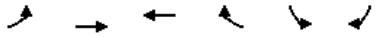
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	190	1842	1261	658	397	174
v/c Ratio	0.84	1.04	1.14	1.42	0.83	0.25
Control Delay	76.4	55.9	87.3	212.5	51.8	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	55.9	87.3	212.5	51.8	14.5
Queue Length 50th (ft)	132	~740	~541	~625	260	60
Queue Length 95th (ft)	#258	#879	m401	m#520	#424	103
Internal Link Dist (ft)		431	869		1753	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	225	1773	1111	465	478	709
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.04	1.14	1.42	0.83	0.25

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	175	1695	1160	605	365	160
Future Volume (vph)	175	1695	1160	605	365	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1417	3025	3020	1263	1547	1338
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1417	3025	3020	1263	1547	1338
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	1842	1261	658	397	174
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	190	1842	1261	658	397	170
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	17.5	64.5	40.5	40.5	34.0	57.5
Effective Green, g (s)	17.5	58.0	40.5	40.5	34.0	57.5
Actuated g/C Ratio	0.16	0.53	0.37	0.37	0.31	0.52
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	225	1595	1111	465	478	699
v/s Ratio Prot	0.13	c0.61	0.42		c0.26	0.13
v/s Ratio Perm				c0.52		
v/c Ratio	0.84	1.15	1.14	1.42	0.83	0.24
Uniform Delay, d1	44.9	26.0	34.8	34.8	35.3	14.3
Progression Factor	1.00	1.00	0.69	0.70	1.00	1.00
Incremental Delay, d2	30.3	77.3	62.0	188.0	15.4	0.8
Delay (s)	75.2	103.3	86.1	212.2	50.7	15.2
Level of Service	E	F	F	F	D	B
Approach Delay (s)		100.7	129.3		39.9	
Approach LOS		F	F		D	

Intersection Summary			
HCM 2000 Control Delay	105.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

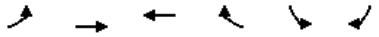
Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	16	723	2174	147
v/c Ratio	0.21	0.33	1.15	0.91
Control Delay	49.3	8.3	96.8	100.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.3	8.3	96.8	100.4
Queue Length 50th (ft)	11	47	~887	104
Queue Length 95th (ft)	m11	m185	#1361	#227
Internal Link Dist (ft)		869	980	202
Turn Bay Length (ft)	170			
Base Capacity (vph)	75	2206	1886	162
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.33	1.15	0.91

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	665	1945	55	110	25
Future Volume (vph)	15	665	1945	55	110	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.98	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1285	2973	2980		1554	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1285	2973	2980		1554	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	723	2114	60	120	27
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	16	723	2174	0	147	0
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	76.0	64.0		11.5	
Effective Green, g (s)	6.5	70.5	64.0		11.5	
Actuated g/C Ratio	0.06	0.64	0.58		0.10	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	75	1905	1733		162	
v/s Ratio Prot	0.01	c0.24	c0.73		c0.09	
v/s Ratio Perm						
v/c Ratio	0.21	0.38	1.25		0.91	
Uniform Delay, d1	49.3	9.4	23.0		48.7	
Progression Factor	0.98	1.17	1.00		1.00	
Incremental Delay, d2	0.0	0.0	119.4		43.6	
Delay (s)	48.2	11.0	142.4		92.3	
Level of Service	D	B	F		F	
Approach Delay (s)		11.8	142.4		92.3	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	108.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	NEL	NER
Lane Group Flow (vph)	16	832	457	113	448	896
v/c Ratio	0.10	1.84	0.38	0.49	0.72	0.78
Control Delay	53.9	421.2	17.1	24.1	39.3	38.7
Queue Delay	0.0	0.3	1.2	1.2	59.8	53.7
Total Delay	53.9	421.5	18.3	25.3	99.1	92.3
Queue Length 50th (ft)	13	~603	54	18	327	374
Queue Length 95th (ft)	36	#736	72	81	468	469
Internal Link Dist (ft)		199	90	45	468	
Turn Bay Length (ft)	100					
Base Capacity (vph)	168	451	1194	231	623	1144
Starvation Cap Reductn	0	0	498	0	0	0
Spillback Cap Reductn	0	15	0	31	369	677
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	1.91	0.66	0.56	1.76	1.92

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.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	15	765	275	145	5	15	85	2	5	1230
Future Volume (vph)	15	765	275	145	5	15	85	2	5	1230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.95			0.89			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1177	3160	3027			1490			1386	2544
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1177	3160	3027			1490			1386	2544
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	832	299	158	5	16	92	2	5	1337
RTOR Reduction (vph)	0	0	47	0	0	83	0	0	0	0
Lane Group Flow (vph)	16	832	410	0	0	30	0	0	448	896
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	20.0	20.0	56.0			14.0			58.0	63.0
Effective Green, g (s)	20.0	20.0	56.0			14.0			58.0	63.0
Actuated g/C Ratio	0.14	0.14	0.40			0.10			0.41	0.45
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	168	451	1210			149			623	1144
v/s Ratio Prot	0.01	c0.26	c0.14			c0.02			0.15	c0.35
v/s Ratio Perm									0.17	
v/c Ratio	0.10	1.84	0.34			0.20			0.72	0.78
Uniform Delay, d1	52.1	60.0	29.1			57.9			33.2	32.7
Progression Factor	1.00	1.00	0.63			1.00			1.00	1.00
Incremental Delay, d2	1.1	388.7	0.1			0.2			4.3	3.8
Delay (s)	53.3	448.7	18.3			58.1			37.5	36.5
Level of Service	D	F	B			E			D	D
Approach Delay (s)		441.2	18.3			58.1			36.8	
Approach LOS		F	B			E			D	

Intersection Summary			
HCM 2000 Control Delay	158.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1864	397	364	205	399	103
v/c Ratio	0.86	0.55	0.39	1.04	0.98	0.33
Control Delay	27.8	9.5	0.6	130.8	98.0	6.7
Queue Delay	48.0	57.9	0.0	0.0	0.0	0.1
Total Delay	75.7	67.3	0.6	130.8	98.0	6.8
Queue Length 50th (ft)	515	197	1	~219	201	0
Queue Length 95th (ft)	m413	m132	m1	#401	#315	30
Internal Link Dist (ft)	90		6		182	
Turn Bay Length (ft)		100				
Base Capacity (vph)	2167	724	927	198	409	308
Starvation Cap Reductn	954	394	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	11
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.54	1.20	0.39	1.04	0.98	0.35

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)	0	1715	365	10	325	0	0	0	0	330	225	95
Future Volume (vph)	0	1715	365	10	325	0	0	0	0	330	225	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4101	1236		3244					1387	2866	1365
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4101	1236		3103					1387	2866	1365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1864	397	11	353	0	0	0	0	359	245	103
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	88
Lane Group Flow (vph)	0	1864	326	0	364	0	0	0	0	205	399	15
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		74.0	74.0		58.0					20.0	20.0	20.0
Effective Green, g (s)		74.0	74.0		58.0					20.0	20.0	20.0
Actuated g/C Ratio		0.53	0.53		0.41					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		2167	653		1313					198	409	195
v/s Ratio Prot		c0.45			c0.06					c0.15	0.14	
v/s Ratio Perm			0.26		0.06							0.01
v/c Ratio		0.86	0.50		0.28					1.04	0.98	0.08
Uniform Delay, d1		28.5	21.1		27.1					60.0	59.8	52.0
Progression Factor		0.94	0.70		0.02					1.00	1.00	1.00
Incremental Delay, d2		0.3	0.0		0.0					73.5	37.6	0.1
Delay (s)		27.2	14.8		0.6					133.5	97.4	52.0
Level of Service		C	B		A					F	F	D
Approach Delay (s)		25.1			0.6			0.0			101.2	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	62.6%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

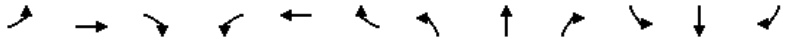
Lane Group	EBT	EBR	NBT	SBT
Lane Group Flow (vph)	1218	821	897	1054
v/c Ratio	0.91	1.32	0.79	1.16
Control Delay	34.9	177.5	45.6	120.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	34.9	177.5	45.6	120.3
Queue Length 50th (ft)	474	~916	380	~518
Queue Length 95th (ft)	m#875	m#1368	466	#736
Internal Link Dist (ft)	704		451	909
Turn Bay Length (ft)				
Base Capacity (vph)	1341	623	1131	905
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.91	1.32	0.79	1.16

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)	190	930	755	0	0	0	0	755	70	70	900	0
Future Volume (vph)	190	930	755	0	0	0	0	755	70	70	900	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		1.00	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			1.00	
Satd. Flow (prot)		3129	1454					3094			3129	
Flt Permitted		0.99	1.00					1.00			0.60	
Satd. Flow (perm)		3129	1454					3094			1873	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1011	821	0	0	0	0	821	76	76	978	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1218	821	0	0	0	0	892	0	0	1054	0
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		56.8	56.8					51.0			63.0	
Effective Green, g (s)		56.8	56.8					51.0			63.0	
Actuated g/C Ratio		0.41	0.41					0.36			0.45	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1269	589					1127			914	
v/s Ratio Prot			c0.56					0.29			c0.07	
v/s Ratio Perm		0.39									c0.45	
v/c Ratio		0.96	1.39					0.79			1.15	
Uniform Delay, d1		40.5	41.6					39.7			38.5	
Progression Factor		0.70	0.72					1.00			1.00	
Incremental Delay, d2		12.6	183.8					3.6			81.5	
Delay (s)		40.9	213.7					43.4			120.0	
Level of Service		D	F					D			F	
Approach Delay (s)		110.5			0.0			43.4			120.0	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	97.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.25			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	104.5%	ICU Level of Service	G	
Analysis Period (min)	15			

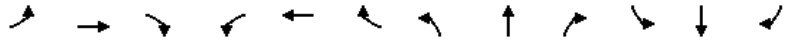
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1293	397	647	1267
v/c Ratio	1.10	1.21	0.66	1.16
Control Delay	97.1	156.7	20.6	118.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	97.1	156.7	20.6	118.4
Queue Length 50th (ft)	~413	~330	318	~606
Queue Length 95th (ft)	#510	#530	450	#746
Internal Link Dist (ft)	706		909	547
Turn Bay Length (ft)				
Base Capacity (vph)	1180	329	978	1089
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.10	1.21	0.66	1.16

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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	105	980	105	365	595	0	0	915	250
Future Volume (vph)	0	0	0	105	980	105	365	595	0	0	915	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		6.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.98		1.00	1.00			0.96	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4255		1570	1653			2912	
Flt Permitted					1.00		0.08	1.00			1.00	
Satd. Flow (perm)					4255		132	1653			2912	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	114	1065	114	397	647	0	0	995	272
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	0	0	1284	0	397	647	0	0	1246	0
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					33.0		71.0	71.0			44.0	
Effective Green, g (s)					33.0		71.0	71.0			44.0	
Actuated g/C Ratio					0.28		0.59	0.59			0.37	
Clearance Time (s)					10.0		6.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1170		329	978			1067	
v/s Ratio Prot					c0.30		c0.21	0.39			0.43	
v/s Ratio Perm							c0.50					
v/c Ratio					1.10		1.21	0.66			1.17	
Uniform Delay, d1					43.5		43.1	16.4			38.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					57.0		118.2	3.5			85.9	
Delay (s)					100.5		161.3	20.0			123.9	
Level of Service					F		F	B			F	
Approach Delay (s)		0.0			100.5			73.7			123.9	
Approach LOS		A			F			E			F	

Intersection Summary				
HCM 2000 Control Delay	100.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.21			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	105.2%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	413	984	870	881
v/c Ratio	0.67	1.37	1.04	1.14
Control Delay	39.3	195.2	43.5	107.2
Queue Delay	0.0	1.2	22.4	0.0
Total Delay	39.3	196.5	65.9	107.2
Queue Length 50th (ft)	134	~402	~430	~353
Queue Length 95th (ft)	193	m97	m156	m#290
Internal Link Dist (ft)			129	1760
Turn Bay Length (ft)	100			
Base Capacity (vph)	618	716	834	776
Starvation Cap Reductn	0	119	111	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	1.65	1.20	1.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

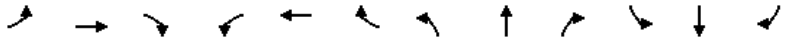
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	380	905	800	0	0	0	0	0	765	45
Future Volume (vph)	0	0	380	905	800	0	0	0	0	0	765	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3216	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3216	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	413	984	870	0	0	0	0	0	832	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	413	984	870	0	0	0	0	0	876	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			26.0	31.0	62.0						24.0	
Effective Green, g (s)			26.0	31.0	57.0						24.0	
Actuated g/C Ratio			0.26	0.31	0.57						0.24	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			618	925	897						771	
v/s Ratio Prot			0.17	c0.33	c0.55						c0.27	
v/s Ratio Perm												
v/c Ratio			0.67	1.06	0.97						1.14	
Uniform Delay, d1			33.1	34.5	20.7						38.0	
Progression Factor			1.00	0.70	1.01						1.08	
Incremental Delay, d2			2.1	31.4	4.1						69.8	
Delay (s)			35.3	55.6	25.1						110.7	
Level of Service			D	E	C						F	
Approach Delay (s)		35.3			41.3			0.0			110.7	
Approach LOS		D			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	59.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	365	25	35	660	150	10	0	15	0	0	0
Future Volume (Veh/h)	55	365	25	35	660	150	10	0	15	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	397	27	38	717	163	11	0	16	0	0	0
Pedestrians		40						50			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		3						4			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		745			513							
pX, platoon unblocked	0.47			0.92			0.51	0.51	0.92	0.51	0.51	0.47
vC, conflicting volume	899			474			1495	1556	460	1426	1488	858
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	217			380			1121	1239	365	987	1106	128
tC, single (s)	4.2			4.2			7.3	6.7	6.4	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.7	4.2	3.5	3.5	4.0	3.3
p0 queue free %	90			96			84	100	97	100	100	100
cM capacity (veh/h)	617			1016			70	69	565	99	90	421

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	60	424	918	27
Volume Left	60	0	38	11
Volume Right	0	27	163	16
cSH	617	1700	1016	146
Volume to Capacity	0.10	0.25	0.04	0.19
Queue Length 95th (ft)	8	0	3	16
Control Delay (s)	11.5	0.0	1.0	35.3
Lane LOS	B		A	E
Approach Delay (s)	1.4		1.0	35.3
Approach LOS				E

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	87.8%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	130	418	43	739	21	38	71
v/c Ratio	0.52	0.43	0.12	0.78	0.17	0.39	0.53
Control Delay	28.1	16.6	15.9	26.4	47.3	56.9	47.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	16.6	15.9	26.4	47.3	56.9	47.6
Queue Length 50th (ft)	42	123	10	325	14	25	31
Queue Length 95th (ft)	#207	#408	49	#905	37	57	77
Internal Link Dist (ft)		525		665	51		70
Turn Bay Length (ft)	110		140				
Base Capacity (vph)	251	969	347	943	239	186	163
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.43	0.12	0.78	0.09	0.20	0.44

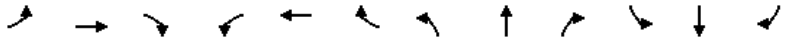
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	380	5	40	545	135	5	15	35	30	10	25
Future Volume (vph)	120	380	5	40	545	135	5	15	35	30	10	25
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.97			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	
Satd. Flow (prot)	1466	1460		1065	1425			1674	1297		1497	
Flt Permitted	0.24	1.00		0.47	1.00			0.99	1.00		0.98	
Satd. Flow (perm)	378	1460		526	1425			1674	1297		1497	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	413	5	43	592	147	5	16	38	33	11	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	22	0
Lane Group Flow (vph)	130	418	0	43	739	0	0	21	38	0	49	0
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	62.4	62.4		62.4	62.4			6.7	6.7		6.7	
Effective Green, g (s)	62.4	62.4		62.4	62.4			6.7	6.7		6.7	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.06	0.06		0.06	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	224	867		312	846			106	82		95	
v/s Ratio Prot		0.29			c0.52			0.01			c0.03	
v/s Ratio Perm	0.34			0.08					c0.03			
v/c Ratio	0.58	0.48		0.14	0.87			0.20	0.46		0.52	
Uniform Delay, d1	13.2	12.1		9.4	18.0			46.6	47.4		47.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	10.5	1.9		0.9	12.1			0.3	1.5		2.4	
Delay (s)	23.7	14.0		10.3	30.1			46.9	48.9		50.0	
Level of Service	C	B		B	C			D	D		D	
Approach Delay (s)		16.3			29.0			48.2			50.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	1	495	25	1	380	130	1	1	0	30	25	0
Future Volume (Veh/h)	1	495	25	1	380	130	1	1	0	30	25	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	538	27	1	413	141	1	1	0	33	27	0
Pedestrians					22			22			17	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		592			467							
pX, platoon unblocked	0.80			0.84			0.88	0.88	0.84	0.88	0.88	0.80
vC, conflicting volume	571			587			1074	1148	596	1078	1092	500
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331			411			599	684	421	604	619	243
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	90	92	100
cM capacity (veh/h)	962			945			325	314	512	338	342	624

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	566	555	2	60
Volume Left	1	1	1	33
Volume Right	27	141	0	0
cSH	962	945	319	340
Volume to Capacity	0.00	0.00	0.01	0.18
Queue Length 95th (ft)	0	0	0	16
Control Delay (s)	0.0	0.0	16.3	17.8
Lane LOS	A	A	C	C
Approach Delay (s)	0.0	0.0	16.3	17.8
Approach LOS			C	C

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	47.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	577	626	22	3
v/c Ratio	0.49	0.56	0.18	0.03
Control Delay	13.9	15.5	32.1	30.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	15.5	32.1	30.7
Queue Length 50th (ft)	0	0	8	1
Queue Length 95th (ft)	#522	#590	30	9
Internal Link Dist (ft)	387	525	202	64
Turn Bay Length (ft)				
Base Capacity (vph)	1189	1126	121	108
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.56	0.18	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	500	30	50	525	1	15	1	5	1	1	1
Future Volume (vph)	1	500	30	50	525	1	15	1	5	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.93			0.89	
Flpb, ped/bikes		1.00			1.00			0.78			0.90	
Frt		0.99			1.00			0.97			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1506			1543			1173			1270	
Flt Permitted		1.00			0.92			1.00			0.92	
Satd. Flow (perm)		1505			1422			1216			1187	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	543	33	54	571	1	16	1	5	1	1	1
RTOR Reduction (vph)	0	1	0	0	0	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	576	0	0	626	0	0	17	0	0	2	0
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		50.7			50.7			2.9			2.9	
Effective Green, g (s)		50.7			50.7			2.9			2.9	
Actuated g/C Ratio		0.63			0.63			0.04			0.04	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		953			901			44			43	
v/s Ratio Prot												
v/s Ratio Perm		0.38			c0.44			c0.01			0.00	
v/c Ratio		0.60			0.69			0.39			0.05	
Uniform Delay, d1		8.7			9.6			37.7			37.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.8			4.4			2.1			0.2	
Delay (s)		11.5			14.0			39.8			37.4	
Level of Service		B			B			D			D	
Approach Delay (s)		11.5			14.0			39.8			37.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	10	10	10	0	50	80	15	440	0	45	350	20
Future Volume (Veh/h)	10	10	10	0	50	80	15	440	0	45	350	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	11	0	54	87	16	478	0	49	380	22
Pedestrians		69			64						42	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		6			6						4	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								521				
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	1224	1132	460	1080	1143	584	471			542		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1198	1097	460	1040	1109	498	471			452		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	93	98	100	66	82	98			95		
cM capacity (veh/h)	71	161	567	145	159	476	1028			955		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	141	494	451
Volume Left	11	0	16	49
Volume Right	11	87	0	22
cSH	136	270	1028	955
Volume to Capacity	0.24	0.52	0.02	0.05
Queue Length 95th (ft)	22	70	1	4
Control Delay (s)	39.6	32.1	0.5	1.5
Lane LOS	E	D	A	A
Approach Delay (s)	39.6	32.1	0.5	1.5
Approach LOS	E	D		

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	780	280	0	0	1720
Future Volume (Veh/h)	0	780	280	0	0	1720
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	848	304	0	0	1870
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.93	
vC, conflicting volume	304				728	152
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304				555	152
tC, single (s)	4.1				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1261				427	864

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	424	424	152	152	1870
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1870
cSH	1700	1700	1700	1700	864
Volume to Capacity	0.25	0.25	0.09	0.09	2.16
Queue Length 95th (ft)	0	0	0	0	3278
Control Delay (s)	0.0	0.0	0.0	0.0	541.0
Lane LOS					F
Approach Delay (s)	0.0		0.0		541.0
Approach LOS					F

Intersection Summary			
Average Delay	334.8		
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		

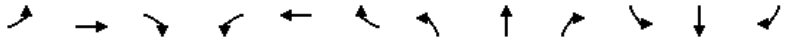
Lane Group	EBT	NBL	NBT
Lane Group Flow (vph)	2223	295	395
v/c Ratio	0.71	0.96	1.36
Control Delay	0.6	96.7	221.1
Queue Delay	0.0	0.0	0.0
Total Delay	0.6	96.7	221.1
Queue Length 50th (ft)	0	283	~480
Queue Length 95th (ft)	m0	#476	#702
Internal Link Dist (ft)	6		224
Turn Bay Length (ft)			
Base Capacity (vph)	3142	308	291
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.71	0.96	1.36

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)	320	1725	0	0	0	0	335	150	150	0	0	0
Future Volume (vph)	320	1725	0	0	0	0	335	150	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.94				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4314					1543	1367				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4314					1543	1367				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	1875	0	0	0	0	364	163	163	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	2223	0	0	0	0	295	377	0	0	0	0
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		99.0					28.0	28.0				
Effective Green, g (s)		99.0					28.0	28.0				
Actuated g/C Ratio		0.71					0.20	0.20				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		3050					308	273				
v/s Ratio Prot		c0.52					0.19	c0.28				
v/s Ratio Perm												
v/c Ratio		0.73					0.96	1.38				
Uniform Delay, d1		12.4					55.4	56.0				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.3					39.8	192.1				
Delay (s)		0.3					95.2	248.1				
Level of Service		A					F	F				
Approach Delay (s)		0.3			0.0			182.7			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

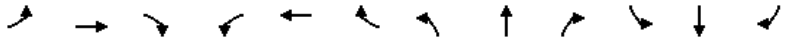
Lane Group	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	75	245	903	794
v/c Ratio	0.80	0.56	0.62	1.11
Control Delay	76.3	7.6	3.0	81.5
Queue Delay	75.2	0.0	1.3	5.6
Total Delay	151.5	7.6	4.3	87.1
Queue Length 50th (ft)	52	21	17	~273
Queue Length 95th (ft)	m47	m13	m11	m#410
Internal Link Dist (ft)	273		98	542
Turn Bay Length (ft)				
Base Capacity (vph)	94	631	1468	716
Starvation Cap Reductn	0	0	336	0
Spillback Cap Reductn	36	0	0	352
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.29	0.39	0.80	2.18

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)	0	0	0	67	2	225	56	775	0	0	700	30
Future Volume (vph)	0	0	0	67	2	225	56	775	0	0	700	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.95	1.00		1.00			1.00	
Satd. Flow (prot)					1576	1405		2910			1521	
Flt Permitted					0.95	1.00		0.78			1.00	
Satd. Flow (perm)					1576	1405		2270			1521	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	73	2	245	61	842	0	0	761	33
RTOR Reduction (vph)	0	0	0	0	0	206	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	75	39	0	903	0	0	792	0
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	16.0		63.0			47.0	
Effective Green, g (s)					6.0	16.0		57.0			47.0	
Actuated g/C Ratio					0.06	0.16		0.57			0.47	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	224		1293			714	
v/s Ratio Prot					c0.05	0.03					c0.52	
v/s Ratio Perm								c0.40				
v/c Ratio					0.80	0.17		0.70			1.11	
Uniform Delay, d1					46.4	36.3		15.4			26.5	
Progression Factor					1.54	1.77		0.20			0.94	
Incremental Delay, d2					4.0	0.0		0.6			55.7	
Delay (s)					75.5	64.2		3.7			80.7	
Level of Service					E	E		A			F	
Approach Delay (s)		0.0			66.8			3.7			80.7	
Approach LOS		A			E			A			F	

Intersection Summary				
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.10			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	86.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	WBT	NBT
Lane Group Flow (vph)	1734	511
v/c Ratio	1.68	0.99dl
Control Delay	339.7	39.2
Queue Delay	1.0	4.8
Total Delay	340.7	44.0
Queue Length 50th (ft)	~595	154
Queue Length 95th (ft)	#691	214
Internal Link Dist (ft)	682	1076
Turn Bay Length (ft)		
Base Capacity (vph)	1030	736
Starvation Cap Reductn	0	0
Spillback Cap Reductn	183	159
Storage Cap Reductn	0	0
Reduced v/c Ratio	2.05	0.89

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.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1365	230	340	130	0	0	0	0
Future Volume (vph)	0	0	0	0	1365	230	340	130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4295			2833				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4295			2833				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1484	250	370	141	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1734	0	0	511	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					24.0			26.0				
Effective Green, g (s)					24.0			26.0				
Actuated g/C Ratio					0.24			0.26				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1030			736				
v/s Ratio Prot					c0.40							
v/s Ratio Perm								0.18				
v/c Ratio					1.68			0.99dl				
Uniform Delay, d1					38.0			33.4				
Progression Factor					1.00			1.00				
Incremental Delay, d2					311.8			2.3				
Delay (s)					349.8			35.7				
Level of Service					F			D				
Approach Delay (s)		0.0			349.8			35.7			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	278.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

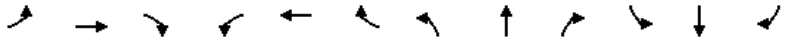
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1114	1109	1201	375
v/c Ratio	1.05	0.95	1.08	0.58
Control Delay	75.2	47.4	78.6	27.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	75.2	47.4	78.6	27.4
Queue Length 50th (ft)	~411	355	~447	181
Queue Length 95th (ft)	#541	#496	m#565	277
Internal Link Dist (ft)	561	2687	694	566
Turn Bay Length (ft)				
Base Capacity (vph)	1056	1173	1108	643
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.05	0.95	1.08	0.58

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)	0	725	300	0	915	105	0	795	310	0	330	15
Future Volume (vph)	0	725	300	0	915	105	0	795	310	0	330	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.90			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.96			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2857			3170			2703			1571	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2857			3170			2703			1571	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	788	326	0	995	114	0	864	337	0	359	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1114	0	0	1109	0	0	1201	0	0	375	0
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			56
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		37.0			37.0			41.0			41.0	
Effective Green, g (s)		37.0			37.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1057			1172			1108			644	
v/s Ratio Prot		c0.39			0.35			c0.44			0.24	
v/s Ratio Perm												
v/c Ratio		1.05			0.95			1.08			0.58	
Uniform Delay, d1		31.5			30.5			29.5			22.9	
Progression Factor		1.00			1.00			1.08			1.00	
Incremental Delay, d2		43.0			14.9			46.8			3.8	
Delay (s)		74.5			45.5			78.8			26.7	
Level of Service		E			D			E			C	
Approach Delay (s)		74.5			45.5			78.8			26.7	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	62.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

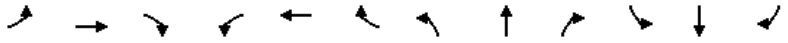
Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	248	292	717	801
v/c Ratio	1.47	1.69	0.71	1.44
Control Delay	273.6	360.2	33.7	219.1
Queue Delay	0.2	0.6	1.0	0.3
Total Delay	273.8	360.8	34.7	219.3
Queue Length 50th (ft)	~229	~269	201	~662
Queue Length 95th (ft)	#390	#445	#300	m#660
Internal Link Dist (ft)		515	1880	98
Turn Bay Length (ft)				
Base Capacity (vph)	169	173	1008	555
Starvation Cap Reductn	0	0	0	19
Spillback Cap Reductn	2	6	107	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.49	1.75	0.80	1.49

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.

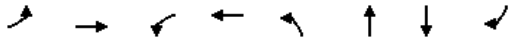
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	20	125	0	0	0	0	625	35	257	480	0
Future Volume (vph)	351	20	125	0	0	0	0	625	35	257	480	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.87						0.98			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			1.00	
Frt	1.00	0.93						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1292						2920			1559	
Flt Permitted	0.95	0.98						1.00			0.41	
Satd. Flow (perm)	1543	1292						2920			644	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	382	22	136	0	0	0	0	679	38	279	522	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	248	261	0	0	0	0	0	717	0	0	801	0
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	11.0	11.0						34.6			66.0	
Effective Green, g (s)	11.0	11.0						34.6			66.0	
Actuated g/C Ratio	0.11	0.11						0.35			0.66	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	169	142						1010			529	
v/s Ratio Prot	0.16	c0.20						0.25			c0.17	
v/s Ratio Perm											c0.83	
v/c Ratio	1.47	1.84						0.71			1.51	
Uniform Delay, d1	44.5	44.5						28.3			17.0	
Progression Factor	1.00	1.00						1.00			1.12	
Incremental Delay, d2	239.7	402.7						4.2			232.3	
Delay (s)	284.2	447.2						32.6			251.3	
Level of Service	F	F						C			F	
Approach Delay (s)		372.3			0.0			32.6			251.3	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	206.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.80			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	91.5%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	201	261	141	516	239	315	364	304
v/c Ratio	1.05	0.46	0.39	0.91	1.43	0.59	0.96	0.88
Control Delay	111.6	43.9	31.7	70.0	258.8	48.1	94.3	74.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Total Delay	111.6	43.9	31.7	70.0	258.8	49.5	94.3	74.9
Queue Length 50th (ft)	~148	215	90	518	~271	271	372	265
Queue Length 95th (ft)	#322	309	142	#756	#458	381	#582	#387
Internal Link Dist (ft)		468		467		175	411	
Turn Bay Length (ft)	250		175		125			160
Base Capacity (vph)	192	568	366	567	167	548	398	355
Starvation Cap Reductn	0	0	0	0	0	97	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.46	0.39	0.91	1.43	0.70	0.91	0.86

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	220	20	130	470	5	220	235	55	5	330	280
Future Volume (vph)	185	220	20	130	470	5	220	235	55	5	330	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.97			1.00	0.81
Flpb, ped/bikes	1.00	1.00		0.97	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1574	1653		1561	1672		1561	1583			1687	1170
Flt Permitted	0.15	1.00		0.48	1.00		0.16	1.00			0.99	1.00
Satd. Flow (perm)	253	1653		787	1672		269	1583			1679	1170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	239	22	141	511	5	239	255	60	5	359	304
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	201	261	0	141	516	0	239	315	0	0	364	304
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	61.4	51.3		60.0	50.6		43.8	47.8			33.7	43.8
Effective Green, g (s)	61.4	51.3		60.0	50.6		43.8	47.8			33.7	43.8
Actuated g/C Ratio	0.41	0.34		0.40	0.34		0.29	0.32			0.22	0.29
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	192	564		362	562		165	503			376	387
v/s Ratio Prot	c0.07	0.16		0.02	0.31		c0.10	0.20				0.05
v/s Ratio Perm	c0.36			0.13			c0.32				0.22	0.21
v/c Ratio	1.05	0.46		0.39	0.92		1.45	0.63			0.97	0.79
Uniform Delay, d1	40.4	38.7		30.2	47.9		48.7	43.6			57.8	48.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	77.8	2.7		0.3	22.4		232.4	1.8			37.4	9.3
Delay (s)	118.2	41.4		30.5	70.2		281.1	45.4			95.2	58.3
Level of Service	F	D		C	E		F	D			F	E
Approach Delay (s)		74.8			61.7			147.1			78.4	
Approach LOS		E			E			F			E	

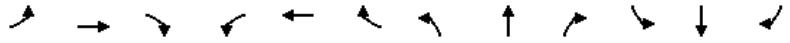
Intersection Summary			
HCM 2000 Control Delay	89.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	150.3	Sum of lost time (s)	29.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	82	32	451	750
v/c Ratio	0.61	0.12	0.38	0.69
Control Delay	22.1	24.2	8.3	15.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.1	24.2	8.3	15.5
Queue Length 50th (ft)	0	6	0	0
Queue Length 95th (ft)	#29	40	285	#706
Internal Link Dist (ft)	373	179	1731	122
Turn Bay Length (ft)				
Base Capacity (vph)	135	774	1195	1091
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.04	0.38	0.69

Intersection Summary

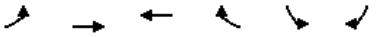
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	400	0	0	625	65
Future Volume (vph)	45	0	30	15	10	5	15	400	0	0	625	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		4.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.81			0.98			1.00			0.99	
Flpb, ped/bikes		0.87			0.94			1.00			1.00	
Frt		0.95			0.98			1.00			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		998			1267			1482			1325	
Flt Permitted		0.97			0.98			0.97			1.00	
Satd. Flow (perm)		998			1267			1443			1325	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	33	16	11	5	16	435	0	0	679	71
RTOR Reduction (vph)	0	82	0	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	27	0	0	451	0	0	750	0
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	D.Pm	NA		Perm	NA		Perm	NA			NA	
Protected Phases					5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		0.0			3.3			42.6			42.6	
Effective Green, g (s)		0.0			3.3			42.6			42.6	
Actuated g/C Ratio		0.00			0.05			0.68			0.68	
Clearance Time (s)					5.0			5.0			5.0	
Vehicle Extension (s)					4.0			4.0			4.0	
Lane Grp Cap (vph)		0			66			983			903	
v/s Ratio Prot											c0.57	
v/s Ratio Perm					0.02			0.31				
v/c Ratio		0.00			0.41			0.46			0.83	
Uniform Delay, d1		31.2			28.7			4.6			7.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			5.6			1.5			8.8	
Delay (s)		31.2			34.3			6.2			16.1	
Level of Service		C			C			A			B	
Approach Delay (s)		31.2			34.3			6.2			16.1	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



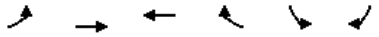
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	247	1571	1491	484	413	315
v/c Ratio	1.17	0.82	1.13	0.88	0.95	0.48
Control Delay	158.1	20.5	85.1	22.9	73.0	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	158.1	20.5	85.1	22.9	73.0	22.3
Queue Length 50th (ft)	~208	415	~650	273	287	144
Queue Length 95th (ft)	#369	525	m#658	m366	#481	224
Internal Link Dist (ft)		431	869		1731	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	211	1921	1314	552	434	661
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.82	1.13	0.88	0.95	0.48

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	227	1445	1372	445	380	290
Future Volume (vph)	227	1445	1372	445	380	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.93	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1501	3085	3110	1306	1593	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1501	3085	3110	1306	1593	1391
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	247	1571	1491	484	413	315
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	247	1571	1491	484	413	311
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	15.5	68.5	46.5	46.5	30.0	51.5
Effective Green, g (s)	15.5	62.0	46.5	46.5	30.0	51.5
Actuated g/C Ratio	0.14	0.56	0.42	0.42	0.27	0.47
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	211	1738	1314	552	434	651
v/s Ratio Prot	c0.16	0.51	c0.48		c0.26	0.22
v/s Ratio Perm				0.37		
v/c Ratio	1.17	0.90	1.13	0.88	0.95	0.48
Uniform Delay, d1	47.2	21.4	31.8	29.1	39.3	20.0
Progression Factor	1.00	1.00	0.69	0.66	1.00	1.00
Incremental Delay, d2	115.6	8.2	61.6	2.0	32.6	2.5
Delay (s)	162.9	29.5	83.4	21.2	71.9	22.5
Level of Service	F	C	F	C	E	C
Approach Delay (s)		47.7	68.2		50.6	
Approach LOS		D	E		D	

Intersection Summary			
HCM 2000 Control Delay	57.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	17	897	2022	169
v/c Ratio	0.19	0.39	1.00	1.27
Control Delay	46.3	8.5	40.9	209.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	46.3	8.5	40.9	209.5
Queue Length 50th (ft)	12	52	553	~151
Queue Length 95th (ft)	m13	m310	#1204	#288
Internal Link Dist (ft)		869	980	202
Turn Bay Length (ft)	170			
Base Capacity (vph)	89	2304	2017	133
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.39	1.00	1.27

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	825	1825	35	80	75
Future Volume (vph)	16	825	1825	35	80	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1516	3032	3100		1541	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1516	3032	3100		1541	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	897	1984	38	87	82
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	17	897	2022	0	169	0
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	78.0	66.0		9.5	
Effective Green, g (s)	6.5	72.5	66.0		9.5	
Actuated g/C Ratio	0.06	0.66	0.60		0.09	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	89	1998	1860		133	
v/s Ratio Prot	0.01	c0.30	c0.65		c0.11	
v/s Ratio Perm						
v/c Ratio	0.19	0.45	1.09		1.27	
Uniform Delay, d1	49.2	9.1	22.0		50.2	
Progression Factor	0.88	1.23	1.00		1.00	
Incremental Delay, d2	0.2	0.0	48.9		167.9	
Delay (s)	43.6	11.2	70.9		218.1	
Level of Service	D	B	E		F	
Approach Delay (s)		11.8	70.9		218.1	
Approach LOS		B	E		F	

Intersection Summary			
HCM 2000 Control Delay	61.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	NEL	NER
Lane Group Flow (vph)	54	940	522	92	421	841
v/c Ratio	0.19	1.72	0.35	0.56	0.64	0.70
Control Delay	51.9	365.2	4.6	34.2	34.7	34.3
Queue Delay	0.0	0.0	0.6	1.7	57.6	52.5
Total Delay	51.9	365.3	5.2	35.8	92.3	86.8
Queue Length 50th (ft)	43	~662	18	19	289	330
Queue Length 95th (ft)	85	#797	26	78	411	414
Internal Link Dist (ft)		199	90	45	468	
Turn Bay Length (ft)	100					
Base Capacity (vph)	278	547	1478	164	658	1197
Starvation Cap Reductn	0	0	571	0	0	0
Spillback Cap Reductn	0	3	0	16	337	613
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	1.73	0.58	0.62	1.31	1.44

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.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	50	865	290	190	5	15	65	5	2	1155
Future Volume (vph)	50	865	290	190	5	15	65	5	2	1155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.94			0.90			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1624	3191	3013			1528			1442	2619
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1624	3191	3013			1528			1442	2619
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	940	315	207	5	16	71	5	2	1255
RTOR Reduction (vph)	0	0	75	0	0	66	0	0	0	0
Lane Group Flow (vph)	54	940	447	0	0	26	0	0	421	841
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	24.0	24.0	68.0			9.0			59.0	64.0
Effective Green, g (s)	24.0	24.0	68.0			9.0			59.0	64.0
Actuated g/C Ratio	0.17	0.17	0.49			0.06			0.42	0.46
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	278	547	1463			98			659	1197
v/s Ratio Prot	0.03	c0.29	c0.15			c0.02			0.09	c0.32
v/s Ratio Perm									0.21	
v/c Ratio	0.19	1.72	0.31			0.26			0.64	0.70
Uniform Delay, d1	49.7	58.0	21.7			62.3			33.1	30.4
Progression Factor	1.00	1.00	0.23			1.00			1.00	1.00
Incremental Delay, d2	1.6	331.0	0.0			0.5			2.3	2.0
Delay (s)	51.3	389.0	5.1			62.9			35.4	32.4
Level of Service	D	F	A			E			D	C
Approach Delay (s)		370.6	5.1			62.9			33.4	
Approach LOS		F	A			E			C	

Intersection Summary			
HCM 2000 Control Delay	146.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

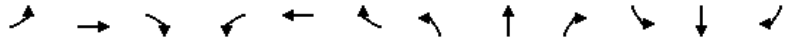
Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1712	554	353	214	476	179
v/c Ratio	0.92	0.70	0.32	1.05	1.13	0.52
Control Delay	28.1	10.8	1.0	133.0	136.4	13.2
Queue Delay	47.6	54.1	0.0	0.0	0.0	0.0
Total Delay	75.8	64.9	1.0	133.0	136.4	13.2
Queue Length 50th (ft)	410	191	1	~232	~274	0
Queue Length 95th (ft)	m350	m161	1	#415	#395	73
Internal Link Dist (ft)	90		6		182	
Turn Bay Length (ft)						
Base Capacity (vph)	1870	794	1103	204	422	341
Starvation Cap Reductn	913	342	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.79	1.23	0.32	1.05	1.13	0.52

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)	0	1575	510	10	315	0	0	0	0	345	290	165
Future Volume (vph)	0	1575	510	10	315	0	0	0	0	345	290	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4223	1260		3244					1429	2958	1319
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4223	1260		3103					1429	2958	1319
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1712	554	11	342	0	0	0	0	375	315	179
RTOR Reduction (vph)	0	0	236	0	0	0	0	0	0	0	0	153
Lane Group Flow (vph)	0	1712	318	0	353	0	0	0	0	214	476	26
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		62.0	62.0		59.0					20.0	20.0	20.0
Effective Green, g (s)		62.0	62.0		59.0					20.0	20.0	20.0
Actuated g/C Ratio		0.44	0.44		0.42					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		1870	558		1347					204	422	188
v/s Ratio Prot		c0.41			c0.07					0.15	c0.16	
v/s Ratio Perm			0.25		0.04							0.02
v/c Ratio		0.92	0.57		0.26					1.05	1.13	0.14
Uniform Delay, d1		36.5	29.1		26.3					60.0	60.0	52.4
Progression Factor		0.73	1.46		0.02					1.00	1.00	1.00
Incremental Delay, d2		0.8	0.1		0.1					76.5	83.5	0.1
Delay (s)		27.6	42.4		0.6					136.5	143.5	52.6
Level of Service		C	D		A					F	F	D
Approach Delay (s)		31.2			0.6			0.0			123.1	
Approach LOS		C			A			A			F	

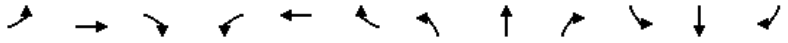
Intersection Summary				
HCM 2000 Control Delay	51.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	63.3%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	EBR	NBT	SBT
Lane Group Flow (vph)	1234	571	1011	848
v/c Ratio	0.98	0.98	0.83	0.96
Control Delay	52.7	62.1	45.3	55.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	52.7	62.1	45.3	55.5
Queue Length 50th (ft)	616	542	431	284
Queue Length 95th (ft)	#988	#979	523	#415
Internal Link Dist (ft)	871		483	927
Turn Bay Length (ft)				
Base Capacity (vph)	1261	584	1227	886
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.98	0.98	0.82	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	860	525	0	0	0	0	895	35	80	700	0
Future Volume (vph)	275	860	525	0	0	0	0	895	35	80	700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		0.99	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			0.99	
Satd. Flow (prot)		3137	1454					3121			3125	
Flt Permitted		0.99	1.00					1.00			0.54	
Satd. Flow (perm)		3137	1454					3121			1704	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	935	571	0	0	0	0	973	38	87	761	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1234	571	0	0	0	0	1009	0	0	848	0
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		53.1	53.1					54.7			66.7	
Effective Green, g (s)		53.1	53.1					54.7			66.7	
Actuated g/C Ratio		0.38	0.38					0.39			0.48	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1189	551					1219			893	
v/s Ratio Prot			0.39					0.32			c0.05	
v/s Ratio Perm		0.39									c0.40	
v/c Ratio		1.04	1.04					0.83			0.95	
Uniform Delay, d1		43.4	43.4					38.4			35.0	
Progression Factor		0.88	0.88					1.00			1.00	
Incremental Delay, d2		31.9	41.1					4.5			18.6	
Delay (s)		70.3	79.4					42.9			53.7	
Level of Service		E	E					D			D	
Approach Delay (s)		73.2			0.0			42.9			53.7	
Approach LOS		E			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	60.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.98			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	102.3%	ICU Level of Service	G	
Analysis Period (min)	15			

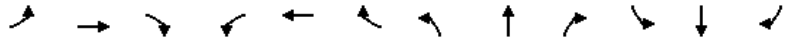
c Critical Lane Group

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1419	527	750	1146
v/c Ratio	1.25	1.29	0.75	1.17
Control Delay	159.6	183.9	22.7	121.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	159.6	183.9	22.7	121.2
Queue Length 50th (ft)	~504	~477	391	~547
Queue Length 95th (ft)	#601	#697	559	#685
Internal Link Dist (ft)	994		927	733
Turn Bay Length (ft)				
Base Capacity (vph)	1131	408	1005	983
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.25	1.29	0.75	1.17

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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	95	1100	110	485	690	0	0	705	350
Future Volume (vph)	0	0	0	95	1100	110	485	690	0	0	705	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		5.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.95	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4349		1570	1653			2813	
Flt Permitted					1.00		0.09	1.00			1.00	
Satd. Flow (perm)					4349		141	1653			2813	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	103	1196	120	527	750	0	0	766	380
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	1410	0	527	750	0	0	1124	0
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					31.0		74.0	73.0			41.0	
Effective Green, g (s)					31.0		74.0	73.0			41.0	
Actuated g/C Ratio					0.26		0.62	0.61			0.34	
Clearance Time (s)					10.0		5.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1123		408	1005			961	
v/s Ratio Prot					c0.32		c0.29	0.45			0.40	
v/s Ratio Perm							c0.51					
v/c Ratio					1.26		1.29	0.75			1.17	
Uniform Delay, d1					44.5		39.6	16.9			39.5	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					122.4		148.5	5.0			87.4	
Delay (s)					166.9		188.1	21.9			126.9	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			166.9			90.5			126.9	
Approach LOS		A			F			F			F	

Intersection Summary				
HCM 2000 Control Delay	129.6	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.33			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0	
Intersection Capacity Utilization	112.0%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	685	1082	696	745
v/c Ratio	1.47	0.98	0.72	1.48
Control Delay	251.5	22.2	6.8	256.0
Queue Delay	0.0	39.9	1.5	0.0
Total Delay	251.5	62.2	8.3	256.0
Queue Length 50th (ft)	~306	98	99	~312
Queue Length 95th (ft)	#426	m77	m67	#428
Internal Link Dist (ft)			180	1744
Turn Bay Length (ft)	100			
Base Capacity (vph)	467	1105	973	504
Starvation Cap Reductn	0	172	128	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.47	1.16	0.82	1.48

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)	0	0	630	995	640	0	0	0	0	0	650	35
Future Volume (vph)	0	0	630	995	640	0	0	0	0	0	650	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3218	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3218	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	685	1082	696	0	0	0	0	0	707	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	685	1082	696	0	0	0	0	0	741	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			17.0	40.0	62.0						14.0	
Effective Green, g (s)			17.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.19	0.44	0.63						0.16	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			467	1340	1046						500	
v/s Ratio Prot			c0.28	c0.36	0.42						c0.23	
v/s Ratio Perm												
v/c Ratio			1.47	0.81	0.67						1.48	
Uniform Delay, d1			36.5	21.7	10.5						38.0	
Progression Factor			1.00	0.54	0.81						1.00	
Incremental Delay, d2			221.5	0.3	0.1						227.3	
Delay (s)			258.0	12.1	8.6						265.3	
Level of Service			F	B	A						F	
Approach Delay (s)		258.0			10.7			0.0			265.3	
Approach LOS		F			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	122.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	118.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	590	15	20	590	65	15	0	40	0	0	0
Future Volume (Veh/h)	20	590	15	20	590	65	15	0	40	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	641	16	22	641	71	16	0	43	0	0	0
Pedestrians		59						77			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		5						6			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		740			515							
pX, platoon unblocked	0.72			0.76			0.85	0.85	0.76	0.85	0.85	0.72
vC, conflicting volume	731			734			1550	1545	726	1468	1518	754
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	436			486			907	902	475	810	869	469
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			91	100	90	100	100	100
cM capacity (veh/h)	808			733			174	209	415	207	218	413

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	22	657	734	59
Volume Left	22	0	22	16
Volume Right	0	16	71	43
cSH	808	1700	733	301
Volume to Capacity	0.03	0.39	0.03	0.20
Queue Length 95th (ft)	2	0	2	18
Control Delay (s)	9.6	0.0	0.8	19.8
Lane LOS	A		A	C
Approach Delay (s)	0.3		0.8	19.8
Approach LOS				C

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	67.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	43	559	33	642	16	16	196
v/c Ratio	0.18	0.63	0.14	0.74	0.15	0.20	1.11
Control Delay	21.1	25.1	20.4	29.0	46.7	49.5	139.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	25.1	20.4	29.0	46.7	49.5	139.5
Queue Length 50th (ft)	10	190	8	242	10	10	~129
Queue Length 95th (ft)	51	#586	41	#713	31	31	#272
Internal Link Dist (ft)		526		660	51		70
Turn Bay Length (ft)	110		140				
Base Capacity (vph)	242	881	240	864	231	174	176
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.63	0.14	0.74	0.07	0.09	1.11

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	510	5	30	535	55	10	5	15	90	20	70
Future Volume (vph)	40	510	5	30	535	55	10	5	15	90	20	70
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.96		0.98	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1506	1529		1209	1505			1653	1227		1540	
Flt Permitted	0.27	1.00		0.33	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	420	1529		419	1505			1653	1227		1540	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	554	5	33	582	60	11	5	16	98	22	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	43	559	0	33	642	0	0	16	16	0	174	0
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	52.4	52.4		52.4	52.4			4.2	4.2		10.0	
Effective Green, g (s)	52.4	52.4		52.4	52.4			4.2	4.2		10.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.04	0.04		0.10	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	220	801		219	788			69	51		154	
v/s Ratio Prot		0.37			c0.43			0.01			c0.11	
v/s Ratio Perm	0.10			0.08					c0.01			
v/c Ratio	0.20	0.70		0.15	0.81			0.23	0.31		1.13	
Uniform Delay, d1	12.6	17.9		12.3	19.8			46.3	46.5		45.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.0	5.0		1.5	9.1			0.6	1.3		110.6	
Delay (s)	14.6	22.9		13.8	28.8			47.0	47.8		155.6	
Level of Service	B	C		B	C			D	D		F	
Approach Delay (s)		22.3			28.1			47.4			155.6	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	425	5	1	535	75	5	20	0	60	10	0
Future Volume (Veh/h)	1	425	5	1	535	75	5	20	0	60	10	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	462	5	1	582	82	5	22	0	65	11	0
Pedestrians					29			29			21	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		547			464							
pX, platoon unblocked	0.73			0.90			0.78	0.78	0.90	0.78	0.78	0.73
vC, conflicting volume	685			496			1126	1182	522	1152	1144	644
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	387			378			722	794	408	756	745	331
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	91	100	70	96	100
cM capacity (veh/h)	843			1031			245	241	549	220	257	511

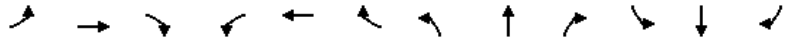
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	468	665	27	76
Volume Left	1	1	5	65
Volume Right	5	82	0	0
cSH	843	1031	241	225
Volume to Capacity	0.00	0.00	0.11	0.34
Queue Length 95th (ft)	0	0	9	36
Control Delay (s)	0.0	0.0	21.8	29.0
Lane LOS	A	A	C	D
Approach Delay (s)	0.0	0.0	21.8	29.0
Approach LOS			C	D

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	55.0%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	572	669	71	3
v/c Ratio	0.50	0.59	0.50	0.03
Control Delay	14.8	16.7	31.1	32.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.8	16.7	31.1	32.3
Queue Length 50th (ft)	69	89	15	1
Queue Length 95th (ft)	#524	#647	55	9
Internal Link Dist (ft)	384	526	214	74
Turn Bay Length (ft)				
Base Capacity (vph)	1134	1132	175	157
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.50	0.59	0.41	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	515	10	15	600	1	25	1	40	1	1	1
Future Volume (vph)	1	515	10	15	600	1	25	1	40	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.87			0.93	
Flpb, ped/bikes		1.00			1.00			0.93			0.95	
Frt		1.00			1.00			0.92			0.95	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		1584			1602			1257			1389	
Flt Permitted		1.00			0.98			0.87			0.93	
Satd. Flow (perm)		1583			1578			1120			1314	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	560	11	16	652	1	27	1	43	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	40	0	0	1	0
Lane Group Flow (vph)	0	572	0	0	669	0	0	31	0	0	2	0
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		55.4			55.4			6.6			6.6	
Effective Green, g (s)		55.4			55.4			6.6			6.6	
Actuated g/C Ratio		0.62			0.62			0.07			0.07	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		974			971			82			96	
v/s Ratio Prot												
v/s Ratio Perm		0.36			c0.42			c0.03			0.00	
v/c Ratio		0.59			0.69			0.38			0.02	
Uniform Delay, d1		10.4			11.5			39.7			38.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.6			4.0			1.1			0.0	
Delay (s)		13.0			15.5			40.8			38.7	
Level of Service		B			B			D			D	
Approach Delay (s)		13.0			15.5			40.8			38.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	45	45	0	10	85	5	420	0	25	575	5
Future Volume (Veh/h)	30	45	45	0	10	85	5	420	0	25	575	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	49	49	0	11	92	5	457	0	27	625	5
Pedestrians		113			85						37	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		9			8						3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								491				
pX, platoon unblocked	0.78	0.78		0.78	0.78	0.78				0.78		
vC, conflicting volume	1396	1346	740	1307	1349	579	743			542		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1367	1304	740	1254	1307	324	743			277		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	40	52	87	100	89	82	99			97		
cM capacity (veh/h)	55	101	377	50	101	502	783			930		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	131	103	462	657
Volume Left	33	0	5	27
Volume Right	49	92	0	5
cSH	108	353	783	930
Volume to Capacity	1.22	0.29	0.01	0.03
Queue Length 95th (ft)	216	30	0	2
Control Delay (s)	231.7	19.4	0.2	0.8
Lane LOS	F	C	A	A
Approach Delay (s)	231.7	19.4	0.2	0.8
Approach LOS	F	C		

Intersection Summary				
Average Delay			24.3	
Intersection Capacity Utilization			71.8%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	915	300	0	0	1560
Future Volume (Veh/h)	0	915	300	0	0	1560
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	995	326	0	0	1696
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.89	
vC, conflicting volume	326				824	163
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326				552	163
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1238				412	853

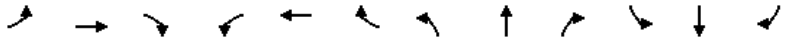
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	498	498	163	163	1696
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1696
cSH	1700	1700	1700	1700	853
Volume to Capacity	0.29	0.29	0.10	0.10	1.99
Queue Length 95th (ft)	0	0	0	0	2778
Control Delay (s)	0.0	0.0	0.0	0.0	462.3
Lane LOS					F
Approach Delay (s)	0.0		0.0		462.3
Approach LOS					F

Intersection Summary			
Average Delay	259.9		
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	NBL	NBT
Lane Group Flow (vph)	2087	286	290
v/c Ratio	0.73	0.65	0.68
Control Delay	0.6	51.9	49.3
Queue Delay	0.0	0.0	0.0
Total Delay	0.6	51.9	49.3
Queue Length 50th (ft)	0	241	225
Queue Length 95th (ft)	m0	351	341
Internal Link Dist (ft)	6		224
Turn Bay Length (ft)			
Base Capacity (vph)	2849	440	426
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.73	0.65	0.68

Intersection Summary

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)	375	1545	0	0	0	0	325	90	115	0	0	0
Future Volume (vph)	375	1545	0	0	0	0	325	90	115	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.98				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4433					1543	1425				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4433					1543	1425				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	408	1679	0	0	0	0	353	98	125	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	2087	0	0	0	0	286	271	0	0	0	0
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		87.0					40.0	40.0				
Effective Green, g (s)		87.0					40.0	40.0				
Actuated g/C Ratio		0.62					0.29	0.29				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		2754					440	407				
v/s Ratio Prot		c0.47					0.19	c0.19				
v/s Ratio Perm												
v/c Ratio		0.76					0.65	0.67				
Uniform Delay, d1		19.0					43.9	44.1				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.4					3.8	4.5				
Delay (s)		0.4					47.6	48.6				
Level of Service		A					D	D				
Approach Delay (s)		0.4			0.0			48.1			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

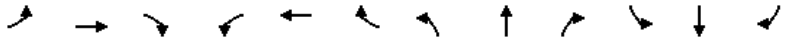
Lane Group	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	160	342	1061	685
v/c Ratio	1.70	0.76	0.89	0.89
Control Delay	388.0	21.1	12.4	27.5
Queue Delay	16.0	0.0	47.2	48.4
Total Delay	404.0	21.1	59.6	75.9
Queue Length 50th (ft)	~150	45	282	324
Queue Length 95th (ft)	#280	126	m291	m408
Internal Link Dist (ft)	273		98	694
Turn Bay Length (ft)				
Base Capacity (vph)	94	504	1195	774
Starvation Cap Reductn	0	0	247	0
Spillback Cap Reductn	40	0	0	174
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.96	0.68	1.12	1.14

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)	0	0	0	137	10	315	186	790	0	0	600	30
Future Volume (vph)	0	0	0	137	10	315	186	790	0	0	600	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		0.98			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.96	1.00		0.99			1.00	
Satd. Flow (prot)					1579	1405		2958			1545	
Flt Permitted					0.96	1.00		0.63			1.00	
Satd. Flow (perm)					1579	1405		1887			1545	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	149	11	342	202	859	0	0	652	33
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	160	135	0	1061	0	0	683	0
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	17.4		61.6			50.0	
Effective Green, g (s)					6.0	17.4		55.6			50.0	
Actuated g/C Ratio					0.06	0.17		0.56			0.50	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	244		1049			772	
v/s Ratio Prot					c0.10	0.10					c0.44	
v/s Ratio Perm								c0.56				
v/c Ratio					1.70	0.55		1.01			0.88	
Uniform Delay, d1					47.0	37.7		22.2			22.4	
Progression Factor					1.00	1.00		0.61			0.78	
Incremental Delay, d2					357.0	1.5		11.3			8.6	
Delay (s)					404.0	39.3		24.9			26.1	
Level of Service					F	D		C			C	
Approach Delay (s)		0.0			155.5			24.9			26.1	
Approach LOS		A			F			C			C	

Intersection Summary				
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.18			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	86.9%	ICU Level of Service	E	
Analysis Period (min)	15			

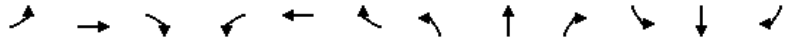
c Critical Lane Group

Lane Group	WBT	NBT
Lane Group Flow (vph)	2104	506
v/c Ratio	1.33	0.87
Control Delay	179.1	52.2
Queue Delay	0.2	3.0
Total Delay	179.3	55.2
Queue Length 50th (ft)	~573	147
Queue Length 95th (ft)	#669	#235
Internal Link Dist (ft)	904	1076
Turn Bay Length (ft)		
Base Capacity (vph)	1585	584
Starvation Cap Reductn	0	0
Spillback Cap Reductn	75	30
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.39	0.91

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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1490	445	145	320	0	0	0	0
Future Volume (vph)	0	0	0	0	1490	445	145	320	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.98				
Satd. Flow (prot)					4326			3092				
Flt Permitted					1.00			0.98				
Satd. Flow (perm)					4326			3092				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1620	484	158	348	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2104	0	0	506	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1586			584				
v/s Ratio Prot					c0.49							
v/s Ratio Perm								0.16				
v/c Ratio					1.33			0.87				
Uniform Delay, d1					28.5			35.4				
Progression Factor					1.00			1.00				
Incremental Delay, d2					151.4			12.4				
Delay (s)					179.9			47.8				
Level of Service					F			D				
Approach Delay (s)		0.0			179.9			47.8			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	154.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	118.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

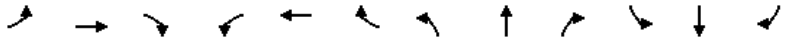
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	960	355	0	625	95	0	820	185	0	385	2
Future Volume (vph)	0	960	355	0	625	95	0	820	185	0	385	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		710			2667			622			624	
Travel Time (s)		13.8			52.0			17.0			21.3	
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1429	0	0	782	0	0	1092	0	0	420	0
v/c Ratio		1.24			0.63			1.01			0.74	
Control Delay		143.2			26.9			53.0			36.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		143.2			26.9			53.0			36.1	
Queue Length 50th (ft)		~597			206			~240			227	
Queue Length 95th (ft)		#733			271			#507			349	
Internal Link Dist (ft)		630			2587			542			544	
Turn Bay Length (ft)												
Base Capacity (vph)		1155			1236			1082			568	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.24			0.63			1.01			0.74	

Intersection Summary

Area Type: CBD

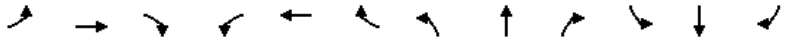
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	960	355	0	625	95	0	820	185	0	385	2
Future Volume (vph)	0	960	355	0	625	95	0	820	185	0	385	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.95			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.97			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2890			3093			2851			1495	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2890			3093			2851			1495	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1043	386	0	679	103	0	891	201	0	418	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1429	0	0	782	0	0	1092	0	0	420	0
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		40.0			40.0			38.0			38.0	
Effective Green, g (s)		40.0			40.0			38.0			38.0	
Actuated g/C Ratio		0.40			0.40			0.38			0.38	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1156			1237			1083			568	
v/s Ratio Prot		c0.49			0.25			c0.38			0.28	
v/s Ratio Perm												
v/c Ratio		1.24			0.63			1.01			0.74	
Uniform Delay, d1		30.0			24.1			31.0			26.7	
Progression Factor		1.00			1.00			0.79			1.00	
Incremental Delay, d2		113.9			0.8			26.7			8.4	
Delay (s)		143.9			24.9			51.2			35.1	
Level of Service		F			C			D			D	
Approach Delay (s)		143.9			24.9			51.2			35.1	
Approach LOS		F			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	79.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
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)	341	10	165	0	0	0	0	500	40	402	375	0
Future Volume (vph)	341	10	165	0	0	0	0	500	40	402	375	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1930			178	
Travel Time (s)		13.5			11.4			52.6			4.9	
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	241	320	0	0	0	0	0	586	0	0	845	0
v/c Ratio	1.12	1.47						0.64			1.66	
Control Delay	137.0	262.2						32.3			320.6	
Queue Delay	0.0	0.0						0.0			0.2	
Total Delay	137.0	262.2						32.3			320.8	
Queue Length 50th (ft)	~186	~265						165			~800	
Queue Length 95th (ft)	#347	#447						226			m#647	
Internal Link Dist (ft)		515			421			1850			98	
Turn Bay Length (ft)												
Base Capacity (vph)	216	218						918			508	
Starvation Cap Reductn	0	0						0			14	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.12	1.47						0.64			1.71	

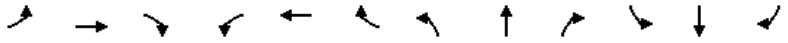
Intersection Summary

Area Type: CBD

~ 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)	341	10	165	0	0	0	0	500	40	402	375	0
Future Volume (vph)	341	10	165	0	0	0	0	500	40	402	375	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.98	
Frt	1.00	0.92						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.97	
Satd. Flow (prot)	1543	1238						2787			1481	
Flt Permitted	0.95	0.98						1.00			0.41	
Satd. Flow (perm)	1543	1238						2787			618	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	371	11	179	0	0	0	0	543	43	437	408	0
RTOR Reduction (vph)	0	46	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	241	274	0	0	0	0	0	586	0	0	845	0
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	14.0	14.0						33.0			63.0	
Effective Green, g (s)	14.0	14.0						33.0			63.0	
Actuated g/C Ratio	0.14	0.14						0.33			0.63	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	216	173						919			475	
v/s Ratio Prot	0.16	c0.22						0.21			c0.18	
v/s Ratio Perm											c0.94	
v/c Ratio	1.12	1.59						0.64			1.78	
Uniform Delay, d1	43.0	43.0						28.4			18.5	
Progression Factor	1.00	1.00						1.00			1.44	
Incremental Delay, d2	95.8	289.5						3.4			351.3	
Delay (s)	138.8	332.5						31.8			378.0	
Level of Service	F	F						C			F	
Approach Delay (s)		249.3			0.0			31.8			378.0	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	239.9	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	2.01			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	91.5%	ICU Level of Service	F	
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)	200	365	10	80	340	10	205	240	40	5	145	210
Future Volume (vph)	200	365	10	80	340	10	205	240	40	5	145	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			592			255			521	
Travel Time (s)		14.9			16.1			7.0			14.2	
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	217	408	0	87	381	0	223	304	0	0	163	228
v/c Ratio	0.74	0.71		0.31	0.79		0.77	0.63			0.59	0.70
Control Delay	44.5	46.4		26.9	52.9		54.7	42.3			55.1	48.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.2			0.0	0.0
Total Delay	44.5	46.4		26.9	52.9		54.7	42.5			55.1	48.6
Queue Length 50th (ft)	129	339		47	316		152	222			126	159
Queue Length 95th (ft)	#269	#547		85	#508		#273	327			203	245
Internal Link Dist (ft)		468			512			175			441	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	295	575		308	485		290	555			350	359
Starvation Cap Reductn	0	0		0	0		0	25			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	0.74	0.71		0.28	0.79		0.77	0.57			0.47	0.64

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	365	10	80	340	10	205	240	40	5	145	210
Future Volume (vph)	200	365	10	80	340	10	205	240	40	5	145	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.97			1.00	0.89
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.95	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1568	1605		1537	1545		1469	1508			1584	1230
Flt Permitted	0.28	1.00		0.34	1.00		0.53	1.00			0.99	1.00
Satd. Flow (perm)	467	1605		549	1545		819	1508			1564	1230
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	397	11	87	370	11	223	261	43	5	158	228
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	217	408	0	87	381	0	223	304	0	0	163	228
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	51.6	41.3		44.4	37.7		30.6	34.6			20.3	30.6
Effective Green, g (s)	51.6	41.3		44.4	37.7		30.6	34.6			20.3	30.6
Actuated g/C Ratio	0.43	0.35		0.37	0.32		0.26	0.29			0.17	0.26
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	297	556		260	488		266	437			266	377
v/s Ratio Prot	0.06	c0.25		0.02	0.25		c0.07	0.20				c0.05
v/s Ratio Perm	0.25			0.11			c0.14				0.10	0.13
v/c Ratio	0.73	0.73		0.33	0.78		0.84	0.70			0.61	0.60
Uniform Delay, d1	25.1	34.1		25.7	37.0		40.6	37.6			45.8	39.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	7.7	8.3		0.3	11.7		19.3	3.9			2.9	1.9
Delay (s)	32.8	42.5		26.0	48.7		59.9	41.5			48.7	40.9
Level of Service	C	D		C	D		E	D			D	D
Approach Delay (s)		39.1			44.5			49.3			44.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	119.2	Sum of lost time (s)	29.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

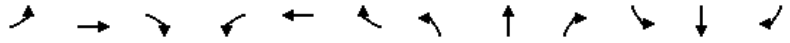
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	435	0	0	380	60
Future Volume (vph)	75	0	40	5	10	5	25	435	0	0	380	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		503			303			1833			182	
Travel Time (s)		13.7			8.3			50.0			5.0	
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	21	0	0	500	0	0	478	0
v/c Ratio		0.55			0.11			0.58			0.60	
Control Delay		26.1			25.0			14.7			15.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.1			25.0			14.7			15.8	
Queue Length 50th (ft)		23			6			80			79	
Queue Length 95th (ft)		90			29			#462			#464	
Internal Link Dist (ft)		423			223			1753			102	
Turn Bay Length (ft)												
Base Capacity (vph)		402			392			868			794	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.05			0.58			0.60	

Intersection Summary

Area Type: CBD

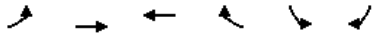
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	435	0	0	380	60
Future Volume (vph)	75	0	40	5	10	5	25	435	0	0	380	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			0.98	
Flpb, ped/bikes		0.94			0.99			1.00			1.00	
Frt		0.95			0.97			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1309			1251			1356			1204	
Flt Permitted		0.79			0.93			0.96			1.00	
Satd. Flow (perm)		1067			1175			1311			1204	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	43	5	11	5	27	473	0	0	413	65
RTOR Reduction (vph)	0	53	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	72	0	0	17	0	0	500	0	0	478	0
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		5			5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		12.3			12.3			51.6			51.6	
Effective Green, g (s)		12.3			12.3			51.6			51.6	
Actuated g/C Ratio		0.15			0.15			0.64			0.64	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		161			178			834			766	
v/s Ratio Prot											c0.40	
v/s Ratio Perm		c0.07			0.01			0.38				
v/c Ratio		0.44			0.09			0.60			0.62	
Uniform Delay, d1		31.3			29.6			8.7			8.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			0.3			3.2			3.8	
Delay (s)		33.9			29.9			11.8			12.7	
Level of Service		C			C			B			B	
Approach Delay (s)		33.9			29.9			11.8			12.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



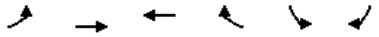
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	1730	1175	510	365	155
Future Volume (vph)	165	1730	1175	510	365	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		511	949		1833	
Travel Time (s)		10.0	18.5		50.0	
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	1880	1277	554	397	168
v/c Ratio	0.80	1.06	1.15	1.19	0.83	0.24
Control Delay	70.2	63.2	94.7	114.8	51.8	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	63.2	94.7	114.8	51.8	14.4
Queue Length 50th (ft)	123	~770	~554	~470	260	58
Queue Length 95th (ft)	#239	#908	m204	m199	#424	100
Internal Link Dist (ft)		431	869		1753	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	225	1773	1111	465	478	709
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.06	1.15	1.19	0.83	0.24

Intersection Summary	
Area Type:	CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	1730	1175	510	365	155
Future Volume (vph)	165	1730	1175	510	365	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1417	3025	3020	1263	1547	1338
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1417	3025	3020	1263	1547	1338
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	1880	1277	554	397	168
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	179	1880	1277	554	397	164
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	17.5	64.5	40.5	40.5	34.0	57.5
Effective Green, g (s)	17.5	58.0	40.5	40.5	34.0	57.5
Actuated g/C Ratio	0.16	0.53	0.37	0.37	0.31	0.52
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	225	1595	1111	465	478	699
v/s Ratio Prot	0.13	c0.62	0.42		c0.26	0.12
v/s Ratio Perm				c0.44		
v/c Ratio	0.80	1.18	1.15	1.19	0.83	0.23
Uniform Delay, d1	44.5	26.0	34.8	34.8	35.3	14.3
Progression Factor	1.00	1.00	0.73	0.73	1.00	1.00
Incremental Delay, d2	24.6	87.3	68.3	88.2	15.4	0.8
Delay (s)	69.1	113.3	93.8	113.6	50.7	15.1
Level of Service	E	F	F	F	D	B
Approach Delay (s)		109.4	99.8		40.1	
Approach LOS		F	F		D	

Intersection Summary			
HCM 2000 Control Delay	96.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	665	1845	355	120	40
Future Volume (vph)	50	665	1845	355	120	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		165	
Travel Time (s)		18.5	20.6		4.5	
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	723	2391	0	173	0
v/c Ratio	0.72	0.33	1.29		1.08	
Control Delay	55.4	8.3	157.1		141.7	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	55.4	8.3	157.1		141.7	
Queue Length 50th (ft)	39	47	~1069		~137	
Queue Length 95th (ft)	m39	m182	#1535		#275	
Internal Link Dist (ft)		869	980		85	
Turn Bay Length (ft)	170					
Base Capacity (vph)	75	2205	1852		160	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.72	0.33	1.29		1.08	

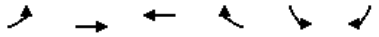
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	665	1845	355	120	40
Future Volume (vph)	50	665	1845	355	120	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.97	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1285	2973	2928		1533	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1285	2973	2928		1533	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	723	2005	386	130	43
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	54	723	2391	0	173	0
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	76.0	64.0		11.5	
Effective Green, g (s)	6.5	70.5	64.0		11.5	
Actuated g/C Ratio	0.06	0.64	0.58		0.10	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	75	1905	1703		160	
v/s Ratio Prot	c0.04	0.24	c0.82		c0.11	
v/s Ratio Perm						
v/c Ratio	0.72	0.38	1.40		1.08	
Uniform Delay, d1	50.9	9.4	23.0		49.2	
Progression Factor	0.95	1.18	1.00		1.00	
Incremental Delay, d2	2.5	0.0	185.4		94.5	
Delay (s)	50.8	11.1	208.4		143.7	
Level of Service	D	B	F		F	
Approach Delay (s)		13.9	208.4		143.7	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	159.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	20	770	305	145	5	15	85	2	5	1130
Future Volume (vph)	20	770	305	145	5	15	85	2	5	1130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	22	837	490	0	0	113	0	0	412	823
v/c Ratio	0.13	1.86	0.41			0.49			0.66	0.72
Control Delay	54.8	425.9	19.4			24.1			36.5	35.7
Queue Delay	0.0	0.3	1.2			1.2			60.2	54.1
Total Delay	54.8	426.2	20.6			25.3			96.7	89.8
Queue Length 50th (ft)	18	~607	68			18			289	329
Queue Length 95th (ft)	46	#740	82			81			414	414
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	168	451	1191			231			623	1144
Starvation Cap Reductn	0	0	466			0			0	0
Spillback Cap Reductn	0	14	0			31			367	674
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.13	1.92	0.68			0.56			1.61	1.75

Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	20	770	305	145	5	15	85	2	5	1130
Future Volume (vph)	20	770	305	145	5	15	85	2	5	1130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.95			0.89			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1177	3160	3039			1490			1385	2544
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1177	3160	3039			1490			1385	2544
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	837	332	158	5	16	92	2	5	1228
RTOR Reduction (vph)	0	0	39	0	0	83	0	0	0	0
Lane Group Flow (vph)	22	837	451	0	0	30	0	0	412	823
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	20.0	20.0	56.0			14.0			58.0	63.0
Effective Green, g (s)	20.0	20.0	56.0			14.0			58.0	63.0
Actuated g/C Ratio	0.14	0.14	0.40			0.10			0.41	0.45
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	168	451	1215			149			623	1144
v/s Ratio Prot	0.02	c0.26	c0.15			c0.02			0.14	c0.32
v/s Ratio Perm									0.16	
v/c Ratio	0.13	1.86	0.37			0.20			0.66	0.72
Uniform Delay, d1	52.4	60.0	29.6			57.9			32.7	31.3
Progression Factor	1.00	1.00	0.67			1.00			1.00	1.00
Incremental Delay, d2	1.6	393.6	0.1			0.2			2.9	2.4
Delay (s)	54.0	453.6	19.8			58.1			35.6	33.7
Level of Service	D	F	B			E			D	C
Approach Delay (s)		443.4	19.8			58.1			34.3	
Approach LOS		F	B			E			C	

Intersection Summary			
HCM 2000 Control Delay	163.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
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)	0	1615	370	10	355	0	0	0	0	335	235	95
Future Volume (vph)	0	1615	370	10	355	0	0	0	0	335	235	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1755	402	0	397	0	0	0	0	207	412	103
v/c Ratio		0.81	0.55		0.43					1.05	1.01	0.33
Control Delay		26.9	10.2		0.7					133.1	105.3	6.7
Queue Delay		48.4	57.4		0.0					0.0	0.0	0.2
Total Delay		75.3	67.6		0.7					133.1	105.3	6.9
Queue Length 50th (ft)		469	187		1					~224	~210	0
Queue Length 95th (ft)		m361	m137		m1					#404	#330	30
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)			100									
Base Capacity (vph)		2167	729		928					198	409	308
Starvation Cap Reductn		966	383		0					0	0	0
Spillback Cap Reductn		0	0		4					0	0	19
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.46	1.16		0.43					1.05	1.01	0.36

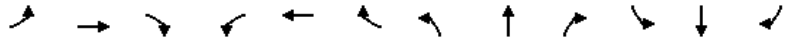
Intersection Summary

Area Type: CBD

~ 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.

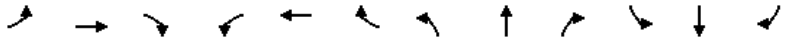
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1615	370	10	355	0	0	0	0	335	235	95
Future Volume (vph)	0	1615	370	10	355	0	0	0	0	335	235	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4101	1236		3244					1387	2866	1365
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4101	1236		3103					1387	2866	1365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1755	402	11	386	0	0	0	0	364	255	103
RTOR Reduction (vph)	0	0	76	0	0	0	0	0	0	0	0	88
Lane Group Flow (vph)	0	1755	326	0	397	0	0	0	0	207	412	15
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		74.0	74.0		58.0					20.0	20.0	20.0
Effective Green, g (s)		74.0	74.0		58.0					20.0	20.0	20.0
Actuated g/C Ratio		0.53	0.53		0.41					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		2167	653		1313					198	409	195
v/s Ratio Prot		c0.43			c0.06					c0.15	0.14	
v/s Ratio Perm			0.26		0.06							0.01
v/c Ratio		0.81	0.50		0.30					1.05	1.01	0.08
Uniform Delay, d1		27.2	21.1		27.5					60.0	60.0	52.0
Progression Factor		0.96	0.79		0.02					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0		0.0					76.4	46.3	0.1
Delay (s)		26.4	16.6		0.7					136.4	106.3	52.0
Level of Service		C	B		A					F	F	D
Approach Delay (s)		24.6			0.7			0.0			107.2	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	60.8%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group



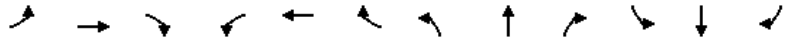
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	935	755	0	0	0	0	760	70	70	900	0
Future Volume (vph)	190	935	755	0	0	0	0	760	70	70	900	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		784			617			531			989	
Travel Time (s)		21.4			21.0			10.3			19.3	
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1223	821	0	0	0	0	902	0	0	1054	0
v/c Ratio		0.91	1.32					0.80			1.17	
Control Delay		36.1	178.1					45.9			120.9	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		36.1	178.1					45.9			120.9	
Queue Length 50th (ft)		454	~915					382			~519	
Queue Length 95th (ft)		m#880	m#1366					470			#736	
Internal Link Dist (ft)		704			537			451			909	
Turn Bay Length (ft)												
Base Capacity (vph)		1341	623					1131			904	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		0.91	1.32					0.80			1.17	

Intersection Summary	
Area Type:	CBD

~ 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)	190	935	755	0	0	0	0	760	70	70	900	0
Future Volume (vph)	190	935	755	0	0	0	0	760	70	70	900	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		1.00	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			1.00	
Satd. Flow (prot)		3129	1454					3095			3129	
Flt Permitted		0.99	1.00					1.00			0.59	
Satd. Flow (perm)		3129	1454					3095			1868	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1016	821	0	0	0	0	826	76	76	978	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1223	821	0	0	0	0	897	0	0	1054	0
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		56.8	56.8					51.0			63.0	
Effective Green, g (s)		56.8	56.8					51.0			63.0	
Actuated g/C Ratio		0.41	0.41					0.36			0.45	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1269	589					1127			912	
v/s Ratio Prot			c0.56					0.29			c0.07	
v/s Ratio Perm		0.39									c0.45	
v/c Ratio		0.96	1.39					0.80			1.16	
Uniform Delay, d1		40.6	41.6					39.8			38.5	
Progression Factor		0.72	0.73					1.00			1.00	
Incremental Delay, d2		13.7	184.2					3.7			82.5	
Delay (s)		42.8	214.5					43.5			121.0	
Level of Service		D	F					D			F	
Approach Delay (s)		111.8			0.0			43.5			121.0	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	98.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.26			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	104.8%	ICU Level of Service	G	
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)	0	0	0	105	990	105	370	595	0	0	915	250
Future Volume (vph)	0	0	0	105	990	105	370	595	0	0	915	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		762			786			989			627	
Travel Time (s)		20.8			21.4			19.3			12.2	
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1304	0	402	647	0	0	1267	0
v/c Ratio					1.11		1.22	0.66			1.16	
Control Delay					100.4		162.3	20.6			118.4	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					100.4		162.3	20.6			118.4	
Queue Length 50th (ft)					~419		~338	318			~606	
Queue Length 95th (ft)					#517		#540	450			#746	
Internal Link Dist (ft)		682			706			909			547	
Turn Bay Length (ft)												
Base Capacity (vph)					1180		329	978			1089	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.11		1.22	0.66			1.16	

Intersection Summary

Area Type: CBD

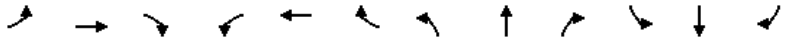
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	105	990	105	370	595	0	0	915	250
Future Volume (vph)	0	0	0	105	990	105	370	595	0	0	915	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		6.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.98		1.00	1.00			0.96	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4256		1570	1653			2912	
Flt Permitted					1.00		0.08	1.00			1.00	
Satd. Flow (perm)					4256		132	1653			2912	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	114	1076	114	402	647	0	0	995	272
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	0	0	1295	0	402	647	0	0	1246	0
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					33.0		71.0	71.0			44.0	
Effective Green, g (s)					33.0		71.0	71.0			44.0	
Actuated g/C Ratio					0.28		0.59	0.59			0.37	
Clearance Time (s)					10.0		6.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1170		329	978			1067	
v/s Ratio Prot					c0.30		c0.21	0.39			0.43	
v/s Ratio Perm							c0.51					
v/c Ratio					1.11		1.22	0.66			1.17	
Uniform Delay, d1					43.5		43.1	16.4			38.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					60.6		124.1	3.5			85.9	
Delay (s)					104.1		167.2	20.0			123.9	
Level of Service					F		F	B			F	
Approach Delay (s)		0.0			104.1			76.4			123.9	
Approach LOS		A			F			E			F	

Intersection Summary				
HCM 2000 Control Delay	103.0	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.23			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0	
Intersection Capacity Utilization	105.7%	ICU Level of Service	G	
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)	0	0	420	905	710	0	0	0	0	0	765	55
Future Volume (vph)	0	0	420	905	710	0	0	0	0	0	765	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		513			209			926			1840	
Travel Time (s)		14.0			5.7			21.0			41.8	
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	457	984	772	0	0	0	0	0	892	0
v/c Ratio			0.77	1.32	0.93						1.15	
Control Delay			44.3	169.7	20.2						112.7	
Queue Delay			0.0	1.0	40.4						0.0	
Total Delay			44.3	170.7	60.6						112.7	
Queue Length 50th (ft)			151	~398	330						~361	
Queue Length 95th (ft)			215	m85	m122						m#295	
Internal Link Dist (ft)		433			129			846			1760	
Turn Bay Length (ft)			100									
Base Capacity (vph)			618	746	850						775	
Starvation Cap Reductn			0	105	138						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.74	1.54	1.08						1.15	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

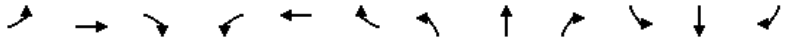
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	420	905	710	0	0	0	0	0	765	55
Future Volume (vph)	0	0	420	905	710	0	0	0	0	0	765	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3209	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3209	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	457	984	772	0	0	0	0	0	832	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	457	984	772	0	0	0	0	0	887	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			25.0	32.0	62.0						24.0	
Effective Green, g (s)			25.0	32.0	57.0						24.0	
Actuated g/C Ratio			0.25	0.32	0.57						0.24	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			594	955	897						770	
v/s Ratio Prot			0.19	c0.33	c0.49						c0.28	
v/s Ratio Perm												
v/c Ratio			0.77	1.03	0.86						1.15	
Uniform Delay, d1			34.8	34.0	18.1						38.0	
Progression Factor			1.00	0.64	1.03						1.06	
Incremental Delay, d2			5.4	18.0	0.8						75.8	
Delay (s)			40.2	39.6	19.4						116.2	
Level of Service			D	D	B						F	
Approach Delay (s)		40.2			30.8			0.0			116.2	
Approach LOS		D			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	375	40	70	575	120	20	15	45	0	0	0
Future Volume (Veh/h)	70	375	40	70	575	120	20	15	45	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	408	43	76	625	130	22	16	49	0	0	0
Pedestrians		40						50			19	
Lane Width (ft)		11.0						11.5			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		3						4			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		746			513							
pX, platoon unblocked	0.60			0.98			0.61	0.61	0.98	0.61	0.61	0.60
vC, conflicting volume	774			501			1448	1558	480	1478	1514	749
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	291			486			1360	1539	464	1408	1467	249
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			93			63	71	91	100	100	100
cM capacity (veh/h)	743			1019			60	56	566	43	63	462

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	76	451	76	755	22	65
Volume Left	76	0	76	0	22	0
Volume Right	0	43	0	130	0	49
cSH	743	1700	1019	1700	60	175
Volume to Capacity	0.10	0.27	0.07	0.44	0.37	0.37
Queue Length 95th (ft)	9	0	6	0	34	40
Control Delay (s)	10.4	0.0	8.8	0.0	96.3	37.4
Lane LOS	B		A		F	E
Approach Delay (s)	1.5		0.8		52.3	
Approach LOS					F	

Intersection Summary					
Average Delay	4.2				
Intersection Capacity Utilization	60.3%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	430	5	30	615	190	5	5	40	40	1	20
Future Volume (vph)	75	430	5	30	615	190	5	5	40	40	1	20
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	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		605			253			131			150	
Travel Time (s)		16.5			6.9			3.6			4.1	
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	472	0	33	875	0	0	10	43	0	66	0
v/c Ratio	0.47	0.47		0.10	0.91			0.08	0.42		0.52	
Control Delay	30.7	17.1		15.8	35.0			44.4	57.8		49.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	30.7	17.1		15.8	35.0			44.4	57.8		49.1	
Queue Length 50th (ft)	26	149		8	494			6	28		31	
Queue Length 95th (ft)	#150	#497		40	#1114			22	62		74	
Internal Link Dist (ft)		525			173			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	175	1002		332	966			233	186		157	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.47	0.47		0.10	0.91			0.04	0.23		0.42	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	430	5	30	615	190	5	5	40	40	1	20
Future Volume (vph)	75	430	5	30	615	190	5	5	40	40	1	20
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1467	1460		1066	1412			1636	1295		1473	
Flt Permitted	0.17	1.00		0.43	1.00			0.98	1.00		0.97	
Satd. Flow (perm)	255	1460		484	1412			1636	1295		1473	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	467	5	33	668	207	5	5	43	43	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	82	472	0	33	875	0	0	10	43	0	48	0
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	63.3	63.3		63.3	63.3			5.8	5.8		6.7	
Effective Green, g (s)	63.3	63.3		63.3	63.3			5.8	5.8		6.7	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.06	0.06		0.06	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	153	880		291	851			90	71		93	
v/s Ratio Prot		0.32			c0.62			0.01			c0.03	
v/s Ratio Perm	0.32			0.07					c0.03			
v/c Ratio	0.54	0.54		0.11	1.03			0.11	0.61		0.52	
Uniform Delay, d1	12.2	12.2		8.9	20.9			47.1	48.5		47.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	12.8	2.3		0.8	38.3			0.2	9.6		2.0	
Delay (s)	25.0	14.6		9.7	59.1			47.3	58.1		49.6	
Level of Service	C	B		A	E			D	E		D	
Approach Delay (s)		16.1			57.3			56.1			49.6	
Approach LOS		B			E			E			D	

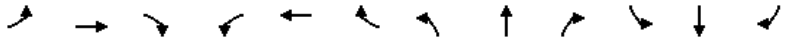
Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	1	475	10	1	420	140	1	2	0	45	25	0
Future Volume (Veh/h)	1	475	10	1	420	140	1	2	0	45	25	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	516	11	1	457	152	1	2	0	49	27	0
Pedestrians		22			22			22			17	
Lane Width (ft)		12.0			11.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		592			467							
pX, platoon unblocked	0.74			0.79			0.85	0.85	0.79	0.85	0.85	0.74
vC, conflicting volume	626			549			1116	1174	566	1098	1103	572
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	322			301			495	563	322	474	479	249
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	99	100	88	93	100
cM capacity (veh/h)	905			981			365	355	551	398	396	567

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	528	610	3	76
Volume Left	1	1	1	49
Volume Right	11	152	0	0
cSH	905	981	359	397
Volume to Capacity	0.00	0.00	0.01	0.19
Queue Length 95th (ft)	0	0	1	17
Control Delay (s)	0.0	0.0	15.1	16.2
Lane LOS	A	A	C	C
Approach Delay (s)	0.0	0.0	15.1	16.2
Approach LOS			C	C

Intersection Summary				
Average Delay			1.1	
Intersection Capacity Utilization			52.6%	ICU Level of Service
Analysis Period (min)			15	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	505	20	60	580	1	10	1	5	1	1	1
Future Volume (vph)	1	505	20	60	580	1	10	1	5	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		467			605			282			144	
Travel Time (s)		12.7			16.5			7.7			3.9	
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	572	0	0	696	0	0	17	0	0	3	0
v/c Ratio		0.48			0.62			0.14			0.03	
Control Delay		13.7			16.8			31.1			30.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.7			16.8			31.1			30.7	
Queue Length 50th (ft)		0			0			6			1	
Queue Length 95th (ft)		#515			#673			24			9	
Internal Link Dist (ft)		387			525			202			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1195			1115			118			109	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.48			0.62			0.14			0.03	

Intersection Summary

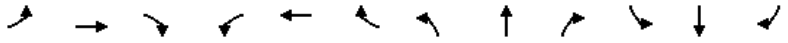
Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	505	20	60	580	1	10	1	5	1	1	1
Future Volume (vph)	1	505	20	60	580	1	10	1	5	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.90			0.89	
Flpb, ped/bikes		1.00			1.00			0.80			0.90	
Frt		0.99			1.00			0.96			0.95	
Flt Protected		1.00			1.00			0.97			0.98	
Satd. Flow (prot)		1509			1543			1161			1259	
Flt Permitted		1.00			0.91			1.00			0.95	
Satd. Flow (perm)		1508			1406			1199			1219	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	549	22	65	630	1	11	1	5	1	1	1
RTOR Reduction (vph)	0	1	0	0	0	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	571	0	0	696	0	0	12	0	0	2	0
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		50.8			50.8			2.8			2.8	
Effective Green, g (s)		50.8			50.8			2.8			2.8	
Actuated g/C Ratio		0.63			0.63			0.03			0.03	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		957			892			41			42	
v/s Ratio Prot												
v/s Ratio Perm		0.38			c0.49			c0.01			0.00	
v/c Ratio		0.60			0.78			0.30			0.05	
Uniform Delay, d1		8.6			10.6			37.6			37.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			6.7			1.5			0.2	
Delay (s)		11.3			17.3			39.1			37.5	
Level of Service		B			B			D			D	
Approach Delay (s)		11.3			17.3			39.1			37.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	0	50	95	15	435	0	60	350	20
Future Volume (Veh/h)	10	10	10	0	50	95	15	435	0	60	350	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	11	0	54	103	16	473	0	65	380	22
Pedestrians		69			64						42	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		6			6						4	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								521				
pX, platoon unblocked	0.78	0.78		0.78	0.78	0.78				0.78		
vC, conflicting volume	1267	1159	460	1106	1170	579	471			537		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1202	1063	460	996	1077	320	471			267		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	80	92	98	100	61	80	98			93		
cM capacity (veh/h)	55	142	567	130	139	511	1028			954		

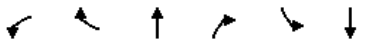
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	157	489	467
Volume Left	11	0	16	65
Volume Right	11	103	0	22
cSH	112	266	1028	954
Volume to Capacity	0.30	0.59	0.02	0.07
Queue Length 95th (ft)	28	86	1	5
Control Delay (s)	50.2	36.2	0.5	2.0
Lane LOS	F	E	A	A
Approach Delay (s)	50.2	36.2	0.5	2.0
Approach LOS	F	E		

Intersection Summary				
Average Delay			7.4	
Intersection Capacity Utilization			72.0%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	70	20	620	215	50
Future Volume (Veh/h)	440	70	20	620	215	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	478	76	22	674	234	54
Pedestrians	3			1	50	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			1006		
pX, platoon unblocked			0.82		0.80	0.82
vC, conflicting volume			604		1287	567
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			412		738	367
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		19	90
cM capacity (veh/h)			905		288	535

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	554	696	288
Volume Left	0	22	234
Volume Right	76	0	54
cSH	1700	905	315
Volume to Capacity	0.33	0.02	0.91
Queue Length 95th (ft)	0	2	221
Control Delay (s)	0.0	0.6	68.4
Lane LOS		A	F
Approach Delay (s)	0.0	0.6	68.4
Approach LOS			F

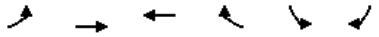
Intersection Summary			
Average Delay	13.1		
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	40	225	120	65	25
Future Volume (Veh/h)	30	40	225	120	65	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	43	245	130	71	27
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	579	410			425	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	579	410			425	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	93			93	
cM capacity (veh/h)	408	589			1083	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	76	375	98
Volume Left	33	0	71
Volume Right	43	130	0
cSH	494	1700	1083
Volume to Capacity	0.15	0.22	0.07
Queue Length 95th (ft)	13	0	5
Control Delay (s)	13.6	0.0	6.4
Lane LOS	B		A
Approach Delay (s)	13.6	0.0	6.4
Approach LOS	B		

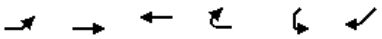
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	345	55	1	1	105
Future Volume (Veh/h)	60	345	55	1	1	105
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	375	60	1	1	114
Pedestrians		8	8		8	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		165				
pX, platoon unblocked						
vC, conflicting volume	69				582	76
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	69				582	76
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	88
cM capacity (veh/h)	1528				449	974

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	440	61	115
Volume Left	65	0	1
Volume Right	0	1	114
cSH	1528	1700	964
Volume to Capacity	0.04	0.04	0.12
Queue Length 95th (ft)	3	0	10
Control Delay (s)	1.4	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.4	0.0	9.2
Approach LOS			A

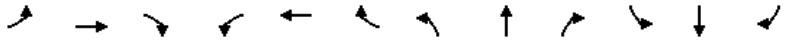
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	790	310	0	0	1890
Future Volume (Veh/h)	0	790	310	0	0	1890
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	859	337	0	0	2054
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked	0.93				0.96	0.93
vC, conflicting volume	337				766	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149				370	0
tC, single (s)	4.1				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1343				578	1010

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	430	430	168	168	2054
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	2054
cSH	1700	1700	1700	1700	1010
Volume to Capacity	0.25	0.25	0.10	0.10	2.03
Queue Length 95th (ft)	0	0	0	0	3405
Control Delay (s)	0.0	0.0	0.0	0.0	480.9
Lane LOS					F
Approach Delay (s)	0.0		0.0		480.9
Approach LOS					F

Intersection Summary			
Average Delay	303.9		
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	1730	0	0	0	0	365	145	150	0	0	0
Future Volume (vph)	220	1730	0	0	0	0	365	145	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			784			304			1156	
Travel Time (s)		1.7			15.3			6.9			26.3	
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2119	0	0	0	0	322	396	0	0	0	0
v/c Ratio		0.67					1.05	1.36				
Control Delay		0.6					116.9	222.6				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.6					116.9	222.6				
Queue Length 50th (ft)		0					~333	~483				
Queue Length 95th (ft)		m0					#538	#705				
Internal Link Dist (ft)		6			704			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		3155					308	291				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.67					1.05	1.36				

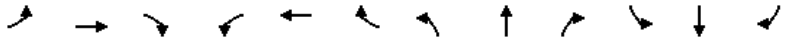
Intersection Summary

Area Type: CBD

~ 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.

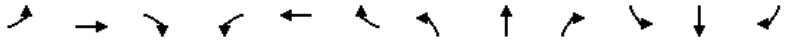
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	1730	0	0	0	0	365	145	150	0	0	0
Future Volume (vph)	220	1730	0	0	0	0	365	145	150	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.94				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4333					1543	1367				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4333					1543	1367				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	1880	0	0	0	0	397	158	163	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	2119	0	0	0	0	322	378	0	0	0	0
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		99.0					28.0	28.0				
Effective Green, g (s)		99.0					28.0	28.0				
Actuated g/C Ratio		0.71					0.20	0.20				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		3064					308	273				
v/s Ratio Prot		c0.49					0.21	c0.28				
v/s Ratio Perm												
v/c Ratio		0.69					1.05	1.39				
Uniform Delay, d1		11.7					56.0	56.0				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.3					63.7	194.8				
Delay (s)		0.3					119.7	250.8				
Level of Service		A					F	F				
Approach Delay (s)		0.3			0.0			192.0			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	48.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



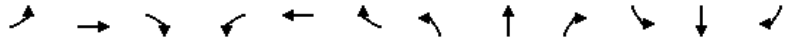
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	225	61	780	0	0	710	30
Future Volume (vph)	0	0	0	67	2	225	61	780	0	0	710	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			622	
Travel Time (s)		13.4			8.0			4.9			17.0	
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	75	245	0	914	0	0	805	0
v/c Ratio					0.80	0.56		0.64			1.12	
Control Delay					76.9	8.2		3.7			87.9	
Queue Delay					75.2	0.0		1.6			5.8	
Total Delay					152.1	8.2		5.3			93.7	
Queue Length 50th (ft)					52	22		23			~315	
Queue Length 95th (ft)					m56	m16		m14			m#449	
Internal Link Dist (ft)		510			273			98			542	
Turn Bay Length (ft)												
Base Capacity (vph)					94	631		1420			716	
Starvation Cap Reductn					0	0		317			0	
Spillback Cap Reductn					36	0		0			359	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					1.29	0.39		0.83			2.25	

Intersection Summary	
Area Type:	CBD

~ 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.

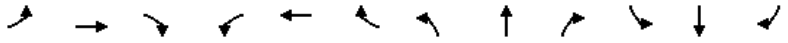
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	225	61	780	0	0	710	30
Future Volume (vph)	0	0	0	67	2	225	61	780	0	0	710	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.99	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.95	1.00		1.00			1.00	
Satd. Flow (prot)					1576	1405		2909			1522	
Flt Permitted					0.95	1.00		0.75			1.00	
Satd. Flow (perm)					1576	1405		2198			1522	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	73	2	245	66	848	0	0	772	33
RTOR Reduction (vph)	0	0	0	0	0	206	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	75	39	0	914	0	0	803	0
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	16.0		63.0			47.0	
Effective Green, g (s)					6.0	16.0		57.0			47.0	
Actuated g/C Ratio					0.06	0.16		0.57			0.47	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	224		1252			715	
v/s Ratio Prot					c0.05	0.03					c0.53	
v/s Ratio Perm								c0.42				
v/c Ratio					0.80	0.17		0.73			1.12	
Uniform Delay, d1					46.4	36.3		15.8			26.5	
Progression Factor					1.55	1.92		0.24			0.96	
Incremental Delay, d2					4.0	0.0		0.9			61.3	
Delay (s)					76.1	69.7		4.7			86.6	
Level of Service					E	E		A			F	
Approach Delay (s)		0.0			71.2			4.7			86.6	
Approach LOS		A			E			A			F	

Intersection Summary				
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.12			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	88.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

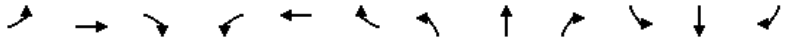


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Future Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		209			762			1156			2190	
Travel Time (s)		5.7			20.8			26.3			49.8	
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1750	0	0	396	0	0	0	0
v/c Ratio					1.63			0.55				
Control Delay					315.2			35.8				
Queue Delay					0.9			0.3				
Total Delay					316.0			36.0				
Queue Length 50th (ft)					~602			114				
Queue Length 95th (ft)					#699			162				
Internal Link Dist (ft)		129			682			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1075			744				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					173			66				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.94			0.58				

Intersection Summary	
Area Type:	CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

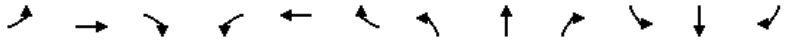
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Future Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4298			2864				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4298			2864				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1500	250	255	141	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1750	0	0	396	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					25.0			25.0				
Effective Green, g (s)					25.0			25.0				
Actuated g/C Ratio					0.25			0.25				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1074			716				
v/s Ratio Prot					c0.41							
v/s Ratio Perm								0.14				
v/c Ratio					1.63			0.55				
Uniform Delay, d1					37.5			32.6				
Progression Factor					1.00			1.00				
Incremental Delay, d2					287.5			0.5				
Delay (s)					325.0			33.2				
Level of Service					F			C				
Approach Delay (s)		0.0			325.0			33.2			0.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	271.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
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)	0	725	300	0	915	105	0	805	310	0	340	15
Future Volume (vph)	0	725	300	0	915	105	0	805	310	0	340	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		641			2767			774			646	
Travel Time (s)		12.5			53.9			21.1			22.0	
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1114	0	0	1109	0	0	1212	0	0	386	0
v/c Ratio		1.05			0.95			1.09			0.60	
Control Delay		75.2			47.4			81.8			27.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		75.2			47.4			81.8			27.9	
Queue Length 50th (ft)		~411			355			~455			189	
Queue Length 95th (ft)		#541			#496			m#548			288	
Internal Link Dist (ft)		561			2687			694			566	
Turn Bay Length (ft)												
Base Capacity (vph)		1056			1173			1109			644	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.05			0.95			1.09			0.60	

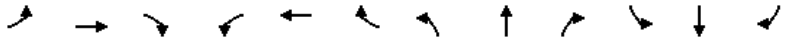
Intersection Summary

Area Type: CBD

~ 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)	0	725	300	0	915	105	0	805	310	0	340	15
Future Volume (vph)	0	725	300	0	915	105	0	805	310	0	340	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.90			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.96			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2857			3170			2706			1572	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2857			3170			2706			1572	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	788	326	0	995	114	0	875	337	0	370	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1114	0	0	1109	0	0	1212	0	0	386	0
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		37.0			37.0			41.0			41.0	
Effective Green, g (s)		37.0			37.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1057			1172			1109			644	
v/s Ratio Prot		c0.39			0.35			c0.45			0.25	
v/s Ratio Perm												
v/c Ratio		1.05			0.95			1.09			0.60	
Uniform Delay, d1		31.5			30.5			29.5			23.1	
Progression Factor		1.00			1.00			1.10			1.00	
Incremental Delay, d2		43.0			14.9			49.7			4.1	
Delay (s)		74.5			45.5			82.2			27.2	
Level of Service		E			D			F			C	
Approach Delay (s)		74.5			45.5			82.2			27.2	
Approach LOS		E			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	63.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
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)	351	20	125	0	0	0	0	645	35	257	490	0
Future Volume (vph)	351	20	125	0	0	0	0	645	35	257	490	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1960			178	
Travel Time (s)		13.5			11.4			53.5			4.9	
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	248	292	0	0	0	0	0	739	0	0	812	0
v/c Ratio	1.47	1.69						0.73			1.49	
Control Delay	273.6	360.2						34.5			240.0	
Queue Delay	0.3	0.7						1.6			0.3	
Total Delay	273.9	361.0						36.1			240.3	
Queue Length 50th (ft)	~229	~269						210			~686	
Queue Length 95th (ft)	#390	#445						#328			m#667	
Internal Link Dist (ft)		515			421			1880			98	
Turn Bay Length (ft)												
Base Capacity (vph)	169	173						1009			545	
Starvation Cap Reductn	0	0						0			18	
Spillback Cap Reductn	3	7						127			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.49	1.76						0.84			1.54	

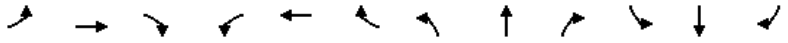
Intersection Summary

Area Type: CBD

~ 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)	351	20	125	0	0	0	0	645	35	257	490	0
Future Volume (vph)	351	20	125	0	0	0	0	645	35	257	490	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.87						0.98			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			1.00	
Frt	1.00	0.93						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1292						2922			1559	
Flt Permitted	0.95	0.98						1.00			0.40	
Satd. Flow (perm)	1543	1292						2922			627	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	382	22	136	0	0	0	0	701	38	279	533	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	248	261	0	0	0	0	0	739	0	0	812	0
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	11.0	11.0						34.6			66.0	
Effective Green, g (s)	11.0	11.0						34.6			66.0	
Actuated g/C Ratio	0.11	0.11						0.35			0.66	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	169	142						1011			520	
v/s Ratio Prot	0.16	c0.20						0.25			c0.18	
v/s Ratio Perm											c0.85	
v/c Ratio	1.47	1.84						0.73			1.56	
Uniform Delay, d1	44.5	44.5						28.6			17.0	
Progression Factor	1.00	1.00						1.00			1.17	
Incremental Delay, d2	239.7	402.7						4.7			253.6	
Delay (s)	284.2	447.2						33.3			273.4	
Level of Service	F	F						C			F	
Approach Delay (s)		372.3			0.0			33.3			273.4	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	214.1	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.85			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	92.7%	ICU Level of Service	F	
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)	185	250	20	130	565	5	190	220	25	5	330	280
Future Volume (vph)	185	250	20	130	565	5	190	220	25	5	330	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			547			255			491	
Travel Time (s)		14.9			14.9			7.0			13.4	
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	294	0	141	619	0	207	266	0	0	364	304
v/c Ratio	1.33	0.52		0.42	1.09		1.24	0.49			0.96	0.88
Control Delay	219.3	45.5		32.3	110.9		186.0	44.5			94.1	74.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	219.3	45.5		32.3	110.9		186.0	44.5			94.1	74.9
Queue Length 50th (ft)	~232	248		90	~741		~204	218			371	265
Queue Length 95th (ft)	#405	349		142	#984		#381	313			#582	#387
Internal Link Dist (ft)		468			467			175			411	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	151	570		343	568		167	566			398	355
Starvation Cap Reductn	0	0		0	0		0	0			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	1.33	0.52		0.41	1.09		1.24	0.47			0.91	0.86

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	250	20	130	565	5	190	220	25	5	330	280
Future Volume (vph)	185	250	20	130	565	5	190	220	25	5	330	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98			1.00	0.81
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1577	1657		1569	1672		1561	1634			1687	1170
Flt Permitted	0.08	1.00		0.44	1.00		0.16	1.00			0.99	1.00
Satd. Flow (perm)	129	1657		719	1672		269	1634			1679	1170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	272	22	141	614	5	207	239	27	5	359	304
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	201	294	0	141	619	0	207	266	0	0	364	304
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	61.4	51.3		60.0	50.6		43.8	47.8			33.7	43.8
Effective Green, g (s)	61.4	51.3		60.0	50.6		43.8	47.8			33.7	43.8
Actuated g/C Ratio	0.41	0.34		0.40	0.34		0.29	0.32			0.22	0.29
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	150	565		340	562		165	519			376	387
v/s Ratio Prot	c0.09	0.18		0.03	0.37		c0.08	0.16				0.05
v/s Ratio Perm	c0.46			0.14			c0.28				0.22	0.21
v/c Ratio	1.34	0.52		0.41	1.10		1.25	0.51			0.97	0.79
Uniform Delay, d1	41.8	39.6		30.4	49.9		48.7	41.8			57.8	48.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	190.9	3.4		0.3	68.7		154.4	0.4			37.4	9.3
Delay (s)	232.7	43.0		30.7	118.6		203.1	42.1			95.2	58.3
Level of Service	F	D		C	F		F	D			F	E
Approach Delay (s)		120.1			102.3			112.6			78.4	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	101.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	150.3	Sum of lost time (s)	29.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
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)	45	0	30	15	10	5	15	325	0	0	620	65
Future Volume (vph)	45	0	30	15	10	5	15	325	0	0	620	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		453			259			1811			202	
Travel Time (s)		12.4			7.1			49.4			5.5	
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	32	0	0	369	0	0	745	0
v/c Ratio		0.61			0.12			0.31			0.68	
Control Delay		22.1			24.2			7.5			15.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.1			24.2			7.5			15.4	
Queue Length 50th (ft)		0			6			0			0	
Queue Length 95th (ft)		#29			40			219			#700	
Internal Link Dist (ft)		373			179			1731			122	
Turn Bay Length (ft)												
Base Capacity (vph)		135			774			1188			1091	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.61			0.04			0.31			0.68	

Intersection Summary

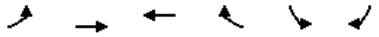
Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	325	0	0	620	65
Future Volume (vph)	45	0	30	15	10	5	15	325	0	0	620	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		4.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.81			0.98			1.00			0.99	
Flpb, ped/bikes		0.87			0.94			1.00			1.00	
Frt		0.95			0.98			1.00			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		998			1267			1481			1325	
Flt Permitted		0.97			0.98			0.97			1.00	
Satd. Flow (perm)		998			1267			1435			1325	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	33	16	11	5	16	353	0	0	674	71
RTOR Reduction (vph)	0	82	0	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	27	0	0	369	0	0	745	0
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	D.Pm	NA		Perm	NA		Perm	NA			NA	
Protected Phases					5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		0.0			3.3			42.6			42.6	
Effective Green, g (s)		0.0			3.3			42.6			42.6	
Actuated g/C Ratio		0.00			0.05			0.68			0.68	
Clearance Time (s)					5.0			5.0			5.0	
Vehicle Extension (s)					4.0			4.0			4.0	
Lane Grp Cap (vph)		0			66			978			903	
v/s Ratio Prot											c0.56	
v/s Ratio Perm					0.02			0.26				
v/c Ratio		0.00			0.41			0.38			0.83	
Uniform Delay, d1		31.2			28.7			4.3			7.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			5.6			1.1			8.5	
Delay (s)		31.2			34.3			5.4			15.7	
Level of Service		C			C			A			B	
Approach Delay (s)		31.2			34.3			5.4			15.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



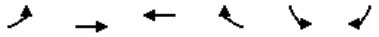
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	1465	1402	375	380	285
Future Volume (vph)	222	1465	1402	375	380	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		511	949		1811	
Travel Time (s)		10.0	18.5		41.2	
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	1592	1524	408	413	310
v/c Ratio	1.14	0.83	1.16	0.74	0.95	0.47
Control Delay	148.8	21.0	96.8	19.7	73.0	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.8	21.0	96.8	19.7	73.0	22.2
Queue Length 50th (ft)	~199	427	~667	190	287	141
Queue Length 95th (ft)	#357	539	m#603	m287	#481	220
Internal Link Dist (ft)		431	869		1731	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	211	1921	1314	552	434	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.83	1.16	0.74	0.95	0.47

Intersection Summary	
Area Type:	CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

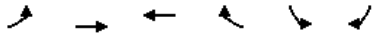
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	1465	1402	375	380	285
Future Volume (vph)	222	1465	1402	375	380	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.93	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1501	3085	3110	1306	1593	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1501	3085	3110	1306	1593	1391
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	241	1592	1524	408	413	310
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	241	1592	1524	408	413	307
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	15.5	68.5	46.5	46.5	30.0	51.5
Effective Green, g (s)	15.5	62.0	46.5	46.5	30.0	51.5
Actuated g/C Ratio	0.14	0.56	0.42	0.42	0.27	0.47
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	211	1738	1314	552	434	651
v/s Ratio Prot	c0.16	0.52	c0.49		c0.26	0.22
v/s Ratio Perm				0.31		
v/c Ratio	1.14	0.92	1.16	0.74	0.95	0.47
Uniform Delay, d1	47.2	21.7	31.8	26.7	39.3	20.0
Progression Factor	1.00	1.00	0.71	0.68	1.00	1.00
Incremental Delay, d2	105.5	9.1	72.8	0.8	32.6	2.4
Delay (s)	152.8	30.8	95.3	19.0	71.9	22.4
Level of Service	F	C	F	B	E	C
Approach Delay (s)		46.8	79.2		50.7	
Approach LOS		D	E		D	

Intersection Summary			
HCM 2000 Control Delay	61.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	825	1755	180	110	110
Future Volume (vph)	31	825	1755	180	110	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		181	
Travel Time (s)		18.5	20.6		4.9	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	897	2104	0	240	0
v/c Ratio	0.38	0.39	1.06		1.82	
Control Delay	49.8	8.6	57.4		426.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	49.8	8.6	57.4		426.4	
Queue Length 50th (ft)	24	56	641		~256	
Queue Length 95th (ft)	m27	m311	#1273		#413	
Internal Link Dist (ft)		869	980		101	
Turn Bay Length (ft)	170					
Base Capacity (vph)	89	2304	1991		132	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.38	0.39	1.06		1.82	

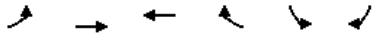
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	825	1755	180	110	110
Future Volume (vph)	31	825	1755	180	110	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1516	3032	3061		1538	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1516	3032	3061		1538	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	897	1908	196	120	120
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	34	897	2104	0	240	0
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	78.0	66.0		9.5	
Effective Green, g (s)	6.5	72.5	66.0		9.5	
Actuated g/C Ratio	0.06	0.66	0.60		0.09	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	89	1998	1836		132	
v/s Ratio Prot	0.02	c0.30	c0.69		c0.16	
v/s Ratio Perm						
v/c Ratio	0.38	0.45	1.15		1.82	
Uniform Delay, d1	49.8	9.1	22.0		50.2	
Progression Factor	0.87	1.23	1.00		1.00	
Incremental Delay, d2	0.5	0.0	72.6		396.3	
Delay (s)	43.6	11.2	94.6		446.6	
Level of Service	D	B	F		F	
Approach Delay (s)		12.4	94.6		446.6	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	97.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	60	885	300	190	5	15	65	5	2	1135
Future Volume (vph)	60	885	300	190	5	15	65	5	2	1135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	65	962	533	0	0	92	0	0	414	827
v/c Ratio	0.23	1.76	0.36			0.56			0.63	0.69
Control Delay	52.7	382.3	5.4			34.2			34.2	33.9
Queue Delay	0.0	0.1	0.6			1.7			58.2	52.9
Total Delay	52.7	382.4	6.0			35.8			92.4	86.8
Queue Length 50th (ft)	52	~684	22			19			282	323
Queue Length 95th (ft)	98	#821	34			78			402	404
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	278	547	1473			164			659	1197
Starvation Cap Reductn	0	0	558			0			0	0
Spillback Cap Reductn	0	5	0			16			351	638
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.23	1.77	0.58			0.62			1.34	1.48

Intersection Summary

Area Type: CBD

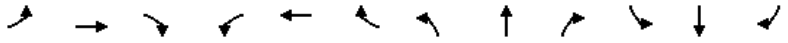
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	60	885	300	190	5	15	65	5	2	1135
Future Volume (vph)	60	885	300	190	5	15	65	5	2	1135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.94			0.90			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1624	3191	3018			1528			1442	2619
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1624	3191	3018			1528			1442	2619
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	962	326	207	5	16	71	5	2	1234
RTOR Reduction (vph)	0	0	69	0	0	66	0	0	0	0
Lane Group Flow (vph)	65	962	464	0	0	26	0	0	414	827
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	24.0	24.0	68.0			9.0			59.0	64.0
Effective Green, g (s)	24.0	24.0	68.0			9.0			59.0	64.0
Actuated g/C Ratio	0.17	0.17	0.49			0.06			0.42	0.46
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	278	547	1465			98			659	1197
v/s Ratio Prot	0.04	c0.30	c0.15			c0.02			0.09	c0.32
v/s Ratio Perm									0.20	
v/c Ratio	0.23	1.76	0.32			0.26			0.63	0.69
Uniform Delay, d1	50.1	58.0	21.9			62.3			32.9	30.2
Progression Factor	1.00	1.00	0.27			1.00			1.00	1.00
Incremental Delay, d2	2.0	348.9	0.0			0.5			2.1	1.9
Delay (s)	52.0	406.9	5.9			62.9			35.0	32.0
Level of Service	D	F	A			E			C	C
Approach Delay (s)		384.4	5.9			62.9			33.0	
Approach LOS		F	A			E			C	

Intersection Summary			
HCM 2000 Control Delay	153.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



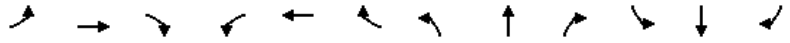
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1560	525	10	325	0	0	0	0	355	305	165
Future Volume (vph)	0	1560	525	10	325	0	0	0	0	355	305	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1696	571	0	364	0	0	0	0	220	498	179
v/c Ratio		0.91	0.71		0.33					1.08	1.18	0.52
Control Delay		28.1	11.3		1.0					140.5	153.7	13.2
Queue Delay		47.9	53.8		0.0					0.0	0.0	0.0
Total Delay		76.0	65.1		1.0					140.5	153.7	13.2
Queue Length 50th (ft)		402	191		1					~245	~297	0
Queue Length 95th (ft)		m338	m154		1					#431	#420	73
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)												
Base Capacity (vph)		1870	803		1103					204	422	341
Starvation Cap Reductn		920	339		0					0	0	0
Spillback Cap Reductn		0	0		0					0	0	0
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.79	1.23		0.33					1.08	1.18	0.52

Intersection Summary	
Area Type:	CBD

~ 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)	0	1560	525	10	325	0	0	0	0	355	305	165
Future Volume (vph)	0	1560	525	10	325	0	0	0	0	355	305	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4223	1260		3244					1429	2959	1319
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4223	1260		3103					1429	2959	1319
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1696	571	11	353	0	0	0	0	386	332	179
RTOR Reduction (vph)	0	0	246	0	0	0	0	0	0	0	0	153
Lane Group Flow (vph)	0	1696	325	0	364	0	0	0	0	220	498	26
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		62.0	62.0		59.0					20.0	20.0	20.0
Effective Green, g (s)		62.0	62.0		59.0					20.0	20.0	20.0
Actuated g/C Ratio		0.44	0.44		0.42					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		1870	558		1347					204	422	188
v/s Ratio Prot		c0.40			c0.08					0.15	c0.17	
v/s Ratio Perm			0.26		0.04							0.02
v/c Ratio		0.91	0.58		0.27					1.08	1.18	0.14
Uniform Delay, d1		36.3	29.3		26.4					60.0	60.0	52.4
Progression Factor		0.74	1.55		0.02					1.00	1.00	1.00
Incremental Delay, d2		0.7	0.1		0.1					85.4	103.0	0.1
Delay (s)		27.6	45.6		0.6					145.4	163.0	52.6
Level of Service		C	D		A					F	F	D
Approach Delay (s)		32.1			0.6			0.0			136.7	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	55.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			

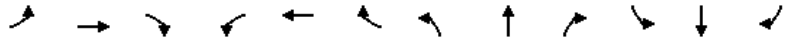
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	870	530	0	0	0	0	895	35	80	700	0
Future Volume (vph)	275	870	530	0	0	0	0	895	35	80	700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		951			939			563			1007	
Travel Time (s)		25.9			32.0			11.0			19.6	
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1245	576	0	0	0	0	1011	0	0	848	0
v/c Ratio		0.99	0.99					0.83			0.96	
Control Delay		54.4	64.0					45.3			55.5	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		54.4	64.0					45.3			55.5	
Queue Length 50th (ft)		622	546					431			284	
Queue Length 95th (ft)		#1000	#990					523			#415	
Internal Link Dist (ft)		871			859			483			927	
Turn Bay Length (ft)												
Base Capacity (vph)		1261	584					1227			886	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		0.99	0.99					0.82			0.96	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	870	530	0	0	0	0	895	35	80	700	0
Future Volume (vph)	275	870	530	0	0	0	0	895	35	80	700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		0.99	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			0.99	
Satd. Flow (prot)		3137	1454					3121			3125	
Flt Permitted		0.99	1.00					1.00			0.54	
Satd. Flow (perm)		3137	1454					3121			1704	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	946	576	0	0	0	0	973	38	87	761	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1245	576	0	0	0	0	1009	0	0	848	0
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		53.1	53.1					54.7			66.7	
Effective Green, g (s)		53.1	53.1					54.7			66.7	
Actuated g/C Ratio		0.38	0.38					0.39			0.48	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1189	551					1219			893	
v/s Ratio Prot			0.40					0.32			c0.05	
v/s Ratio Perm		0.40									c0.40	
v/c Ratio		1.05	1.05					0.83			0.95	
Uniform Delay, d1		43.4	43.4					38.4			35.0	
Progression Factor		0.88	0.88					1.00			1.00	
Incremental Delay, d2		34.9	43.9					4.5			18.6	
Delay (s)		73.1	82.0					42.9			53.7	
Level of Service		E	F					D			D	
Approach Delay (s)		75.9			0.0			42.9			53.7	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	61.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

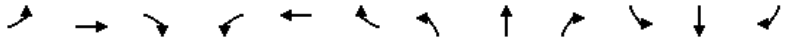
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	95	1105	110	490	690	0	0	705	350
Future Volume (vph)	0	0	0	95	1105	110	490	690	0	0	705	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		984			1074			1007			813	
Travel Time (s)		26.8			29.3			19.6			15.8	
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1424	0	533	750	0	0	1146	0
v/c Ratio					1.26		1.31	0.75			1.17	
Control Delay					161.4		189.7	22.7			121.7	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					161.4		189.7	22.7			121.7	
Queue Length 50th (ft)					~506		~487	391			~547	
Queue Length 95th (ft)					#605		#707	559			#686	
Internal Link Dist (ft)		904			994			927			733	
Turn Bay Length (ft)												
Base Capacity (vph)					1131		408	1005			982	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.26		1.31	0.75			1.17	

Intersection Summary

Area Type: CBD

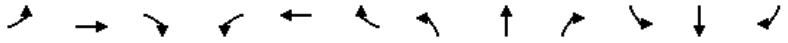
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	95	1105	110	490	690	0	0	705	350
Future Volume (vph)	0	0	0	95	1105	110	490	690	0	0	705	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		5.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.95	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4350		1570	1653			2813	
Flt Permitted					1.00		0.09	1.00			1.00	
Satd. Flow (perm)					4350		141	1653			2813	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	103	1201	120	533	750	0	0	766	380
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	1415	0	533	750	0	0	1124	0
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					31.0		74.0	73.0			41.0	
Effective Green, g (s)					31.0		74.0	73.0			41.0	
Actuated g/C Ratio					0.26		0.62	0.61			0.34	
Clearance Time (s)					10.0		5.0	6.0			6.0	
Lane Grp Cap (vph)					1123		408	1005			961	
v/s Ratio Prot					c0.33		c0.29	0.45			0.40	
v/s Ratio Perm							c0.51					
v/c Ratio					1.26		1.31	0.75			1.17	
Uniform Delay, d1					44.5		39.6	16.9			39.5	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					124.4		154.6	5.0			87.7	
Delay (s)					168.9		194.2	21.9			127.2	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			168.9			93.5			127.2	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	131.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	112.4%	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)	0	0	725	995	635	0	0	0	0	0	650	40
Future Volume (vph)	0	0	725	995	635	0	0	0	0	0	650	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		515			260			938			1824	
Travel Time (s)		14.0			7.1			21.3			41.5	
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	788	1082	690	0	0	0	0	0	750	0
v/c Ratio			1.69	0.98	0.71						1.49	
Control Delay			345.8	22.0	6.7						260.2	
Queue Delay			0.0	39.9	1.5						0.0	
Total Delay			345.8	61.9	8.2						260.2	
Queue Length 50th (ft)			~376	96	100						~314	
Queue Length 95th (ft)			#501	m75	m67						#432	
Internal Link Dist (ft)		435			180			858			1744	
Turn Bay Length (ft)			100									
Base Capacity (vph)			467	1105	973						504	
Starvation Cap Reductn			0	169	130						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			1.69	1.16	0.82						1.49	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

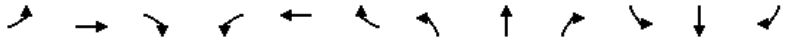
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	725	995	635	0	0	0	0	0	650	40
Future Volume (vph)	0	0	725	995	635	0	0	0	0	0	650	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3214	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3214	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	788	1082	690	0	0	0	0	0	707	43
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	788	1082	690	0	0	0	0	0	745	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			17.0	40.0	62.0						14.0	
Effective Green, g (s)			17.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.19	0.44	0.63						0.16	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			467	1340	1046						499	
v/s Ratio Prot			c0.32	c0.36	0.42						c0.23	
v/s Ratio Perm												
v/c Ratio			1.69	0.81	0.66						1.49	
Uniform Delay, d1			36.5	21.7	10.4						38.0	
Progression Factor			1.00	0.53	0.82						1.00	
Incremental Delay, d2			318.5	0.3	0.1						232.2	
Delay (s)			355.0	11.9	8.6						270.2	
Level of Service			F	B	A						F	
Approach Delay (s)		355.0			10.6			0.0			270.2	
Approach LOS		F			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	151.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		

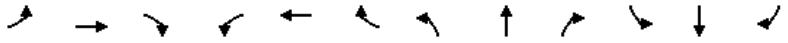
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	610	25	45	575	55	35	5	115	0	0	0
Future Volume (Veh/h)	25	610	25	45	575	55	35	5	115	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	663	27	49	625	60	38	5	125	0	0	0
Pedestrians		59						77			19	
Lane Width (ft)		11.0						11.5			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		5						6			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		740			515							
pX, platoon unblocked	0.74			0.76			0.86	0.86	0.76	0.86	0.86	0.74
vC, conflicting volume	704			767			1590	1610	754	1616	1593	733
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430			536			979	1002	518	1010	983	469
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			93			76	97	69	100	100	100
cM capacity (veh/h)	836			708			156	177	398	112	182	422

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	27	690	49	685	38	130
Volume Left	27	0	49	0	38	0
Volume Right	0	27	0	60	0	125
cSH	836	1700	708	1700	156	380
Volume to Capacity	0.03	0.41	0.07	0.40	0.24	0.34
Queue Length 95th (ft)	2	0	6	0	23	37
Control Delay (s)	9.4	0.0	10.5	0.0	35.3	19.3
Lane LOS	A		B		E	C
Approach Delay (s)	0.4		0.7		22.9	
Approach LOS					C	

Intersection Summary					
Average Delay	2.9				
Intersection Capacity Utilization	56.4%	ICU Level of Service		B	
Analysis Period (min)	15				

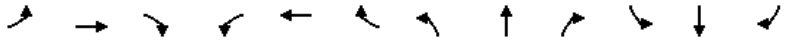


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	560	5	20	665	75	10	1	30	110	0	65
Future Volume (vph)	25	560	5	20	665	75	10	1	30	110	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		606			253			131			150	
Travel Time (s)		16.5			6.9			3.6			4.1	
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	614	0	22	805	0	0	12	33	0	191	0
v/c Ratio	0.18	0.68		0.10	0.91			0.10	0.35		0.71	
Control Delay	25.0	26.8		21.1	40.6			43.5	53.4		25.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	25.0	26.8		21.1	40.6			43.5	53.4		25.7	
Queue Length 50th (ft)	6	203		5	345			7	20		17	
Queue Length 95th (ft)	41	#689		31	#969			24	50		85	
Internal Link Dist (ft)		526			173			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	147	902		222	882			228	174		301	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.18	0.68		0.10	0.91			0.05	0.19		0.63	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	560	5	20	665	75	10	1	30	110	0	65
Future Volume (vph)	25	560	5	20	665	75	10	1	30	110	0	65
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.98			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	
Satd. Flow (prot)	1509	1530		1211	1502			1635	1231		1531	
Flt Permitted	0.16	1.00		0.30	1.00			0.96	1.00		0.97	
Satd. Flow (perm)	250	1530		378	1502			1635	1231		1531	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	609	5	22	723	82	11	1	33	120	0	71
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	152	0
Lane Group Flow (vph)	27	614	0	22	805	0	0	12	33	0	39	0
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	53.8	53.8		53.8	53.8			5.2	5.2		7.6	
Effective Green, g (s)	53.8	53.8		53.8	53.8			5.2	5.2		7.6	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.05	0.05		0.08	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	134	823		203	808			85	64		116	
v/s Ratio Prot		0.40			c0.54			0.01			c0.03	
v/s Ratio Perm	0.11			0.06					c0.03			
v/c Ratio	0.20	0.75		0.11	1.00			0.14	0.52		0.34	
Uniform Delay, d1	12.0	17.8		11.3	23.0			45.3	46.2		43.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.4	6.1		1.1	30.8			0.3	2.9		0.6	
Delay (s)	15.3	23.9		12.4	53.8			45.5	49.1		44.5	
Level of Service	B	C		B	D			D	D		D	
Approach Delay (s)		23.6			52.7			48.1			44.5	
Approach LOS		C			D			D			D	

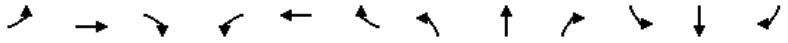
Intersection Summary				
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	73.8%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	1	430	1	1	625	115	5	20	0	65	10	0
Future Volume (Veh/h)	1	430	1	1	625	115	5	20	0	65	10	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	467	1	1	679	125	5	22	0	71	11	0
Pedestrians					29			29			21	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		547			464							
pX, platoon unblocked	0.60			0.87			0.67	0.67	0.87	0.67	0.67	0.60
vC, conflicting volume	825			497			1248	1326	526	1274	1264	762
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	380			353			696	813	385	736	720	277
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	89	100	63	95	100
cM capacity (veh/h)	698			1029			215	199	553	190	225	451

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	469	805	27	82
Volume Left	1	1	5	71
Volume Right	1	125	0	0
cSH	698	1029	202	194
Volume to Capacity	0.00	0.00	0.13	0.42
Queue Length 95th (ft)	0	0	11	48
Control Delay (s)	0.0	0.0	25.6	36.6
Lane LOS	A	A	D	E
Approach Delay (s)	0.0	0.0	25.6	36.6
Approach LOS			D	E

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	63.4%	ICU Level of Service	B	
Analysis Period (min)	15			

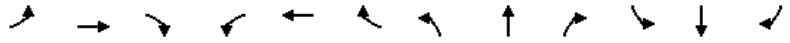


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	540	5	10	730	1	25	1	50	1	1	1
Future Volume (vph)	1	540	5	10	730	1	25	1	50	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		464			606			294			154	
Travel Time (s)		12.7			16.5			8.0			4.2	
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	0	805	0	0	82	0	0	3	0
v/c Ratio		0.52			0.71			0.53			0.03	
Control Delay		15.2			19.6			30.0			32.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.2			19.6			30.0			32.3	
Queue Length 50th (ft)		73			126			15			1	
Queue Length 95th (ft)		#550			#819			58			9	
Internal Link Dist (ft)		384			526			214			74	
Turn Bay Length (ft)												
Base Capacity (vph)		1136			1141			186			157	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.52			0.71			0.44			0.02	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	540	5	10	730	1	25	1	50	1	1	1
Future Volume (vph)	1	540	5	10	730	1	25	1	50	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.86			0.93	
Flpb, ped/bikes		1.00			1.00			0.94			0.95	
Frt		1.00			1.00			0.91			0.95	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		1587			1603			1248			1395	
Flt Permitted		1.00			0.99			0.89			0.93	
Satd. Flow (perm)		1586			1591			1127			1314	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	587	5	11	793	1	27	1	54	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	50	0	0	1	0
Lane Group Flow (vph)	0	593	0	0	805	0	0	32	0	0	2	0
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		55.4			55.4			6.6			6.6	
Effective Green, g (s)		55.4			55.4			6.6			6.6	
Actuated g/C Ratio		0.62			0.62			0.07			0.07	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		976			979			82			96	
v/s Ratio Prot												
v/s Ratio Perm		0.37			c0.51			c0.03			0.00	
v/c Ratio		0.61			0.82			0.39			0.02	
Uniform Delay, d1		10.6			13.5			39.8			38.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.8			7.8			1.1			0.0	
Delay (s)		13.4			21.2			40.9			38.7	
Level of Service		B			C			D			D	
Approach Delay (s)		13.4			21.2			40.9			38.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	45	45	0	10	125	5	405	0	30	575	5
Future Volume (Veh/h)	30	45	45	0	10	125	5	405	0	30	575	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	49	49	0	11	136	5	440	0	33	625	5
Pedestrians		113			85						37	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		9			8						3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								491				
pX, platoon unblocked	0.80	0.80		0.80	0.80	0.80				0.80		
vC, conflicting volume	1435	1342	740	1302	1344	562	743			525		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1419	1303	740	1254	1306	335	743			289		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	29	53	87	100	89	73	99			97		
cM capacity (veh/h)	46	104	377	52	103	509	783			946		

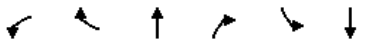
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	131	147	445	663
Volume Left	33	0	5	33
Volume Right	49	136	0	5
cSH	99	393	783	946
Volume to Capacity	1.32	0.37	0.01	0.03
Queue Length 95th (ft)	231	42	0	3
Control Delay (s)	275.4	19.5	0.2	0.9
Lane LOS	F	C	A	A
Approach Delay (s)	275.4	19.5	0.2	0.9
Approach LOS	F	C		

Intersection Summary				
Average Delay			28.6	
Intersection Capacity Utilization			84.7%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	610	90	20	600	160	45
Future Volume (Veh/h)	610	90	20	600	160	45
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	98	22	652	174	49
Pedestrians	2			2	71	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			1002		
pX, platoon unblocked			0.70		0.80	0.70
vC, conflicting volume			832		1481	785
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			540		905	473
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		22	87
cM capacity (veh/h)			673		222	387

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	761	674	223
Volume Left	0	22	174
Volume Right	98	0	49
cSH	1700	673	245
Volume to Capacity	0.45	0.03	0.91
Queue Length 95th (ft)	0	3	197
Control Delay (s)	0.0	0.9	79.5
Lane LOS		A	F
Approach Delay (s)	0.0	0.9	79.5
Approach LOS			F

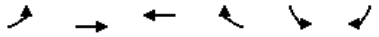
Intersection Summary			
Average Delay	11.1		
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	65	105	100	65	40	70
Future Volume (Veh/h)	65	105	100	65	40	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	71	114	109	71	43	76
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	406	244			230	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	406	244			230	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	84			97	
cM capacity (veh/h)	531	729			1278	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	185	180	119
Volume Left	71	0	43
Volume Right	114	71	0
cSH	638	1700	1278
Volume to Capacity	0.29	0.11	0.03
Queue Length 95th (ft)	30	0	3
Control Delay (s)	12.9	0.0	3.0
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	3.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	165	135	1	1	85
Future Volume (Veh/h)	45	165	135	1	1	85
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	179	147	1	1	92
Pedestrians		3	3		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		181				
pX, platoon unblocked						
vC, conflicting volume	151				430	154
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	151				430	154
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	90
cM capacity (veh/h)	1426				559	888

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	228	148	93
Volume Left	49	0	1
Volume Right	0	1	92
cSH	1426	1700	882
Volume to Capacity	0.03	0.09	0.11
Queue Length 95th (ft)	3	0	9
Control Delay (s)	1.9	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	1.9	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	945	310	0	0	1625
Future Volume (Veh/h)	0	945	310	0	0	1625
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1027	337	0	0	1766
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.89	
vC, conflicting volume	337				850	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	337				583	168
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1226				394	846

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	514	514	168	168	1766
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1766
cSH	1700	1700	1700	1700	846
Volume to Capacity	0.30	0.30	0.10	0.10	2.09
Queue Length 95th (ft)	0	0	0	0	3012
Control Delay (s)	0.0	0.0	0.0	0.0	506.6
Lane LOS					F
Approach Delay (s)	0.0		0.0		506.6
Approach LOS					F

Intersection Summary			
Average Delay	285.8		
Intersection Capacity Utilization	115.9%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	1560	0	0	0	0	335	95	115	0	0	0
Future Volume (vph)	355	1560	0	0	0	0	335	95	115	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			951			304			1156	
Travel Time (s)		1.7			18.5			6.9			26.3	
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2082	0	0	0	0	295	297	0	0	0	0
v/c Ratio		0.73					0.67	0.70				
Control Delay		0.6					52.9	50.5				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.6					52.9	50.5				
Queue Length 50th (ft)		0					250	233				
Queue Length 95th (ft)		m0					363	351				
Internal Link Dist (ft)		6			871			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		2851					440	426				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.73					0.67	0.70				

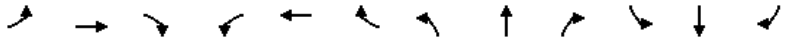
Intersection Summary	
Area Type:	CBD

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)	355	1560	0	0	0	0	335	95	115	0	0	0
Future Volume (vph)	355	1560	0	0	0	0	335	95	115	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.98				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4435					1543	1428				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4435					1543	1428				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	386	1696	0	0	0	0	364	103	125	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	2082	0	0	0	0	295	278	0	0	0	0
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		87.0					40.0	40.0				
Effective Green, g (s)		87.0					40.0	40.0				
Actuated g/C Ratio		0.62					0.29	0.29				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		2756					440	408				
v/s Ratio Prot		c0.47					0.19	c0.20				
v/s Ratio Perm												
v/c Ratio		0.76					0.67	0.68				
Uniform Delay, d1		18.9					44.2	44.4				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.4					4.4	5.1				
Delay (s)		0.4					48.5	49.4				
Level of Service		A					D	D				
Approach Delay (s)		0.4			0.0			49.0			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
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)	0	0	0	137	10	315	196	800	0	0	610	30
Future Volume (vph)	0	0	0	137	10	315	196	800	0	0	610	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			774	
Travel Time (s)		13.4			8.0			4.9			21.1	
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	160	342	0	1083	0	0	696	0
v/c Ratio					1.70	0.76		0.92			0.90	
Control Delay					388.0	21.1		13.6			29.1	
Queue Delay					16.6	0.0		45.9			48.0	
Total Delay					404.7	21.1		59.5			77.0	
Queue Length 50th (ft)					~150	45		299			337	
Queue Length 95th (ft)					#280	126		m302			m167	
Internal Link Dist (ft)		510			273			98			694	
Turn Bay Length (ft)												
Base Capacity (vph)					94	504		1176			775	
Starvation Cap Reductn					0	0		242			0	
Spillback Cap Reductn					41	0		0			183	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					3.02	0.68		1.16			1.18	

Intersection Summary	
Area Type:	CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

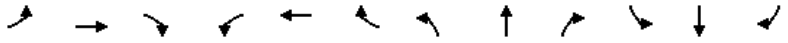
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	0	137	10	315	196	800	0	0	610	30
Future Volume (vph)	0	0	0	137	10	315	196	800	0	0	610	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		0.99			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.96	1.00		0.99			1.00	
Satd. Flow (prot)					1579	1405		2959			1545	
Flt Permitted					0.96	1.00		0.62			1.00	
Satd. Flow (perm)					1579	1405		1860			1545	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	149	11	342	213	870	0	0	663	33
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	160	135	0	1083	0	0	694	0
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	17.4		61.6			50.0	
Effective Green, g (s)					6.0	17.4		55.6			50.0	
Actuated g/C Ratio					0.06	0.17		0.56			0.50	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	244		1034			772	
v/s Ratio Prot					c0.10	0.10					c0.45	
v/s Ratio Perm								c0.58				
v/c Ratio					1.70	0.55		1.05			0.90	
Uniform Delay, d1					47.0	37.7		22.2			22.7	
Progression Factor					1.00	1.00		0.61			0.80	
Incremental Delay, d2					357.0	1.5		24.4			9.5	
Delay (s)					404.0	39.3		38.0			27.7	
Level of Service					F	D		D			C	
Approach Delay (s)		0.0			155.5			38.0			27.7	
Approach LOS		A			F			D			C	

Intersection Summary				
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.21			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	88.1%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

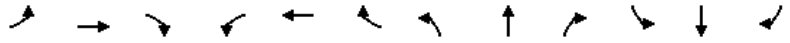


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Future Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		260			984			1156			2190	
Travel Time (s)		7.1			26.8			26.3			49.8	
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2114	0	0	489	0	0	0	0
v/c Ratio					1.33			0.84				
Control Delay					181.1			49.5				
Queue Delay					0.1			2.0				
Total Delay					181.3			51.5				
Queue Length 50th (ft)					~578			142				
Queue Length 95th (ft)					#673			#223				
Internal Link Dist (ft)		180			904			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1587			584				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					70			30				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.39			0.88				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Future Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					4328			3096				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					4328			3096				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1630	484	141	348	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2114	0	0	489	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1586			584				
v/s Ratio Prot					c0.49							
v/s Ratio Perm								0.16				
v/c Ratio					1.33			0.84				
Uniform Delay, d1					28.5			35.2				
Progression Factor					1.00			1.00				
Incremental Delay, d2					154.2			9.7				
Delay (s)					182.7			44.9				
Level of Service					F			D				
Approach Delay (s)		0.0			182.7			44.9			0.0	
Approach LOS		A			F			D			A	

Intersection Summary				
HCM 2000 Control Delay	156.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	99.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Intersection Capacity Analysis Worksheets

2030 No Build Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1040	365	0	645	100	0	850	185	0	425	2
Future Volume (vph)	0	1040	365	0	645	100	0	850	185	0	425	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		710			2667			622			624	
Travel Time (s)		13.8			52.0			17.0			21.3	
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1527	0	0	810	0	0	1125	0	0	464	0
v/c Ratio		1.32			0.66			1.04			0.82	
Control Delay		176.8			27.5			61.2			41.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		176.8			27.5			61.2			41.4	
Queue Length 50th (ft)		~664			216			~320			262	
Queue Length 95th (ft)		#801			284			#533			#434	
Internal Link Dist (ft)		630			2587			542			544	
Turn Bay Length (ft)												
Base Capacity (vph)		1160			1236			1085			568	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.32			0.66			1.04			0.82	

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1040	365	0	645	100	0	850	185	0	425	2
Future Volume (vph)	0	1040	365	0	645	100	0	850	185	0	425	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.94			0.99			0.95			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.97			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2902			3091			2857			1496	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2902			3091			2857			1496	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1130	397	0	701	109	0	924	201	0	462	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1527	0	0	810	0	0	1125	0	0	464	0
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		40.0			40.0			38.0			38.0	
Effective Green, g (s)		40.0			40.0			38.0			38.0	
Actuated g/C Ratio		0.40			0.40			0.38			0.38	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1160			1236			1085			568	
v/s Ratio Prot		c0.53			0.26			c0.39			0.31	
v/s Ratio Perm												
v/c Ratio		1.32			0.66			1.04			0.82	
Uniform Delay, d1		30.0			24.4			31.0			27.9	
Progression Factor		1.00			1.00			0.83			1.00	
Incremental Delay, d2		148.6			1.0			34.2			12.3	
Delay (s)		178.6			25.4			59.8			40.2	
Level of Service		F			C			E			D	
Approach Delay (s)		178.6			25.4			59.8			40.2	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	96.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
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)	361	10	165	0	0	0	0	505	40	417	395	0
Future Volume (vph)	361	10	165	0	0	0	0	505	40	417	395	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1930			178	
Travel Time (s)		13.5			11.4			52.6			4.9	
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	255	327	0	0	0	0	0	592	0	0	882	0
v/c Ratio	1.18	1.51						0.64			1.74	
Control Delay	158.0	278.6						32.4			356.2	
Queue Delay	0.0	0.0						0.1			0.3	
Total Delay	158.0	278.6						32.6			356.4	
Queue Length 50th (ft)	~206	~276						167			~852	
Queue Length 95th (ft)	#370	#461						228			m#627	
Internal Link Dist (ft)		515			421			1850			98	
Turn Bay Length (ft)												
Base Capacity (vph)	216	217						918			506	
Starvation Cap Reductn	0	0						0			15	
Spillback Cap Reductn	0	0						23			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.18	1.51						0.66			1.80	

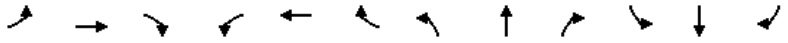
Intersection Summary

Area Type: CBD

~ 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.

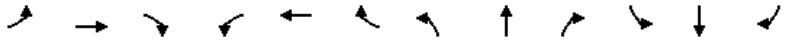
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	10	165	0	0	0	0	505	40	417	395	0
Future Volume (vph)	361	10	165	0	0	0	0	505	40	417	395	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.98	
Frt	1.00	0.92						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.97	
Satd. Flow (prot)	1543	1244						2788			1481	
Flt Permitted	0.95	0.98						1.00			0.40	
Satd. Flow (perm)	1543	1244						2788			614	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	392	11	179	0	0	0	0	549	43	453	429	0
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	255	283	0	0	0	0	0	592	0	0	882	0
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	14.0	14.0						33.0			63.0	
Effective Green, g (s)	14.0	14.0						33.0			63.0	
Actuated g/C Ratio	0.14	0.14						0.33			0.63	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	216	174						920			473	
v/s Ratio Prot	0.17	c0.23						0.21			c0.19	
v/s Ratio Perm											c0.99	
v/c Ratio	1.18	1.63						0.64			1.86	
Uniform Delay, d1	43.0	43.0						28.5			18.5	
Progression Factor	1.00	1.00						1.00			1.46	
Incremental Delay, d2	118.6	306.9						3.5			389.8	
Delay (s)	161.6	349.9						32.0			416.9	
Level of Service	F	F						C			F	
Approach Delay (s)		267.4			0.0			32.0			416.9	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	263.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	2.10			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	94.4%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

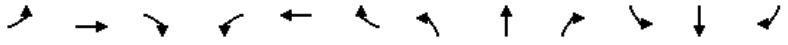


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	320	15	80	315	10	245	245	125	5	145	245
Future Volume (vph)	210	320	15	80	315	10	245	245	125	5	145	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			592			255			521	
Travel Time (s)		14.9			16.1			7.0			14.2	
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	228	364	0	87	353	0	266	402	0	0	163	266
v/c Ratio	0.76	0.65		0.29	0.75		0.88	0.86			0.54	0.77
Control Delay	46.3	44.8		26.8	51.1		66.8	57.8			52.5	53.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	46.3	44.8		26.8	51.1		66.8	57.8			52.5	53.8
Queue Length 50th (ft)	137	292		47	286		187	328			126	192
Queue Length 95th (ft)	#281	#463		85	#455		#372	#526			203	#335
Internal Link Dist (ft)		468			512			175			441	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	301	558		324	473		303	505			342	367
Starvation Cap Reductn	0	0		0	0		0	1			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	0.76	0.65		0.27	0.75		0.88	0.80			0.48	0.72

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	320	15	80	315	10	245	245	125	5	145	245
Future Volume (vph)	210	320	15	80	315	10	245	245	125	5	145	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.94			1.00	0.89
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.95	1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1566	1600		1534	1544		1470	1409			1586	1231
Flt Permitted	0.31	1.00		0.39	1.00		0.54	1.00			0.98	1.00
Satd. Flow (perm)	509	1600		624	1544		840	1409			1562	1231
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	348	16	87	342	11	266	266	136	5	158	266
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	228	364	0	87	353	0	266	402	0	0	163	266
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	51.1	40.9		44.1	37.4		32.7	36.7			22.5	32.7
Effective Green, g (s)	51.1	40.9		44.1	37.4		32.7	36.7			22.5	32.7
Actuated g/C Ratio	0.42	0.34		0.36	0.31		0.27	0.30			0.19	0.27
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	303	540		277	476		279	427			290	393
v/s Ratio Prot	0.06	0.23		0.02	0.23		0.08	c0.29				c0.06
v/s Ratio Perm	c0.25			0.10			0.18				0.10	0.16
v/c Ratio	0.75	0.67		0.31	0.74		0.95	0.94			0.56	0.68
Uniform Delay, d1	27.5	34.4		26.5	37.5		42.3	41.2			44.8	39.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	9.0	6.6		0.2	10.0		40.8	28.9			1.5	3.6
Delay (s)	36.5	41.0		26.7	47.5		83.1	70.0			46.3	43.1
Level of Service	D	D		C	D		F	E			D	D
Approach Delay (s)		39.3			43.4			75.2			44.3	
Approach LOS		D			D			E			D	

Intersection Summary				
HCM 2000 Control Delay	52.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	121.1	Sum of lost time (s)	29.0	
Intersection Capacity Utilization	83.6%	ICU Level of Service	E	
Analysis Period (min)	15			

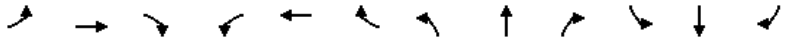
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	570	0	0	395	60
Future Volume (vph)	75	0	40	5	10	5	25	570	0	0	395	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		503			303			1833			182	
Travel Time (s)		13.7			8.3			50.0			5.0	
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	21	0	0	647	0	0	494	0
v/c Ratio		0.55			0.11			0.74			0.62	
Control Delay		26.1			25.0			19.5			16.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.1			25.0			19.5			16.3	
Queue Length 50th (ft)		23			6			125			83	
Queue Length 95th (ft)		90			29			#669			#488	
Internal Link Dist (ft)		423			223			1753			102	
Turn Bay Length (ft)												
Base Capacity (vph)		402			392			875			794	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.05			0.74			0.62	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	570	0	0	395	60
Future Volume (vph)	75	0	40	5	10	5	25	570	0	0	395	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			0.98	
Flpb, ped/bikes		0.94			0.99			1.00			1.00	
Frt		0.95			0.97			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1309			1251			1358			1205	
Flt Permitted		0.79			0.93			0.97			1.00	
Satd. Flow (perm)		1067			1175			1322			1205	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	43	5	11	5	27	620	0	0	429	65
RTOR Reduction (vph)	0	53	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	72	0	0	17	0	0	647	0	0	494	0
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		5			5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		12.3			12.3			51.6			51.6	
Effective Green, g (s)		12.3			12.3			51.6			51.6	
Actuated g/C Ratio		0.15			0.15			0.64			0.64	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		161			178			841			766	
v/s Ratio Prot											0.41	
v/s Ratio Perm		c0.07			0.01			c0.49				
v/c Ratio		0.44			0.09			0.77			0.64	
Uniform Delay, d1		31.3			29.6			10.5			9.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			0.3			6.7			4.2	
Delay (s)		33.9			29.9			17.2			13.3	
Level of Service		C			C			B			B	
Approach Delay (s)		33.9			29.9			17.2			13.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	175	1750	1215	630	375	160
Future Volume (vph)	175	1750	1215	630	375	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		511	949		1833	
Travel Time (s)		10.0	18.5		50.0	
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	1902	1321	685	408	174
v/c Ratio	0.84	1.07	1.19	1.47	0.85	0.25
Control Delay	76.4	67.7	111.7	238.5	54.1	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	67.7	111.7	238.5	54.1	14.7
Queue Length 50th (ft)	132	~786	~588	~665	270	61
Queue Length 95th (ft)	#258	#925	m391	m#513	#440	104
Internal Link Dist (ft)		431	869		1753	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	225	1773	1111	465	478	708
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.07	1.19	1.47	0.85	0.25

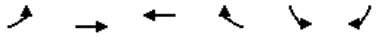
Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

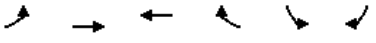
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	175	1750	1215	630	375	160
Future Volume (vph)	175	1750	1215	630	375	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1417	3025	3020	1263	1547	1338
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1417	3025	3020	1263	1547	1338
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	1902	1321	685	408	174
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	190	1902	1321	685	408	171
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	17.5	64.5	40.5	40.5	34.0	57.5
Effective Green, g (s)	17.5	58.0	40.5	40.5	34.0	57.5
Actuated g/C Ratio	0.16	0.53	0.37	0.37	0.31	0.52
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	225	1595	1111	465	478	699
v/s Ratio Prot	0.13	c0.63	0.44		c0.26	0.13
v/s Ratio Perm				c0.54		
v/c Ratio	0.84	1.19	1.19	1.47	0.85	0.24
Uniform Delay, d1	44.9	26.0	34.8	34.8	35.7	14.4
Progression Factor	1.00	1.00	0.71	0.72	1.00	1.00
Incremental Delay, d2	30.3	93.1	86.0	214.0	17.4	0.8
Delay (s)	75.2	119.1	110.8	238.9	53.0	15.2
Level of Service	E	F	F	F	D	B
Approach Delay (s)		115.1	154.5		41.7	
Approach LOS		F	F		D	

Intersection Summary			
HCM 2000 Control Delay	122.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	690	2045	55	110	25
Future Volume (vph)	15	690	2045	55	110	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		282	
Travel Time (s)		18.5	20.6		7.7	
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	750	2283	0	147	0
v/c Ratio	0.21	0.34	1.21		0.91	
Control Delay	49.4	8.4	121.6		100.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	49.4	8.4	121.6		100.4	
Queue Length 50th (ft)	11	50	~971		104	
Queue Length 95th (ft)	m11	m186	#1445		#227	
Internal Link Dist (ft)		869	980		202	
Turn Bay Length (ft)	170					
Base Capacity (vph)	75	2206	1886		162	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.21	0.34	1.21		0.91	

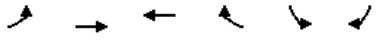
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	690	2045	55	110	25
Future Volume (vph)	15	690	2045	55	110	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.98	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1285	2973	2981		1554	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1285	2973	2981		1554	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	750	2223	60	120	27
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	16	750	2283	0	147	0
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	76.0	64.0		11.5	
Effective Green, g (s)	6.5	70.5	64.0		11.5	
Actuated g/C Ratio	0.06	0.64	0.58		0.10	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	75	1905	1734		162	
v/s Ratio Prot	0.01	c0.25	c0.77		c0.09	
v/s Ratio Perm						
v/c Ratio	0.21	0.39	1.32		0.91	
Uniform Delay, d1	49.3	9.5	23.0		48.7	
Progression Factor	0.98	1.18	1.00		1.00	
Incremental Delay, d2	0.0	0.0	146.7		43.6	
Delay (s)	48.2	11.2	169.7		92.3	
Level of Service	D	B	F		F	
Approach Delay (s)		12.0	169.7		92.3	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	128.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	15	790	295	150	5	15	85	2	5	1305
Future Volume (vph)	15	790	295	150	5	15	85	2	5	1305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	16	859	484	0	0	113	0	0	475	950
v/c Ratio	0.10	1.90	0.41			0.49			0.76	0.83
Control Delay	53.9	446.8	18.5			24.1			41.9	41.5
Queue Delay	0.0	0.4	1.2			2.2			59.4	53.2
Total Delay	53.9	447.2	19.6			26.4			101.3	94.7
Queue Length 50th (ft)	13	~630	66			18			356	410
Queue Length 95th (ft)	36	#763	77			81			508	513
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	168	451	1192			231			623	1144
Starvation Cap Reductn	0	0	466			0			0	0
Spillback Cap Reductn	0	20	0			46			372	683
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.10	1.99	0.67			0.61			1.89	2.06

Intersection Summary

Area Type: CBD

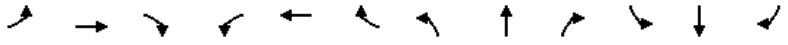
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	15	790	295	150	5	15	85	2	5	1305
Future Volume (vph)	15	790	295	150	5	15	85	2	5	1305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.95			0.89			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1177	3160	3032			1490			1387	2544
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1177	3160	3032			1490			1387	2544
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	859	321	163	5	16	92	2	5	1418
RTOR Reduction (vph)	0	0	44	0	0	83	0	0	0	0
Lane Group Flow (vph)	16	859	440	0	0	30	0	0	475	950
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	20.0	20.0	56.0			14.0			58.0	63.0
Effective Green, g (s)	20.0	20.0	56.0			14.0			58.0	63.0
Actuated g/C Ratio	0.14	0.14	0.40			0.10			0.41	0.45
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	168	451	1212			149			624	1144
v/s Ratio Prot	0.01	c0.27	c0.15			c0.02			0.16	c0.37
v/s Ratio Perm									0.18	
v/c Ratio	0.10	1.90	0.36			0.20			0.76	0.83
Uniform Delay, d1	52.1	60.0	29.5			57.9			33.8	33.8
Progression Factor	1.00	1.00	0.65			1.00			1.00	1.00
Incremental Delay, d2	1.1	415.3	0.1			0.2			5.8	5.5
Delay (s)	53.3	475.3	19.2			58.1			39.6	39.3
Level of Service	D	F	B			E			D	D
Approach Delay (s)		467.6	19.2			58.1			39.4	
Approach LOS		F	B			E			D	

Intersection Summary			
HCM 2000 Control Delay	166.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
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)	0	1805	375	10	340	0	0	0	0	345	240	105
Future Volume (vph)	0	1805	375	10	340	0	0	0	0	345	240	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1962	408	0	381	0	0	0	0	214	422	114
v/c Ratio		0.91	0.57		0.41					1.08	1.03	0.37
Control Delay		29.3	9.4		0.7					142.0	110.5	9.1
Queue Delay		47.2	58.0		0.0					0.0	0.0	0.1
Total Delay		76.5	67.4		0.7					142.0	110.5	9.2
Queue Length 50th (ft)		553	206		1					~238	~225	0
Queue Length 95th (ft)		m446	m119		m1					#420	#341	42
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)			100									
Base Capacity (vph)		2167	722		928					198	409	308
Starvation Cap Reductn		948	397		0					0	0	0
Spillback Cap Reductn		0	0		0					0	0	15
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.61	1.26		0.41					1.08	1.03	0.39

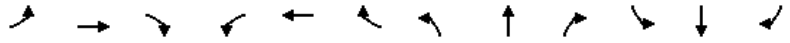
Intersection Summary

Area Type: CBD

~ 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)	0	1805	375	10	340	0	0	0	0	345	240	105
Future Volume (vph)	0	1805	375	10	340	0	0	0	0	345	240	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4101	1236		3244					1387	2866	1365
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4101	1236		3103					1387	2866	1365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1962	408	11	370	0	0	0	0	375	261	114
RTOR Reduction (vph)	0	0	69	0	0	0	0	0	0	0	0	98
Lane Group Flow (vph)	0	1962	339	0	381	0	0	0	0	214	422	16
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		74.0	74.0		58.0					20.0	20.0	20.0
Effective Green, g (s)		74.0	74.0		58.0					20.0	20.0	20.0
Actuated g/C Ratio		0.53	0.53		0.41					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		2167	653		1313					198	409	195
v/s Ratio Prot		c0.48			c0.06					c0.15	0.15	
v/s Ratio Perm			0.27		0.06							0.01
v/c Ratio		0.91	0.52		0.29					1.08	1.03	0.08
Uniform Delay, d1		29.8	21.4		27.3					60.0	60.0	52.0
Progression Factor		0.95	0.66		0.03					1.00	1.00	1.00
Incremental Delay, d2		0.6	0.0		0.0					87.1	52.9	0.1
Delay (s)		28.8	14.2		0.7					147.1	112.9	52.1
Level of Service		C	B		A					F	F	D
Approach Delay (s)		26.3			0.7			0.0			113.4	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
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)	190	1005	770	0	0	0	0	795	75	75	975	0
Future Volume (vph)	190	1005	770	0	0	0	0	795	75	75	975	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		784			617			531			989	
Travel Time (s)		21.4			21.0			10.3			19.3	
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1299	837	0	0	0	0	946	0	0	1142	0
v/c Ratio		0.97	1.34					0.84			1.31	
Control Delay		41.3	187.8					48.2			180.9	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		41.3	187.8					48.2			180.9	
Queue Length 50th (ft)		587	~947					410			~670	
Queue Length 95th (ft)		m#954	m#1397					501			#842	
Internal Link Dist (ft)		704			537			451			909	
Turn Bay Length (ft)												
Base Capacity (vph)		1341	623					1131			870	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		0.97	1.34					0.84			1.31	

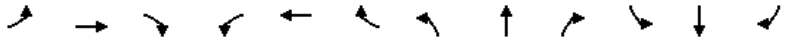
Intersection Summary

Area Type: CBD

~ 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.

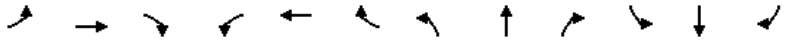
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1005	770	0	0	0	0	795	75	75	975	0
Future Volume (vph)	190	1005	770	0	0	0	0	795	75	75	975	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		1.00	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			1.00	
Satd. Flow (prot)		3130	1454					3093			3129	
Flt Permitted		0.99	1.00					1.00			0.57	
Satd. Flow (perm)		3130	1454					3093			1783	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1092	837	0	0	0	0	864	82	82	1060	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1299	837	0	0	0	0	941	0	0	1142	0
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		56.8	56.8					51.0			63.0	
Effective Green, g (s)		56.8	56.8					51.0			63.0	
Actuated g/C Ratio		0.41	0.41					0.36			0.45	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1269	589					1126			879	
v/s Ratio Prot			c0.58					0.30			c0.07	
v/s Ratio Perm		0.41									c0.51	
v/c Ratio		1.02	1.42					0.84			1.30	
Uniform Delay, d1		41.6	41.6					40.7			38.5	
Progression Factor		0.70	0.71					1.00			1.00	
Incremental Delay, d2		25.5	195.3					5.3			143.0	
Delay (s)		54.5	224.9					45.9			181.5	
Level of Service		D	F					D			F	
Approach Delay (s)		121.3			0.0			45.9			181.5	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	120.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.34			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	110.6%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group



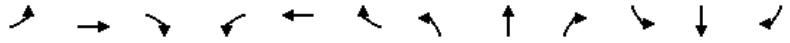
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	1015	110	390	615	0	0	990	255
Future Volume (vph)	0	0	0	110	1015	110	390	615	0	0	990	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		762			786			989			627	
Travel Time (s)		20.8			21.4			19.3			12.2	
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1343	0	424	668	0	0	1353	0
v/c Ratio					1.14		1.29	0.68			1.24	
Control Delay					112.5		187.6	21.3			149.9	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					112.5		187.6	21.3			149.9	
Queue Length 50th (ft)					~443		~374	335			~680	
Queue Length 95th (ft)					#541		#579	476			#821	
Internal Link Dist (ft)		682			706			909			547	
Turn Bay Length (ft)												
Base Capacity (vph)					1180		329	978			1090	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.14		1.29	0.68			1.24	

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	1015	110	390	615	0	0	990	255
Future Volume (vph)	0	0	0	110	1015	110	390	615	0	0	990	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		6.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.98		1.00	1.00			0.96	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4253		1570	1653			2923	
Flt Permitted					1.00		0.08	1.00			1.00	
Satd. Flow (perm)					4253		132	1653			2923	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	120	1103	120	424	668	0	0	1076	277
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	0	0	0	1334	0	424	668	0	0	1334	0
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					33.0		71.0	71.0			44.0	
Effective Green, g (s)					33.0		71.0	71.0			44.0	
Actuated g/C Ratio					0.28		0.59	0.59			0.37	
Clearance Time (s)					10.0		6.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1169		329	978			1071	
v/s Ratio Prot					c0.31		c0.22	0.40			0.46	
v/s Ratio Perm							c0.53					
v/c Ratio					1.14		1.29	0.68			1.25	
Uniform Delay, d1					43.5		45.2	16.8			38.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					74.0		151.0	3.9			118.5	
Delay (s)					117.5		196.1	20.7			156.5	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			117.5			88.8			156.5	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	123.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	110.2%	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)	0	0	395	945	810	0	0	0	0	0	785	45
Future Volume (vph)	0	0	395	945	810	0	0	0	0	0	785	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		513			209			926			1840	
Travel Time (s)		14.0			5.7			21.0			41.8	
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	429	1027	880	0	0	0	0	0	902	0
v/c Ratio			0.69	1.43	1.06						1.16	
Control Delay			40.3	221.6	48.6						116.8	
Queue Delay			0.0	1.2	18.3						0.0	
Total Delay			40.3	222.9	66.9						116.8	
Queue Length 50th (ft)			140	~430	~443						~368	
Queue Length 95th (ft)			201	m97	m148						m#287	
Internal Link Dist (ft)		433			129			846			1760	
Turn Bay Length (ft)			100									
Base Capacity (vph)			618	716	834						775	
Starvation Cap Reductn			0	117	121						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.69	1.71	1.23						1.16	

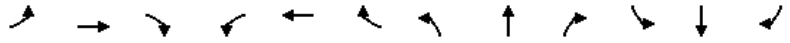
Intersection Summary

Area Type: CBD

~ 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.

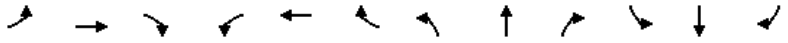
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	395	945	810	0	0	0	0	0	785	45
Future Volume (vph)	0	0	395	945	810	0	0	0	0	0	785	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3217	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3217	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	429	1027	880	0	0	0	0	0	853	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	429	1027	880	0	0	0	0	0	898	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			26.0	31.0	62.0						24.0	
Effective Green, g (s)			26.0	31.0	57.0						24.0	
Actuated g/C Ratio			0.26	0.31	0.57						0.24	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			618	925	897						772	
v/s Ratio Prot			0.18	c0.34	c0.56						c0.28	
v/s Ratio Perm												
v/c Ratio			0.69	1.11	0.98						1.16	
Uniform Delay, d1			33.4	34.5	21.0						38.0	
Progression Factor			1.00	0.69	1.03						1.08	
Incremental Delay, d2			2.7	51.3	5.5						79.3	
Delay (s)			36.1	75.2	27.0						120.2	
Level of Service			D	E	C						F	
Approach Delay (s)		36.1			53.0			0.0			120.2	
Approach LOS		D			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	69.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	109.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	380	25	35	670	150	10	0	15	0	0	0
Future Volume (Veh/h)	55	380	25	35	670	150	10	0	15	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	413	27	38	728	163	11	0	16	0	0	0
Pedestrians		40						50			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		3						4			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		745			513							
pX, platoon unblocked	0.46			0.90			0.51	0.51	0.90	0.51	0.51	0.46
vC, conflicting volume	910			490			1522	1582	476	1454	1514	868
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229			383			1124	1242	369	990	1109	139
tC, single (s)	4.2			4.2			7.3	6.7	6.4	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.7	4.2	3.5	3.5	4.0	3.3
p0 queue free %	90			96			84	100	97	100	100	100
cM capacity (veh/h)	606			1000			70	69	555	98	90	411

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	60	440	929	27
Volume Left	60	0	38	11
Volume Right	0	27	163	16
cSH	606	1700	1000	145
Volume to Capacity	0.10	0.26	0.04	0.19
Queue Length 95th (ft)	8	0	3	16
Control Delay (s)	11.6	0.0	1.0	35.5
Lane LOS	B		A	E
Approach Delay (s)	1.4		1.0	35.5
Approach LOS				E

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	89.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	395	5	40	560	135	5	15	35	30	10	25
Future Volume (vph)	120	395	5	40	560	135	5	15	35	30	10	25
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	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		605			745			131			150	
Travel Time (s)		16.5			20.3			3.6			4.1	
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	130	434	0	43	756	0	0	21	38	0	71	0
v/c Ratio	0.54	0.45		0.13	0.80			0.17	0.39		0.53	
Control Delay	29.7	17.0		16.0	27.3			47.3	56.9		47.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	29.7	17.0		16.0	27.3			47.3	56.9		47.6	
Queue Length 50th (ft)	43	130		10	340			14	25		31	
Queue Length 95th (ft)	#212	#433		50	#930			37	57		77	
Internal Link Dist (ft)		525			665			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	240	969		339	944			239	186		163	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.54	0.45		0.13	0.80			0.09	0.20		0.44	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	395	5	40	560	135	5	15	35	30	10	25
Future Volume (vph)	120	395	5	40	560	135	5	15	35	30	10	25
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.98	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.97			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	
Satd. Flow (prot)	1466	1460		1065	1426			1674	1297		1497	
Flt Permitted	0.23	1.00		0.46	1.00			0.99	1.00		0.98	
Satd. Flow (perm)	361	1460		512	1426			1674	1297		1497	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	429	5	43	609	147	5	16	38	33	11	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	22	0
Lane Group Flow (vph)	130	434	0	43	756	0	0	21	38	0	49	0
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	62.4	62.4		62.4	62.4			6.7	6.7		6.7	
Effective Green, g (s)	62.4	62.4		62.4	62.4			6.7	6.7		6.7	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.06	0.06		0.06	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	214	867		304	847			106	82		95	
v/s Ratio Prot		0.30			c0.53			0.01			c0.03	
v/s Ratio Perm	0.36			0.08					c0.03			
v/c Ratio	0.61	0.50		0.14	0.89			0.20	0.46		0.52	
Uniform Delay, d1	13.5	12.3		9.4	18.4			46.6	47.4		47.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	12.2	2.1		1.0	13.7			0.3	1.5		2.4	
Delay (s)	25.7	14.4		10.4	32.2			46.9	48.9		50.0	
Level of Service	C	B		B	C			D	D		D	
Approach Delay (s)		17.0			31.0			48.2			50.0	
Approach LOS		B			C			D			D	

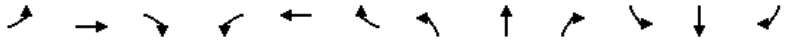
Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	510	25	1	400	130	1	1	0	30	25	0
Future Volume (Veh/h)	1	510	25	1	400	130	1	1	0	30	25	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	554	27	1	435	141	1	1	0	33	27	0
Pedestrians					22			22			17	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		592			467							
pX, platoon unblocked	0.78			0.82			0.87	0.87	0.82	0.87	0.87	0.78
vC, conflicting volume	593			603			1112	1186	612	1116	1130	522
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	336			413			599	684	423	603	618	246
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	90	92	100
cM capacity (veh/h)	940			928			322	311	502	335	339	609

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	582	577	2	60
Volume Left	1	1	1	33
Volume Right	27	141	0	0
cSH	940	928	316	337
Volume to Capacity	0.00	0.00	0.01	0.18
Queue Length 95th (ft)	0	0	0	16
Control Delay (s)	0.0	0.0	16.5	18.0
Lane LOS	A	A	C	C
Approach Delay (s)	0.0	0.0	16.5	18.0
Approach LOS			C	C

Intersection Summary				
Average Delay			0.9	
Intersection Capacity Utilization			48.6%	ICU Level of Service
Analysis Period (min)			15	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	515	30	50	540	1	15	1	5	1	1	1
Future Volume (vph)	1	515	30	50	540	1	15	1	5	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		467			605			282			144	
Travel Time (s)		12.7			16.5			7.7			3.9	
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	594	0	0	642	0	0	22	0	0	3	0
v/c Ratio		0.50			0.57			0.18			0.03	
Control Delay		14.1			15.7			32.1			30.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.1			15.7			32.1			30.7	
Queue Length 50th (ft)		0			0			8			1	
Queue Length 95th (ft)		#542			#609			30			9	
Internal Link Dist (ft)		387			525			202			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1189			1125			121			108	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.50			0.57			0.18			0.03	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	515	30	50	540	1	15	1	5	1	1	1
Future Volume (vph)	1	515	30	50	540	1	15	1	5	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.93			0.89	
Flpb, ped/bikes		1.00			1.00			0.78			0.90	
Frt		0.99			1.00			0.97			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1506			1543			1173			1270	
Flt Permitted		1.00			0.92			1.00			0.92	
Satd. Flow (perm)		1505			1422			1216			1187	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	560	33	54	587	1	16	1	5	1	1	1
RTOR Reduction (vph)	0	1	0	0	0	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	593	0	0	642	0	0	17	0	0	2	0
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		50.7			50.7			2.9			2.9	
Effective Green, g (s)		50.7			50.7			2.9			2.9	
Actuated g/C Ratio		0.63			0.63			0.04			0.04	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		953			901			44			43	
v/s Ratio Prot												
v/s Ratio Perm		0.39			c0.45			c0.01			0.00	
v/c Ratio		0.62			0.71			0.39			0.05	
Uniform Delay, d1		8.9			9.8			37.7			37.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.1			4.8			2.1			0.2	
Delay (s)		11.9			14.6			39.8			37.4	
Level of Service		B			B			D			D	
Approach Delay (s)		11.9			14.6			39.8			37.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	0	50	80	15	450	0	45	380	20
Future Volume (Veh/h)	10	10	10	0	50	80	15	450	0	45	380	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	11	0	54	87	16	489	0	49	413	22
Pedestrians		69			64						42	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		6			6						4	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								521				
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	1268	1176	493	1124	1187	595	504			553		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1244	1143	493	1085	1155	502	504			456		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	93	98	100	63	81	98			95		
cM capacity (veh/h)	64	150	543	134	148	469	1000			944		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	141	505	484
Volume Left	11	0	16	49
Volume Right	11	87	0	22
cSH	124	256	1000	944
Volume to Capacity	0.27	0.55	0.02	0.05
Queue Length 95th (ft)	25	76	1	4
Control Delay (s)	44.2	35.0	0.5	1.5
Lane LOS	E	D	A	A
Approach Delay (s)	44.2	35.0	0.5	1.5
Approach LOS	E	D		

Intersection Summary				
Average Delay			6.3	
Intersection Capacity Utilization			65.5%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	805	300	0	0	1800
Future Volume (Veh/h)	0	805	300	0	0	1800
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	875	326	0	0	1957
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.92	
vC, conflicting volume	326				764	163
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326				574	163
tC, single (s)	4.1				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1238				412	850

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	438	438	163	163	1957
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1957
cSH	1700	1700	1700	1700	850
Volume to Capacity	0.26	0.26	0.10	0.10	2.30
Queue Length 95th (ft)	0	0	0	0	3588
Control Delay (s)	0.0	0.0	0.0	0.0	602.9
Lane LOS					F
Approach Delay (s)	0.0		0.0		602.9
Approach LOS					F

Intersection Summary			
Average Delay	373.6		
Intersection Capacity Utilization	126.4%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	1810	0	0	0	0	350	155	155	0	0	0
Future Volume (vph)	340	1810	0	0	0	0	350	155	155	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			784			304			1156	
Travel Time (s)		1.7			15.3			6.9			26.3	
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2337	0	0	0	0	308	408	0	0	0	0
v/c Ratio		0.74					1.00	1.40				
Control Delay		0.6					106.7	239.0				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.6					106.7	239.0				
Queue Length 50th (ft)		0					297	~507				
Queue Length 95th (ft)		m0					#506	#729				
Internal Link Dist (ft)		6			704			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		3142					308	291				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.74					1.00	1.40				

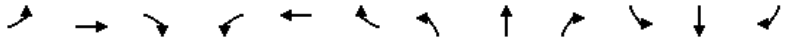
Intersection Summary

Area Type: CBD

~ 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.

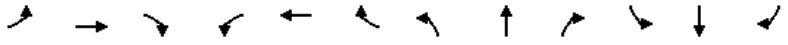
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	1810	0	0	0	0	350	155	155	0	0	0
Future Volume (vph)	340	1810	0	0	0	0	350	155	155	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.94				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4314					1543	1367				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4314					1543	1367				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	1967	0	0	0	0	380	168	168	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	2337	0	0	0	0	308	390	0	0	0	0
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		99.0					28.0	28.0				
Effective Green, g (s)		99.0					28.0	28.0				
Actuated g/C Ratio		0.71					0.20	0.20				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		3050					308	273				
v/s Ratio Prot		c0.54					0.20	c0.29				
v/s Ratio Perm												
v/c Ratio		0.77					1.00	1.43				
Uniform Delay, d1		13.1					56.0	56.0				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.4					51.3	213.4				
Delay (s)		0.4					107.3	269.4				
Level of Service		A					F	F				
Approach Delay (s)		0.4			0.0			199.7			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



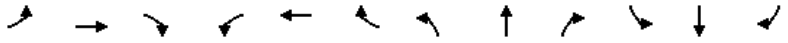
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	230	61	805	0	0	745	45
Future Volume (vph)	0	0	0	67	2	230	61	805	0	0	745	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			622	
Travel Time (s)		13.4			8.0			4.9			17.0	
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	75	250	0	941	0	0	859	0
v/c Ratio					0.80	0.57		0.70			1.21	
Control Delay					75.4	8.0		5.7			121.2	
Queue Delay					75.2	0.0		2.7			6.4	
Total Delay					150.6	8.0		8.4			127.6	
Queue Length 50th (ft)					52	25		32			~532	
Queue Length 95th (ft)					m46	m12		m24			m#591	
Internal Link Dist (ft)		510			273			98			542	
Turn Bay Length (ft)												
Base Capacity (vph)					94	631		1350			712	
Starvation Cap Reductn					0	0		286			0	
Spillback Cap Reductn					36	0		0			375	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					1.29	0.40		0.88			2.55	

Intersection Summary	
Area Type:	CBD

~ 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.

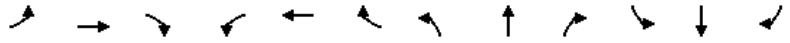
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	230	61	805	0	0	745	45
Future Volume (vph)	0	0	0	67	2	230	61	805	0	0	745	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.95	1.00		1.00			1.00	
Satd. Flow (prot)					1576	1405		2910			1511	
Flt Permitted					0.95	1.00		0.71			1.00	
Satd. Flow (perm)					1576	1405		2086			1511	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	73	2	250	66	875	0	0	810	49
RTOR Reduction (vph)	0	0	0	0	0	210	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	75	40	0	941	0	0	857	0
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	16.0		63.0			47.0	
Effective Green, g (s)					6.0	16.0		57.0			47.0	
Actuated g/C Ratio					0.06	0.16		0.57			0.47	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	224		1189			710	
v/s Ratio Prot					c0.05	0.03					c0.57	
v/s Ratio Perm								c0.45				
v/c Ratio					0.80	0.18		0.79			1.21	
Uniform Delay, d1					46.4	36.3		16.8			26.5	
Progression Factor					1.52	1.73		0.38			1.01	
Incremental Delay, d2					4.0	0.0		1.4			94.4	
Delay (s)					74.5	62.7		7.8			121.2	
Level of Service					E	E		A			F	
Approach Delay (s)		0.0			65.4			7.8			121.2	
Approach LOS		A			E			A			F	

Intersection Summary				
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.20			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	91.5%	ICU Level of Service	F	
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)	0	0	0	0	1415	245	340	155	0	0	0	0
Future Volume (vph)	0	0	0	0	1415	245	340	155	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		209			762			1156			2190	
Travel Time (s)		5.7			20.8			26.3			49.8	
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1804	0	0	538	0	0	0	0
v/c Ratio					1.75			0.99dl				
Control Delay					370.0			40.4				
Queue Delay					1.0			8.4				
Total Delay					371.0			48.8				
Queue Length 50th (ft)					~630			164				
Queue Length 95th (ft)					#726			226				
Internal Link Dist (ft)		129			682			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1029			740				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					183			166				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					2.13			0.94				

Intersection Summary	
Area Type:	CBD

~ 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.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1415	245	340	155	0	0	0	0
Future Volume (vph)	0	0	0	0	1415	245	340	155	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4289			2847				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4289			2847				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1538	266	370	168	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1804	0	0	538	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					24.0			26.0				
Effective Green, g (s)					24.0			26.0				
Actuated g/C Ratio					0.24			0.26				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1029			740				
v/s Ratio Prot					c0.42							
v/s Ratio Perm								0.19				
v/c Ratio					1.75			0.99dl				
Uniform Delay, d1					38.0			33.8				
Progression Factor					1.00			1.00				
Incremental Delay, d2					342.9			3.0				
Delay (s)					380.9			36.8				
Level of Service					F			D				
Approach Delay (s)		0.0			380.9			36.8			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	301.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	109.5%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	755	305	0	990	110	0	855	315	0	360	15
Future Volume (vph)	0	755	305	0	990	110	0	855	315	0	360	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		641			2767			774			646	
Travel Time (s)		12.5			53.9			21.1			22.0	
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1153	0	0	1196	0	0	1271	0	0	407	0
v/c Ratio		1.09			1.02			1.14			0.63	
Control Delay		86.5			63.5			100.3			28.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		86.5			63.5			100.3			28.9	
Queue Length 50th (ft)		~437			~412			~497			202	
Queue Length 95th (ft)		#568			#558			m#558			307	
Internal Link Dist (ft)		561			2687			694			566	
Turn Bay Length (ft)												
Base Capacity (vph)		1059			1173			1114			644	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.09			1.02			1.14			0.63	

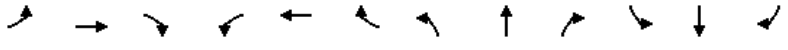
Intersection Summary

Area Type: CBD

~ 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)	0	755	305	0	990	110	0	855	315	0	360	15
Future Volume (vph)	0	755	305	0	990	110	0	855	315	0	360	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.90			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.96			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2862			3172			2718			1573	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2862			3172			2718			1573	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	821	332	0	1076	120	0	929	342	0	391	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1153	0	0	1196	0	0	1271	0	0	407	0
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			56
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		37.0			37.0			41.0			41.0	
Effective Green, g (s)		37.0			37.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1058			1173			1114			644	
v/s Ratio Prot		c0.40			0.38			c0.47			0.26	
v/s Ratio Perm												
v/c Ratio		1.09			1.02			1.14			0.63	
Uniform Delay, d1		31.5			31.5			29.5			23.5	
Progression Factor		1.00			1.00			1.11			1.00	
Incremental Delay, d2		55.5			31.3			68.6			4.7	
Delay (s)		87.0			62.8			101.3			28.2	
Level of Service		F			E			F			C	
Approach Delay (s)		87.0			62.8			101.3			28.2	
Approach LOS		F			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	78.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
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)	381	20	130	0	0	0	0	655	35	267	510	0
Future Volume (vph)	381	20	130	0	0	0	0	655	35	267	510	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1960			178	
Travel Time (s)		13.5			11.4			53.5			4.9	
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	269	308	0	0	0	0	0	750	0	0	844	0
v/c Ratio	1.59	1.79						0.75			1.57	
Control Delay	324.1	404.0						35.1			275.1	
Queue Delay	0.3	0.7						2.7			0.3	
Total Delay	324.4	404.8						37.8			275.4	
Queue Length 50th (ft)	~258	~292						214			~735	
Queue Length 95th (ft)	#425	#472						#336			m#677	
Internal Link Dist (ft)		515			421			1880			98	
Turn Bay Length (ft)												
Base Capacity (vph)	169	172						1006			539	
Starvation Cap Reductn	0	0						0			18	
Spillback Cap Reductn	3	7						153			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.62	1.87						0.88			1.62	

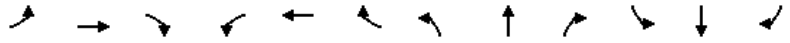
Intersection Summary

Area Type: CBD

~ 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)	381	20	130	0	0	0	0	655	35	267	510	0
Future Volume (vph)	381	20	130	0	0	0	0	655	35	267	510	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.98			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			1.00	
Frt	1.00	0.93						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1296						2923			1559	
Flt Permitted	0.95	0.98						1.00			0.39	
Satd. Flow (perm)	1543	1296						2923			615	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	414	22	141	0	0	0	0	712	38	290	554	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	269	278	0	0	0	0	0	750	0	0	844	0
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	11.0	11.0						34.4			66.0	
Effective Green, g (s)	11.0	11.0						34.4			66.0	
Actuated g/C Ratio	0.11	0.11						0.34			0.66	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	169	142						1005			515	
v/s Ratio Prot	0.17	c0.21						0.26			c0.19	
v/s Ratio Perm											c0.89	
v/c Ratio	1.59	1.96						0.75			1.64	
Uniform Delay, d1	44.5	44.5						28.9			17.0	
Progression Factor	1.00	1.00						1.00			1.22	
Incremental Delay, d2	292.4	454.7						5.0			288.3	
Delay (s)	336.9	499.2						34.0			309.0	
Level of Service	F	F						C			F	
Approach Delay (s)		423.5			0.0			34.0			309.0	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	244.4	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.94			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	95.8%	ICU Level of Service	F	
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)	215	245	40	130	485	5	230	235	55	5	330	305
Future Volume (vph)	215	245	40	130	485	5	230	235	55	5	330	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			547			255			491	
Travel Time (s)		14.9			14.9			7.0			13.4	
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	309	0	141	532	0	250	315	0	0	364	332
v/c Ratio	1.34	0.56		0.44	0.95		1.44	0.58			0.93	0.95
Control Delay	212.7	47.3		33.1	77.1		260.0	47.6			87.1	85.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	1.5			0.0	0.0
Total Delay	212.7	47.3		33.1	77.1		260.0	49.2			87.1	85.2
Queue Length 50th (ft)	~248	265		90	542		~281	271			372	297
Queue Length 95th (ft)	#432	372		142	#792		#472	381			#582	#450
Internal Link Dist (ft)		468			467			175			411	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	175	551		326	560		174	541			393	351
Starvation Cap Reductn	0	0		0	0		0	97			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	1.34	0.56		0.43	0.95		1.44	0.71			0.93	0.95

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	245	40	130	485	5	230	235	55	5	330	305
Future Volume (vph)	215	245	40	130	485	5	230	235	55	5	330	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.97			1.00	0.82
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1575	1626		1572	1672		1559	1584			1687	1174
Flt Permitted	0.13	1.00		0.41	1.00		0.18	1.00			0.99	1.00
Satd. Flow (perm)	209	1626		681	1672		297	1584			1679	1174
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	234	266	43	141	527	5	250	255	60	5	359	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	234	309	0	141	532	0	250	315	0	0	364	332
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	61.1	51.0		59.7	50.3		45.3	49.3			35.2	45.3
Effective Green, g (s)	61.1	51.0		59.7	50.3		45.3	49.3			35.2	45.3
Actuated g/C Ratio	0.40	0.34		0.39	0.33		0.30	0.33			0.23	0.30
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	175	547		323	554		172	515			389	397
v/s Ratio Prot	c0.09	0.19		0.03	0.32		c0.10	0.20				0.06
v/s Ratio Perm	c0.45			0.14			c0.34				0.22	0.23
v/c Ratio	1.34	0.56		0.44	0.96		1.45	0.61			0.94	0.84
Uniform Delay, d1	39.4	41.2		31.4	49.7		49.2	43.1			57.1	49.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	185.1	4.2		0.3	29.6		233.4	1.5			29.3	13.6
Delay (s)	224.6	45.4		31.7	79.3		282.6	44.6			86.4	63.3
Level of Service	F	D		C	E		F	D			F	E
Approach Delay (s)		122.6			69.3			149.9			75.3	
Approach LOS		F			E			F			E	

Intersection Summary				
HCM 2000 Control Delay	101.1	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.20			
Actuated Cycle Length (s)	151.6	Sum of lost time (s)	29.0	
Intersection Capacity Utilization	98.4%	ICU Level of Service	F	
Analysis Period (min)	15			

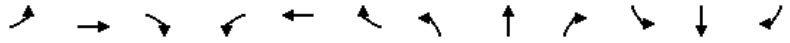
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	410	0	0	660	65
Future Volume (vph)	45	0	30	15	10	5	15	410	0	0	660	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		453			259			1811			202	
Travel Time (s)		12.4			7.1			49.4			5.5	
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	32	0	0	462	0	0	788	0
v/c Ratio		0.61			0.12			0.39			0.72	
Control Delay		22.1			24.2			8.4			16.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.1			24.2			8.4			16.7	
Queue Length 50th (ft)		0			6			0			0	
Queue Length 95th (ft)		#29			40			296			#751	
Internal Link Dist (ft)		373			179			1731			122	
Turn Bay Length (ft)												
Base Capacity (vph)		135			774			1194			1092	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.61			0.04			0.39			0.72	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	410	0	0	660	65
Future Volume (vph)	45	0	30	15	10	5	15	410	0	0	660	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		4.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.81			0.98			1.00			0.99	
Flpb, ped/bikes		0.87			0.94			1.00			1.00	
Frt		0.95			0.98			1.00			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		998			1267			1482			1326	
Flt Permitted		0.97			0.98			0.97			1.00	
Satd. Flow (perm)		998			1267			1442			1326	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	33	16	11	5	16	446	0	0	717	71
RTOR Reduction (vph)	0	82	0	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	27	0	0	462	0	0	788	0
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	D.Pm	NA		Perm	NA		Perm	NA			NA	
Protected Phases					5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		0.0			3.3			42.6			42.6	
Effective Green, g (s)		0.0			3.3			42.6			42.6	
Actuated g/C Ratio		0.00			0.05			0.68			0.68	
Clearance Time (s)					5.0			5.0			5.0	
Vehicle Extension (s)					4.0			4.0			4.0	
Lane Grp Cap (vph)		0			66			982			903	
v/s Ratio Prot											c0.59	
v/s Ratio Perm					0.02			0.32				
v/c Ratio		0.00			0.41			0.47			0.87	
Uniform Delay, d1		31.2			28.7			4.7			7.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			5.6			1.6			11.4	
Delay (s)		31.2			34.3			6.3			19.2	
Level of Service		C			C			A			B	
Approach Delay (s)		31.2			34.3			6.3			19.2	
Approach LOS		C			C			A			B	

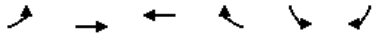
Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	227	1500	1417	460	415	290
Future Volume (vph)	227	1500	1417	460	415	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		511	949		1811	
Travel Time (s)		10.0	18.5		49.4	
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	1630	1540	500	451	315
v/c Ratio	1.17	0.85	1.17	0.91	1.04	0.48
Control Delay	158.1	22.1	101.6	24.1	93.7	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	158.1	22.1	101.6	24.1	93.7	22.4
Queue Length 50th (ft)	~208	448	~681	274	~344	144
Queue Length 95th (ft)	#369	568	m#654	m365	#543	224
Internal Link Dist (ft)		431	869		1731	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	211	1921	1314	552	434	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.85	1.17	0.91	1.04	0.48

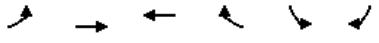
Intersection Summary	
Area Type:	CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	227	1500	1417	460	415	290
Future Volume (vph)	227	1500	1417	460	415	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.93	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1501	3085	3110	1306	1593	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1501	3085	3110	1306	1593	1391
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	247	1630	1540	500	451	315
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	247	1630	1540	500	451	312
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	15.5	68.5	46.5	46.5	30.0	51.5
Effective Green, g (s)	15.5	62.0	46.5	46.5	30.0	51.5
Actuated g/C Ratio	0.14	0.56	0.42	0.42	0.27	0.47
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	211	1738	1314	552	434	651
v/s Ratio Prot	c0.16	0.53	c0.50		c0.28	0.22
v/s Ratio Perm				0.38		
v/c Ratio	1.17	0.94	1.17	0.91	1.04	0.48
Uniform Delay, d1	47.2	22.2	31.8	29.7	40.0	20.1
Progression Factor	1.00	1.00	0.68	0.66	1.00	1.00
Incremental Delay, d2	115.6	11.2	78.2	2.7	53.7	2.5
Delay (s)	162.9	33.4	99.7	22.1	93.7	22.6
Level of Service	F	C	F	C	F	C
Approach Delay (s)		50.4	80.7		64.5	
Approach LOS		D	F		E	

Intersection Summary			
HCM 2000 Control Delay	65.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	860	1895	35	80	75
Future Volume (vph)	16	860	1895	35	80	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		282	
Travel Time (s)		18.5	20.6		7.7	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	935	2098	0	169	0
v/c Ratio	0.19	0.41	1.04		1.27	
Control Delay	46.1	8.6	51.7		209.5	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	46.1	8.6	51.7		209.5	
Queue Length 50th (ft)	12	64	617		~151	
Queue Length 95th (ft)	m13	m318	#1262		#288	
Internal Link Dist (ft)		869	980		202	
Turn Bay Length (ft)	170					
Base Capacity (vph)	89	2304	2017		133	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.19	0.41	1.04		1.27	

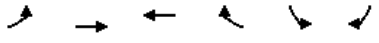
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	860	1895	35	80	75
Future Volume (vph)	16	860	1895	35	80	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1516	3032	3100		1541	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1516	3032	3100		1541	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	935	2060	38	87	82
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	17	935	2098	0	169	0
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	78.0	66.0		9.5	
Effective Green, g (s)	6.5	72.5	66.0		9.5	
Actuated g/C Ratio	0.06	0.66	0.60		0.09	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	89	1998	1860		133	
v/s Ratio Prot	0.01	c0.31	c0.68		c0.11	
v/s Ratio Perm						
v/c Ratio	0.19	0.47	1.13		1.27	
Uniform Delay, d1	49.2	9.2	22.0		50.2	
Progression Factor	0.88	1.22	1.00		1.00	
Incremental Delay, d2	0.2	0.0	65.1		167.9	
Delay (s)	43.7	11.3	87.1		218.1	
Level of Service	D	B	F		F	
Approach Delay (s)		11.8	87.1		218.1	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	71.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	50	900	310	190	5	15	65	5	2	1190
Future Volume (vph)	50	900	310	190	5	15	65	5	2	1190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	54	978	544	0	0	92	0	0	434	866
v/c Ratio	0.19	1.79	0.37			0.56			0.66	0.72
Control Delay	51.9	394.8	6.1			34.2			35.5	35.1
Queue Delay	0.0	0.1	0.7			1.7			57.7	52.5
Total Delay	51.9	394.9	6.8			35.8			93.2	87.7
Queue Length 50th (ft)	43	~700	28			19			302	345
Queue Length 95th (ft)	85	#836	39			78			429	431
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	278	547	1471			164			658	1197
Starvation Cap Reductn	0	0	562			0			0	0
Spillback Cap Reductn	0	5	0			16			343	624
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.19	1.80	0.60			0.62			1.38	1.51

Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	50	900	310	190	5	15	65	5	2	1190
Future Volume (vph)	50	900	310	190	5	15	65	5	2	1190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.94			0.90			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1624	3191	3023			1528			1442	2619
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1624	3191	3023			1528			1442	2619
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	978	337	207	5	16	71	5	2	1293
RTOR Reduction (vph)	0	0	65	0	0	66	0	0	0	0
Lane Group Flow (vph)	54	978	479	0	0	26	0	0	434	866
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	24.0	24.0	68.0			9.0			59.0	64.0
Effective Green, g (s)	24.0	24.0	68.0			9.0			59.0	64.0
Actuated g/C Ratio	0.17	0.17	0.49			0.06			0.42	0.46
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	278	547	1468			98			659	1197
v/s Ratio Prot	0.03	c0.31	c0.16			c0.02			0.09	c0.33
v/s Ratio Perm									0.21	
v/c Ratio	0.19	1.79	0.33			0.26			0.66	0.72
Uniform Delay, d1	49.7	58.0	22.0			62.3			33.5	30.8
Progression Factor	1.00	1.00	0.30			1.00			1.00	1.00
Incremental Delay, d2	1.6	361.9	0.0			0.5			2.6	2.3
Delay (s)	51.3	419.9	6.6			62.9			36.2	33.2
Level of Service	D	F	A			E			D	C
Approach Delay (s)		400.6	6.6			62.9			34.2	
Approach LOS		F	A			E			C	

Intersection Summary			
HCM 2000 Control Delay	157.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
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)	0	1625	530	10	320	0	0	0	0	370	305	180
Future Volume (vph)	0	1625	530	10	320	0	0	0	0	370	305	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1766	576	0	359	0	0	0	0	229	505	196
v/c Ratio		0.94	0.72		0.33					1.12	1.20	0.55
Control Delay		29.5	11.6		1.0					152.8	159.4	13.2
Queue Delay		46.3	53.8		0.0					0.0	0.0	0.0
Total Delay		75.8	65.5		1.0					152.8	159.4	13.2
Queue Length 50th (ft)		429	203		1					~263	~304	0
Queue Length 95th (ft)		m354	m168		1					#452	#427	76
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)												
Base Capacity (vph)		1870	796		1103					204	422	356
Starvation Cap Reductn		914	342		0					0	0	0
Spillback Cap Reductn		0	0		0					0	0	0
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.85	1.27		0.33					1.12	1.20	0.55

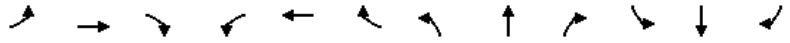
Intersection Summary

Area Type: CBD

~ 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)	0	1625	530	10	320	0	0	0	0	370	305	180
Future Volume (vph)	0	1625	530	10	320	0	0	0	0	370	305	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4223	1260		3244					1429	2958	1319
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4223	1260		3103					1429	2958	1319
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1766	576	11	348	0	0	0	0	402	332	196
RTOR Reduction (vph)	0	0	238	0	0	0	0	0	0	0	0	168
Lane Group Flow (vph)	0	1766	338	0	359	0	0	0	0	229	505	28
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		62.0	62.0		59.0					20.0	20.0	20.0
Effective Green, g (s)		62.0	62.0		59.0					20.0	20.0	20.0
Actuated g/C Ratio		0.44	0.44		0.42					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		1870	558		1347					204	422	188
v/s Ratio Prot		c0.42			c0.08					0.16	c0.17	
v/s Ratio Perm			0.27		0.04							0.02
v/c Ratio		0.94	0.60		0.27					1.12	1.20	0.15
Uniform Delay, d1		37.3	29.7		26.4					60.0	60.0	52.5
Progression Factor		0.74	1.42		0.02					1.00	1.00	1.00
Incremental Delay, d2		1.2	0.1		0.1					99.8	109.5	0.1
Delay (s)		28.8	42.2		0.6					159.8	169.5	52.7
Level of Service		C	D		A					F	F	D
Approach Delay (s)		32.1			0.6			0.0			142.5	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	57.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			

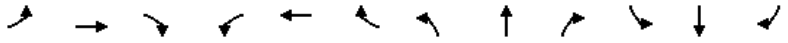
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	910	540	0	0	0	0	1020	35	85	730	0
Future Volume (vph)	280	910	540	0	0	0	0	1020	35	85	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		951			939			563			1007	
Travel Time (s)		25.9			32.0			11.0			19.6	
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1293	587	0	0	0	0	1147	0	0	885	0
v/c Ratio		1.03	1.01					0.93			1.06	
Control Delay		64.9	69.1					55.0			81.9	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		64.9	69.1					55.0			81.9	
Queue Length 50th (ft)		646	557					522			~335	
Queue Length 95th (ft)		#1050	#1013					#668			#500	
Internal Link Dist (ft)		871			859			483			927	
Turn Bay Length (ft)												
Base Capacity (vph)		1254	581					1228			834	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		1.03	1.01					0.93			1.06	

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	910	540	0	0	0	0	1020	35	85	730	0
Future Volume (vph)	280	910	540	0	0	0	0	1020	35	85	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		0.99	1.00					1.00			1.00	
Frt		1.00	0.85					1.00			1.00	
Flt Protected		0.99	1.00					1.00			0.99	
Satd. Flow (prot)		3138	1454					3123			3124	
Flt Permitted		0.99	1.00					1.00			0.50	
Satd. Flow (perm)		3138	1454					3123			1582	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	304	989	587	0	0	0	0	1109	38	92	793	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1293	587	0	0	0	0	1145	0	0	885	0
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		52.8	52.8					55.0			67.0	
Effective Green, g (s)		52.8	52.8					55.0			67.0	
Actuated g/C Ratio		0.38	0.38					0.39			0.48	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1183	548					1226			845	
v/s Ratio Prot			0.40					0.37			c0.06	
v/s Ratio Perm		0.41									c0.44	
v/c Ratio		1.09	1.07					0.93			1.05	
Uniform Delay, d1		43.6	43.6					40.8			36.5	
Progression Factor		0.88	0.88					1.00			1.00	
Incremental Delay, d2		51.1	51.4					12.7			44.1	
Delay (s)		89.5	89.7					53.5			80.6	
Level of Service		F	F					D			F	
Approach Delay (s)		89.6			0.0			53.5			80.6	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	77.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	108.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

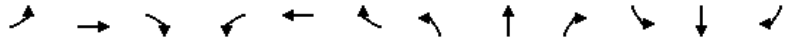
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	100	1130	115	550	765	0	0	735	360
Future Volume (vph)	0	0	0	100	1130	115	550	765	0	0	735	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		984			1074			1007			813	
Travel Time (s)		26.8			29.3			19.6			15.8	
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1462	0	598	832	0	0	1190	0
v/c Ratio					1.29		1.47	0.83			1.22	
Control Delay					175.2		254.9	27.4			142.3	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					175.2		254.9	27.4			142.3	
Queue Length 50th (ft)					~529		~594	478			~591	
Queue Length 95th (ft)					#628		#820	691			#730	
Internal Link Dist (ft)		904			994			927			733	
Turn Bay Length (ft)												
Base Capacity (vph)					1131		408	1005			977	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.29		1.47	0.83			1.22	

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	100	1130	115	550	765	0	0	735	360
Future Volume (vph)	0	0	0	100	1130	115	550	765	0	0	735	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		5.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.95	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4348		1570	1653			2816	
Flt Permitted					1.00		0.09	1.00			1.00	
Satd. Flow (perm)					4348		141	1653			2816	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	109	1228	125	598	832	0	0	799	391
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	0	0	1453	0	598	832	0	0	1175	0
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					31.0		74.0	73.0			41.0	
Effective Green, g (s)					31.0		74.0	73.0			41.0	
Actuated g/C Ratio					0.26		0.62	0.61			0.34	
Clearance Time (s)					10.0		5.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1123		408	1005			962	
v/s Ratio Prot					c0.33		c0.33	0.50			0.42	
v/s Ratio Perm							c0.57					
v/c Ratio					1.29		1.47	0.83			1.22	
Uniform Delay, d1					44.5		40.5	18.5			39.5	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					139.0		222.6	7.8			109.0	
Delay (s)					183.5		263.1	26.4			148.5	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			183.5			125.4			148.5	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	152.9	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)	21.0
Intersection Capacity Utilization	118.1%	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)	0	0	655	1080	660	0	0	0	0	0	685	35
Future Volume (vph)	0	0	655	1080	660	0	0	0	0	0	685	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		515			260			938			1824	
Travel Time (s)		14.0			7.1			21.3			41.5	
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	712	1174	717	0	0	0	0	0	783	0
v/c Ratio			1.52	1.06	0.74						1.55	
Control Delay			276.0	48.8	7.5						286.8	
Queue Delay			0.0	15.8	2.1						0.0	
Total Delay			276.0	64.6	9.5						286.8	
Queue Length 50th (ft)			~325	~358	111						~336	
Queue Length 95th (ft)			#446	m80	m66						#454	
Internal Link Dist (ft)		435			180			858			1744	
Turn Bay Length (ft)			100									
Base Capacity (vph)			467	1105	973						505	
Starvation Cap Reductn			0	161	134						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			1.52	1.24	0.85						1.55	

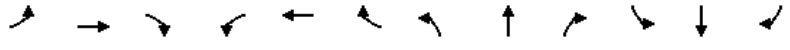
Intersection Summary

Area Type: CBD

~ 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.

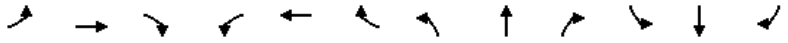
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	655	1080	660	0	0	0	0	0	685	35
Future Volume (vph)	0	0	655	1080	660	0	0	0	0	0	685	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3220	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3220	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	712	1174	717	0	0	0	0	0	745	38
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	712	1174	717	0	0	0	0	0	779	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			17.0	40.0	62.0						14.0	
Effective Green, g (s)			17.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.19	0.44	0.63						0.16	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			467	1340	1046						500	
v/s Ratio Prot			c0.29	c0.39	0.43						c0.24	
v/s Ratio Perm												
v/c Ratio			1.52	0.88	0.69						1.56	
Uniform Delay, d1			36.5	22.7	10.7						38.0	
Progression Factor			1.00	0.54	0.88						1.00	
Incremental Delay, d2			246.8	0.7	0.1						260.6	
Delay (s)			283.3	12.9	9.5						298.6	
Level of Service			F	B	A						F	
Approach Delay (s)		283.3			11.6			0.0			298.6	
Approach LOS		F			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	135.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	123.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	615	15	20	610	65	15	0	40	0	0	0
Future Volume (Veh/h)	20	615	15	20	610	65	15	0	40	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	668	16	22	663	71	16	0	43	0	0	0
Pedestrians		59						77			19	
Lane Width (ft)		11.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		5						6			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		740			515							
pX, platoon unblocked	0.71			0.73			0.84	0.84	0.73	0.84	0.84	0.71
vC, conflicting volume	753			761			1598	1594	753	1516	1566	776
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	442			488			895	890	477	798	857	475
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			91	100	89	100	100	100
cM capacity (veh/h)	786			707			176	211	400	209	220	400

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	22	684	756	59
Volume Left	22	0	22	16
Volume Right	0	16	71	43
cSH	786	1700	707	297
Volume to Capacity	0.03	0.40	0.03	0.20
Queue Length 95th (ft)	2	0	2	18
Control Delay (s)	9.7	0.0	0.8	20.1
Lane LOS	A		A	C
Approach Delay (s)	0.3		0.8	20.1
Approach LOS				C

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	68.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	535	5	30	550	55	10	5	15	90	20	70
Future Volume (vph)	40	535	5	30	550	55	10	5	15	90	20	70
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	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		606			740			131			150	
Travel Time (s)		16.5			20.2			3.6			4.1	
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	587	0	33	658	0	0	16	16	0	196	0
v/c Ratio	0.19	0.67		0.15	0.76			0.15	0.20		1.11	
Control Delay	21.6	26.1		20.8	29.8			46.7	49.5		139.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	21.6	26.1		20.8	29.8			46.7	49.5		139.5	
Queue Length 50th (ft)	10	205		8	252			10	10		~129	
Queue Length 95th (ft)	52	#626		41	#736			31	31		#272	
Internal Link Dist (ft)		526			660			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	230	881		224	864			231	174		176	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.19	0.67		0.15	0.76			0.07	0.09		1.11	

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	535	5	30	550	55	10	5	15	90	20	70
Future Volume (vph)	40	535	5	30	550	55	10	5	15	90	20	70
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.96		0.98	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1506	1530		1210	1506			1653	1227		1540	
Flt Permitted	0.25	1.00		0.31	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	401	1530		392	1506			1653	1227		1540	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	582	5	33	598	60	11	5	16	98	22	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	43	587	0	33	658	0	0	16	16	0	174	0
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	52.4	52.4		52.4	52.4			4.2	4.2		10.0	
Effective Green, g (s)	52.4	52.4		52.4	52.4			4.2	4.2		10.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.04	0.04		0.10	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	210	801		205	789			69	51		154	
v/s Ratio Prot		0.38			c0.44			0.01			c0.11	
v/s Ratio Perm	0.11			0.08					c0.01			
v/c Ratio	0.20	0.73		0.16	0.83			0.23	0.31		1.13	
Uniform Delay, d1	12.7	18.4		12.4	20.1			46.3	46.5		45.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.2	5.9		1.7	10.1			0.6	1.3		110.6	
Delay (s)	14.9	24.3		14.0	30.2			47.0	47.8		155.6	
Level of Service	B	C		B	C			D	D		F	
Approach Delay (s)		23.6			29.4			47.4			155.6	
Approach LOS		C			C			D			F	

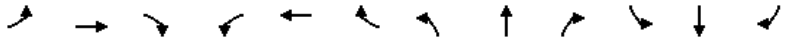
Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	450	5	1	550	75	5	20	0	60	10	0
Future Volume (Veh/h)	1	450	5	1	550	75	5	20	0	60	10	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	489	5	1	598	82	5	22	0	65	11	0
Pedestrians					29			29			21	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		547			464							
pX, platoon unblocked	0.72			0.87			0.78	0.78	0.87	0.78	0.78	0.72
vC, conflicting volume	701			523			1169	1226	550	1196	1187	660
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	389			377			705	777	408	739	728	332
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	91	100	71	96	100
cM capacity (veh/h)	826			1003			252	246	534	226	263	501

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	495	681	27	76
Volume Left	1	1	5	65
Volume Right	5	82	0	0
cSH	826	1003	247	231
Volume to Capacity	0.00	0.00	0.11	0.33
Queue Length 95th (ft)	0	0	9	34
Control Delay (s)	0.0	0.0	21.4	28.1
Lane LOS	A	A	C	D
Approach Delay (s)	0.0	0.0	21.4	28.1
Approach LOS			C	D

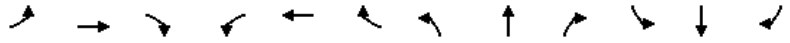
Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	540	10	15	615	1	25	1	40	1	1	1
Future Volume (vph)	1	540	10	15	615	1	25	1	40	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		464			606			294			154	
Travel Time (s)		12.7			16.5			8.0			4.2	
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	599	0	0	685	0	0	71	0	0	3	0
v/c Ratio		0.53			0.61			0.50			0.03	
Control Delay		15.3			17.0			31.1			32.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.3			17.0			31.1			32.3	
Queue Length 50th (ft)		74			94			15			1	
Queue Length 95th (ft)		#560			#668			55			9	
Internal Link Dist (ft)		384			526			214			74	
Turn Bay Length (ft)												
Base Capacity (vph)		1135			1130			175			157	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.61			0.41			0.02	

Intersection Summary	
Area Type:	CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	540	10	15	615	1	25	1	40	1	1	1
Future Volume (vph)	1	540	10	15	615	1	25	1	40	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.87			0.93	
Flpb, ped/bikes		1.00			1.00			0.93			0.95	
Frt		1.00			1.00			0.92			0.95	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		1584			1603			1257			1389	
Flt Permitted		1.00			0.98			0.87			0.93	
Satd. Flow (perm)		1584			1578			1120			1314	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	587	11	16	668	1	27	1	43	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	40	0	0	1	0
Lane Group Flow (vph)	0	599	0	0	685	0	0	31	0	0	2	0
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		55.4			55.4			6.6			6.6	
Effective Green, g (s)		55.4			55.4			6.6			6.6	
Actuated g/C Ratio		0.62			0.62			0.07			0.07	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		975			971			82			96	
v/s Ratio Prot												
v/s Ratio Perm		0.38			c0.43			c0.03			0.00	
v/c Ratio		0.61			0.71			0.38			0.02	
Uniform Delay, d1		10.7			11.8			39.7			38.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			4.3			1.1			0.0	
Delay (s)		13.6			16.1			40.8			38.7	
Level of Service		B			B			D			D	
Approach Delay (s)		13.6			16.1			40.8			38.7	
Approach LOS		B			B			D			D	

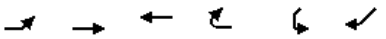
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	45	45	0	10	85	5	450	0	25	600	5
Future Volume (Veh/h)	30	45	45	0	10	85	5	450	0	25	600	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	49	49	0	11	92	5	489	0	27	652	5
Pedestrians		113			85						37	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		9			8						3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								491				
pX, platoon unblocked	0.76	0.76		0.76	0.76	0.76				0.76		
vC, conflicting volume	1455	1406	768	1366	1408	611	770			574		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1441	1376	768	1325	1380	336	770			288		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	29	45	87	100	88	81	99			97		
cM capacity (veh/h)	46	89	364	40	89	482	765			899		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	131	103	494	684
Volume Left	33	0	5	27
Volume Right	49	92	0	5
cSH	94	328	765	899
Volume to Capacity	1.40	0.31	0.01	0.03
Queue Length 95th (ft)	243	33	0	2
Control Delay (s)	311.7	21.0	0.2	0.8
Lane LOS	F	C	A	A
Approach Delay (s)	311.7	21.0	0.2	0.8
Approach LOS	F	C		

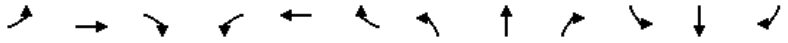
Intersection Summary				
Average Delay			30.9	
Intersection Capacity Utilization			73.5%	ICU Level of Service
Analysis Period (min)			15	



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	950	320	0	0	1610
Future Volume (Veh/h)	0	950	320	0	0	1610
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1033	348	0	0	1750
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.88	
vC, conflicting volume	348				864	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	348				569	174
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1215				397	839

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	516	516	174	174	1750
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1750
cSH	1700	1700	1700	1700	839
Volume to Capacity	0.30	0.30	0.10	0.10	2.09
Queue Length 95th (ft)	0	0	0	0	2984
Control Delay (s)	0.0	0.0	0.0	0.0	505.8
Lane LOS					F
Approach Delay (s)	0.0		0.0		505.8
Approach LOS					F

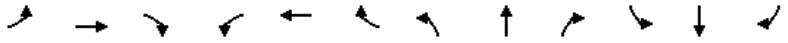
Intersection Summary			
Average Delay	282.7		
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	1610	0	0	0	0	330	100	120	0	0	0
Future Volume (vph)	385	1610	0	0	0	0	330	100	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			951			304			1156	
Travel Time (s)		1.7			18.5			6.9			26.3	
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2168	0	0	0	0	291	307	0	0	0	0
v/c Ratio		0.76					0.66	0.72				
Control Delay		0.7					52.5	52.0				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.7					52.5	52.0				
Queue Length 50th (ft)		0					246	244				
Queue Length 95th (ft)		m0					358	366				
Internal Link Dist (ft)		6			871			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		2849					440	426				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.76					0.66	0.72				

Intersection Summary	
Area Type:	CBD

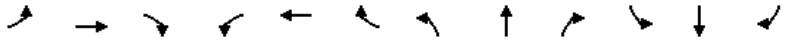
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	385	1610	0	0	0	0	330	100	120	0	0	0
Future Volume (vph)	385	1610	0	0	0	0	330	100	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.98				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4434					1543	1428				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4434					1543	1428				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	418	1750	0	0	0	0	359	109	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	2168	0	0	0	0	291	288	0	0	0	0
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		87.0					40.0	40.0				
Effective Green, g (s)		87.0					40.0	40.0				
Actuated g/C Ratio		0.62					0.29	0.29				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		2755					440	408				
v/s Ratio Prot		c0.49					0.19	c0.20				
v/s Ratio Perm												
v/c Ratio		0.79					0.66	0.71				
Uniform Delay, d1		19.6					44.0	44.8				
Progression Factor		0.01					1.00	1.00				
Incremental Delay, d2		0.4					4.1	5.9				
Delay (s)		0.5					48.1	50.7				
Level of Service		A					D	D				
Approach Delay (s)		0.5			0.0			49.4			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



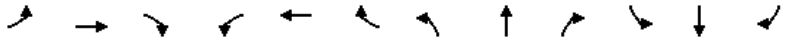
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	142	10	320	186	850	0	0	635	30
Future Volume (vph)	0	0	0	142	10	320	186	850	0	0	635	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			774	
Travel Time (s)		13.4			8.0			4.9			21.1	
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	165	348	0	1126	0	0	723	0
v/c Ratio					1.76	0.77		0.96			0.93	
Control Delay					409.9	22.1		17.6			33.0	
Queue Delay					17.9	0.0		42.4			26.7	
Total Delay					427.8	22.1		60.0			59.7	
Queue Length 50th (ft)					~157	49		323			355	
Queue Length 95th (ft)					#288	131		m306			m#197	
Internal Link Dist (ft)		510			273			98			694	
Turn Bay Length (ft)												
Base Capacity (vph)					94	504		1167			775	
Starvation Cap Reductn					0	0		240			0	
Spillback Cap Reductn					43	0		0			88	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					3.24	0.69		1.21			1.05	

Intersection Summary	
Area Type:	CBD

~ 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.

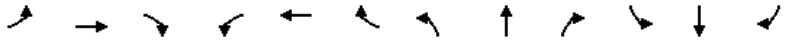
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	142	10	320	186	850	0	0	635	30
Future Volume (vph)	0	0	0	142	10	320	186	850	0	0	635	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		0.99			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.96	1.00		0.99			1.00	
Satd. Flow (prot)					1579	1405		2971			1547	
Flt Permitted					0.96	1.00		0.62			1.00	
Satd. Flow (perm)					1579	1405		1847			1547	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	154	11	348	202	924	0	0	690	33
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	165	141	0	1126	0	0	722	0
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	17.6		61.4			50.0	
Effective Green, g (s)					6.0	17.6		55.4			50.0	
Actuated g/C Ratio					0.06	0.18		0.55			0.50	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	247		1023			773	
v/s Ratio Prot					c0.10	0.10					c0.47	
v/s Ratio Perm								c0.61				
v/c Ratio					1.76	0.57		1.10			0.93	
Uniform Delay, d1					47.0	37.7		22.3			23.4	
Progression Factor					1.00	1.00		0.69			0.83	
Incremental Delay, d2					379.7	2.0		47.0			11.9	
Delay (s)					426.7	39.7		62.4			31.4	
Level of Service					F	D		E			C	
Approach Delay (s)		0.0			164.2			62.4			31.4	
Approach LOS		A			F			E			C	

Intersection Summary				
HCM 2000 Control Delay	75.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.27			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	90.9%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

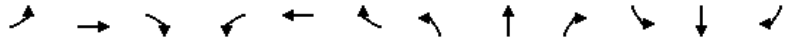


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1585	455	155	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1585	455	155	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		260			984			1156			2190	
Travel Time (s)		7.1			26.8			26.3			49.8	
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2218	0	0	527	0	0	0	0
v/c Ratio					1.39			0.90				
Control Delay					208.5			56.8				
Queue Delay					0.3			5.0				
Total Delay					208.7			61.8				
Queue Length 50th (ft)					~623			155				
Queue Length 95th (ft)					#718			#250				
Internal Link Dist (ft)		180			904			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1590			583				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					118			30				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.51			0.95				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1585	455	155	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1585	455	155	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.98				
Satd. Flow (prot)					4335			3091				
Flt Permitted					1.00			0.98				
Satd. Flow (perm)					4335			3091				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1723	495	168	359	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2218	0	0	527	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1589			583				
v/s Ratio Prot					c0.51							
v/s Ratio Perm								0.17				
v/c Ratio					1.40			0.90				
Uniform Delay, d1					28.5			35.7				
Progression Factor					1.00			1.00				
Incremental Delay, d2					182.0			17.1				
Delay (s)					210.5			52.8				
Level of Service					F			D				
Approach Delay (s)		0.0			210.5			52.8			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	180.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	123.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection Capacity Analysis Worksheets

2030 Build Conditions

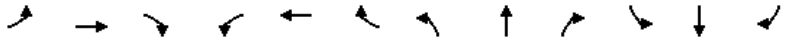
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1040	365	0	645	100	0	865	185	0	445	2
Future Volume (vph)	0	1040	365	0	645	100	0	865	185	0	445	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		710			2667			622			624	
Travel Time (s)		13.8			52.0			17.0			21.3	
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1527	0	0	810	0	0	1141	0	0	486	0
v/c Ratio		1.32			0.66			1.05			0.86	
Control Delay		176.8			27.5			65.6			45.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		176.8			27.5			65.6			45.0	
Queue Length 50th (ft)		~664			216			~406			280	
Queue Length 95th (ft)		#801			284			#546			#467	
Internal Link Dist (ft)		630			2587			542			544	
Turn Bay Length (ft)												
Base Capacity (vph)		1160			1236			1087			568	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.32			0.66			1.05			0.86	

Intersection Summary

Area Type: CBD

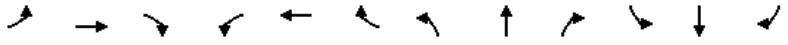
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1040	365	0	645	100	0	865	185	0	445	2
Future Volume (vph)	0	1040	365	0	645	100	0	865	185	0	445	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.94			0.99			0.95			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.97			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2902			3091			2860			1496	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2902			3091			2860			1496	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1130	397	0	701	109	0	940	201	0	484	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1527	0	0	810	0	0	1141	0	0	486	0
Confl. Peds. (#/hr)			88			37			171			131
Confl. Bikes (#/hr)			60						55			45
Heavy Vehicles (%)	0%	1%	0%	0%	1%	10%	0%	6%	1%	0%	14%	50%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		40.0			40.0			38.0			38.0	
Effective Green, g (s)		40.0			40.0			38.0			38.0	
Actuated g/C Ratio		0.40			0.40			0.38			0.38	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1160			1236			1086			568	
v/s Ratio Prot		c0.53			0.26			c0.40			0.32	
v/s Ratio Perm												
v/c Ratio		1.32			0.66			1.05			0.86	
Uniform Delay, d1		30.0			24.4			31.0			28.5	
Progression Factor		1.00			1.00			0.87			1.00	
Incremental Delay, d2		148.6			1.0			38.0			15.2	
Delay (s)		178.6			25.4			64.8			43.7	
Level of Service		F			C			E			D	
Approach Delay (s)		178.6			25.4			64.8			43.7	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	98.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
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)	361	10	165	0	0	0	0	525	40	417	415	0
Future Volume (vph)	361	10	165	0	0	0	0	525	40	417	415	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1930			178	
Travel Time (s)		13.5			11.4			52.6			4.9	
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	255	327	0	0	0	0	0	614	0	0	904	0
v/c Ratio	1.18	1.51						0.67			1.82	
Control Delay	158.0	278.6						33.1			390.0	
Queue Delay	0.0	0.0						0.2			0.3	
Total Delay	158.0	278.6						33.3			390.3	
Queue Length 50th (ft)	~206	~276						175			~889	
Queue Length 95th (ft)	#370	#461						238			m#635	
Internal Link Dist (ft)		515			421			1850			98	
Turn Bay Length (ft)												
Base Capacity (vph)	216	217						919			497	
Starvation Cap Reductn	0	0						0			15	
Spillback Cap Reductn	0	0						31			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.18	1.51						0.69			1.88	

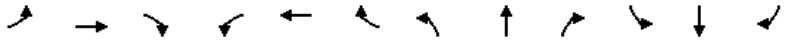
Intersection Summary

Area Type: CBD

~ 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.

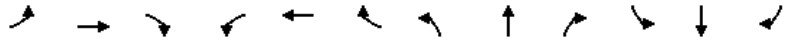
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	10	165	0	0	0	0	525	40	417	415	0
Future Volume (vph)	361	10	165	0	0	0	0	525	40	417	415	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.97			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			0.99	
Frt	1.00	0.92						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1244						2792			1484	
Flt Permitted	0.95	0.98						1.00			0.40	
Satd. Flow (perm)	1543	1244						2792			601	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	392	11	179	0	0	0	0	571	43	453	451	0
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	255	283	0	0	0	0	0	614	0	0	904	0
Confl. Peds. (#/hr)			42						266	266		
Confl. Bikes (#/hr)			2						82			
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	5%	0%	0%	7%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	14.0	14.0						33.0			63.0	
Effective Green, g (s)	14.0	14.0						33.0			63.0	
Actuated g/C Ratio	0.14	0.14						0.33			0.63	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	216	174						921			466	
v/s Ratio Prot	0.17	c0.23						0.22			c0.19	
v/s Ratio Perm											c1.03	
v/c Ratio	1.18	1.63						0.67			1.94	
Uniform Delay, d1	43.0	43.0						28.8			18.5	
Progression Factor	1.00	1.00						1.00			1.51	
Incremental Delay, d2	118.6	306.9						3.8			423.7	
Delay (s)	161.6	349.9						32.6			451.6	
Level of Service	F	F						C			F	
Approach Delay (s)		267.4			0.0			32.6			451.6	
Approach LOS		F			A			C			F	

Intersection Summary				
HCM 2000 Control Delay	278.0	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	2.17			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	96.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group



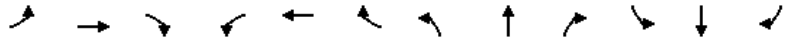
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	435	15	80	380	10	230	240	40	5	145	245
Future Volume (vph)	210	435	15	80	380	10	230	240	40	5	145	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			592			255			521	
Travel Time (s)		14.9			16.1			7.0			14.2	
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	228	489	0	87	424	0	250	304	0	0	163	266
v/c Ratio	0.89	0.87		0.40	0.89		0.83	0.61			0.55	0.78
Control Delay	64.9	57.7		29.8	63.8		60.5	41.3			52.9	54.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.2			0.0	0.0
Total Delay	64.9	57.7		29.8	63.8		60.5	41.5			52.9	54.3
Queue Length 50th (ft)	~146	~477		47	~384		174	222			126	192
Queue Length 95th (ft)	#289	#702		85	#592		#332	327			203	#335
Internal Link Dist (ft)		468			512			175			441	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	256	562		244	475		301	544			343	368
Starvation Cap Reductn	0	0		0	0		0	25			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	0.89	0.87		0.36	0.89		0.83	0.59			0.48	0.72

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

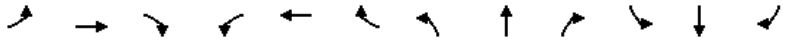
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	435	15	80	380	10	230	240	40	5	145	245
Future Volume (vph)	210	435	15	80	380	10	230	240	40	5	145	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98			1.00	0.89
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.95	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1571	1603		1542	1547		1470	1509			1584	1232
Flt Permitted	0.22	1.00		0.22	1.00		0.54	1.00			0.99	1.00
Satd. Flow (perm)	368	1603		359	1547		837	1509			1565	1232
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	473	16	87	413	11	250	261	43	5	158	266
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	228	489	0	87	424	0	250	304	0	0	163	266
Confl. Peds. (#/hr)	42		34	34		42	69		64	64		69
Confl. Bikes (#/hr)			26			16			48			13
Heavy Vehicles (%)	3%	6%	0%	5%	8%	11%	5%	8%	9%	20%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	4	4	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	51.2	40.9		44.2	37.4		32.5	36.5			22.2	32.5
Effective Green, g (s)	51.2	40.9		44.2	37.4		32.5	36.5			22.2	32.5
Actuated g/C Ratio	0.42	0.34		0.37	0.31		0.27	0.30			0.18	0.27
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	258	542		197	478		278	455			287	392
v/s Ratio Prot	c0.08	c0.31		0.02	0.27		c0.08	0.20				0.06
v/s Ratio Perm	0.30			0.14			c0.16				0.10	0.16
v/c Ratio	0.88	0.90		0.44	0.89		0.90	0.67			0.57	0.68
Uniform Delay, d1	29.0	38.1		27.7	39.7		41.4	36.9			45.0	39.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	27.3	20.8		0.6	20.9		28.5	2.9			1.5	3.6
Delay (s)	56.3	58.9		28.3	60.7		69.8	39.8			46.5	43.2
Level of Service	E	E		C	E		E	D			D	D
Approach Delay (s)		58.1			55.2			53.3			44.4	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.9	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

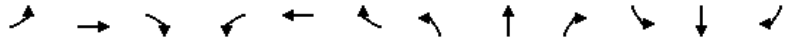


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	465	0	0	390	60
Future Volume (vph)	75	0	40	5	10	5	25	465	0	0	390	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		503			303			1833			182	
Travel Time (s)		13.7			8.3			50.0			5.0	
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	21	0	0	532	0	0	489	0
v/c Ratio		0.55			0.11			0.61			0.62	
Control Delay		26.1			25.0			15.6			16.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.1			25.0			15.6			16.2	
Queue Length 50th (ft)		23			6			88			81	
Queue Length 95th (ft)		90			29			#507			#480	
Internal Link Dist (ft)		423			223			1753			102	
Turn Bay Length (ft)												
Base Capacity (vph)		402			392			870			794	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.05			0.61			0.62	

Intersection Summary

Area Type: CBD

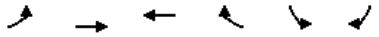
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	0	40	5	10	5	25	465	0	0	390	60
Future Volume (vph)	75	0	40	5	10	5	25	465	0	0	390	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			0.98	
Flpb, ped/bikes		0.94			0.99			1.00			1.00	
Frt		0.95			0.97			1.00			0.98	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1309			1251			1357			1205	
Flt Permitted		0.79			0.93			0.97			1.00	
Satd. Flow (perm)		1067			1175			1314			1205	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	0	43	5	11	5	27	505	0	0	424	65
RTOR Reduction (vph)	0	53	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	72	0	0	17	0	0	532	0	0	489	0
Confl. Peds. (#/hr)	29		16	16		29	54		32	32		54
Confl. Bikes (#/hr)			1			2			17			5
Heavy Vehicles (%)	6%	0%	8%	0%	11%	0%	19%	14%	0%	0%	14%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		5			5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		12.3			12.3			51.6			51.6	
Effective Green, g (s)		12.3			12.3			51.6			51.6	
Actuated g/C Ratio		0.15			0.15			0.64			0.64	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		161			178			836			766	
v/s Ratio Prot											c0.41	
v/s Ratio Perm		c0.07			0.01			0.41				
v/c Ratio		0.44			0.09			0.64			0.64	
Uniform Delay, d1		31.3			29.6			9.0			9.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			0.3			3.7			4.0	
Delay (s)		33.9			29.9			12.7			13.1	
Level of Service		C			C			B			B	
Approach Delay (s)		33.9			29.9			12.7			13.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

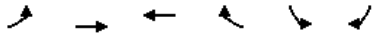
c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	1815	1235	535	375	155
Future Volume (vph)	165	1815	1235	535	375	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		511	949		1833	
Travel Time (s)		10.0	18.5		50.0	
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	1973	1342	582	408	168
v/c Ratio	0.80	1.11	1.21	1.25	0.85	0.24
Control Delay	70.2	83.3	120.6	141.3	54.1	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	83.3	120.6	141.3	54.1	14.6
Queue Length 50th (ft)	123	~842	~605	~512	270	59
Queue Length 95th (ft)	#239	#980	m178	m169	#440	101
Internal Link Dist (ft)		431	869		1753	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	225	1773	1111	465	478	708
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.11	1.21	1.25	0.85	0.24

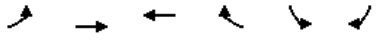
Intersection Summary	
Area Type:	CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	1815	1235	535	375	155
Future Volume (vph)	165	1815	1235	535	375	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.94	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1417	3025	3020	1263	1547	1338
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1417	3025	3020	1263	1547	1338
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	1973	1342	582	408	168
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	179	1973	1342	582	408	165
Confl. Peds. (#/hr)	17			17		11
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	7%	3%	4%	8%	5%	5%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	17.5	64.5	40.5	40.5	34.0	57.5
Effective Green, g (s)	17.5	58.0	40.5	40.5	34.0	57.5
Actuated g/C Ratio	0.16	0.53	0.37	0.37	0.31	0.52
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	225	1595	1111	465	478	699
v/s Ratio Prot	0.13	c0.65	0.44		c0.26	0.12
v/s Ratio Perm				c0.46		
v/c Ratio	0.80	1.24	1.21	1.25	0.85	0.24
Uniform Delay, d1	44.5	26.0	34.8	34.8	35.7	14.3
Progression Factor	1.00	1.00	0.74	0.74	1.00	1.00
Incremental Delay, d2	24.6	112.2	94.4	114.9	17.4	0.8
Delay (s)	69.1	138.2	120.1	140.5	53.0	15.1
Level of Service	E	F	F	F	D	B
Approach Delay (s)		132.5	126.3		42.0	
Approach LOS		F	F		D	

Intersection Summary				
HCM 2000 Control Delay	118.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.10			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	90.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	690	1950	430	125	50
Future Volume (vph)	80	690	1950	430	125	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		165	
Travel Time (s)		18.5	20.6		4.5	
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	750	2587	0	190	0
v/c Ratio	1.16	0.34	1.40		1.19	
Control Delay	130.1	8.5	205.8		176.6	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	130.1	8.5	205.8		176.6	
Queue Length 50th (ft)	~74	50	~1223		~163	
Queue Length 95th (ft)	m#66	m181	#1686		#307	
Internal Link Dist (ft)		869	980		85	
Turn Bay Length (ft)	170					
Base Capacity (vph)	75	2205	1846		159	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	1.16	0.34	1.40		1.19	

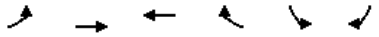
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	690	1950	430	125	50
Future Volume (vph)	80	690	1950	430	125	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.96	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1285	2973	2920		1522	
Flt Permitted	0.95	1.00	1.00		0.97	
Satd. Flow (perm)	1285	2973	2920		1522	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	750	2120	467	136	54
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	87	750	2587	0	190	0
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	76.0	64.0		11.5	
Effective Green, g (s)	6.5	70.5	64.0		11.5	
Actuated g/C Ratio	0.06	0.64	0.58		0.10	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	75	1905	1698		159	
v/s Ratio Prot	c0.07	0.25	c0.89		c0.12	
v/s Ratio Perm						
v/c Ratio	1.16	0.39	1.52		1.19	
Uniform Delay, d1	51.8	9.5	23.0		49.2	
Progression Factor	0.95	1.19	1.00		1.00	
Incremental Delay, d2	85.2	0.0	238.6		133.4	
Delay (s)	134.1	11.3	261.6		182.6	
Level of Service	F	B	F		F	
Approach Delay (s)		24.0	261.6		182.6	
Approach LOS		C	F		F	

Intersection Summary			
HCM 2000 Control Delay	202.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	25	795	335	150	5	15	85	2	5	1220
Future Volume (vph)	25	795	335	150	5	15	85	2	5	1220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	27	864	527	0	0	113	0	0	445	888
v/c Ratio	0.16	1.92	0.44			0.49			0.71	0.78
Control Delay	55.5	451.6	20.7			24.1			39.0	38.3
Queue Delay	0.0	0.4	1.2			2.0			60.0	53.8
Total Delay	55.5	451.9	21.9			26.1			99.0	92.2
Queue Length 50th (ft)	22	~634	78			18			323	369
Queue Length 95th (ft)	53	#767	88			81			463	463
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	168	451	1190			231			623	1144
Starvation Cap Reductn	0	0	426			0			0	0
Spillback Cap Reductn	0	18	0			43			371	683
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.16	2.00	0.69			0.60			1.77	1.93

Intersection Summary

Area Type: CBD

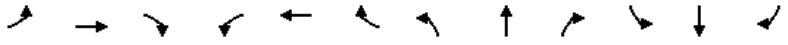
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	25	795	335	150	5	15	85	2	5	1220
Future Volume (vph)	25	795	335	150	5	15	85	2	5	1220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.95			0.89			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1177	3160	3047			1490			1386	2544
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1177	3160	3047			1490			1386	2544
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	864	364	163	5	16	92	2	5	1326
RTOR Reduction (vph)	0	0	35	0	0	83	0	0	0	0
Lane Group Flow (vph)	27	864	492	0	0	30	0	0	445	888
Confl. Peds. (#/hr)	9			9					9	
Confl. Bikes (#/hr)				1						
Heavy Vehicles (%)	38%	2%	1%	0%	0%	8%	1%	0%	100%	4%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	20.0	20.0	56.0			14.0			58.0	63.0
Effective Green, g (s)	20.0	20.0	56.0			14.0			58.0	63.0
Actuated g/C Ratio	0.14	0.14	0.40			0.10			0.41	0.45
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	168	451	1218			149			623	1144
v/s Ratio Prot	0.02	c0.27	c0.16			c0.02			0.15	c0.35
v/s Ratio Perm									0.17	
v/c Ratio	0.16	1.92	0.40			0.20			0.71	0.78
Uniform Delay, d1	52.6	60.0	30.1			57.9			33.2	32.5
Progression Factor	1.00	1.00	0.68			1.00			1.00	1.00
Incremental Delay, d2	2.0	420.3	0.1			0.2			4.2	3.6
Delay (s)	54.7	480.3	20.5			58.1			37.3	36.1
Level of Service	D	F	C			E			D	D
Approach Delay (s)		467.4	20.5			58.1			36.5	
Approach LOS		F	C			E			D	

Intersection Summary			
HCM 2000 Control Delay	168.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
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)	0	1720	380	10	380	0	0	0	0	355	260	105
Future Volume (vph)	0	1720	380	10	380	0	0	0	0	355	260	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1870	413	0	424	0	0	0	0	220	449	114
v/c Ratio		0.86	0.57		0.46					1.11	1.10	0.37
Control Delay		28.8	10.2		0.7					150.4	127.8	9.1
Queue Delay		47.9	57.5		0.1					0.0	0.0	0.6
Total Delay		76.7	67.7		0.8					150.4	127.8	9.7
Queue Length 50th (ft)		518	202		1					~251	~253	0
Queue Length 95th (ft)		m403	m132		m1					#438	#371	42
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)			100									
Base Capacity (vph)		2167	726		928					198	409	308
Starvation Cap Reductn		959	388		0					0	0	0
Spillback Cap Reductn		0	0		39					0	0	47
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.55	1.22		0.48					1.11	1.10	0.44

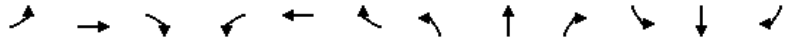
Intersection Summary

Area Type: CBD

~ 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)	0	1720	380	10	380	0	0	0	0	355	260	105
Future Volume (vph)	0	1720	380	10	380	0	0	0	0	355	260	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4101	1236		3245					1387	2868	1365
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4101	1236		3103					1387	2868	1365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1870	413	11	413	0	0	0	0	386	283	114
RTOR Reduction (vph)	0	0	73	0	0	0	0	0	0	0	0	98
Lane Group Flow (vph)	0	1870	340	0	424	0	0	0	0	220	449	16
Confl. Peds. (#/hr)			31	31								8
Confl. Bikes (#/hr)			11									
Heavy Vehicles (%)	0%	4%	1%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		74.0	74.0		58.0					20.0	20.0	20.0
Effective Green, g (s)		74.0	74.0		58.0					20.0	20.0	20.0
Actuated g/C Ratio		0.53	0.53		0.41					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		2167	653		1313					198	409	195
v/s Ratio Prot		c0.46			c0.06					c0.16	0.16	
v/s Ratio Perm			0.28		0.07							0.01
v/c Ratio		0.86	0.52		0.32					1.11	1.10	0.08
Uniform Delay, d1		28.6	21.5		27.7					60.0	60.0	52.0
Progression Factor		0.97	0.73		0.02					1.00	1.00	1.00
Incremental Delay, d2		0.4	0.0		0.0					96.9	73.6	0.1
Delay (s)		28.2	15.8		0.7					156.9	133.6	52.1
Level of Service		C	B		A					F	F	D
Approach Delay (s)		26.0			0.7			0.0			128.3	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	64.0%	ICU Level of Service	C	
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)	190	1015	775	0	0	0	0	805	75	75	975	0
Future Volume (vph)	190	1015	775	0	0	0	0	805	75	75	975	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		784			617			531			989	
Travel Time (s)		21.4			21.0			10.3			19.3	
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1310	842	0	0	0	0	957	0	0	1142	0
v/c Ratio		0.98	1.35					0.85			1.32	
Control Delay		43.7	191.8					48.8			184.7	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		43.7	191.8					48.8			184.7	
Queue Length 50th (ft)		588	~956					416			~674	
Queue Length 95th (ft)		m#961	m#1405					510			#844	
Internal Link Dist (ft)		704			537			451			909	
Turn Bay Length (ft)												
Base Capacity (vph)		1341	623					1131			864	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		0.98	1.35					0.85			1.32	

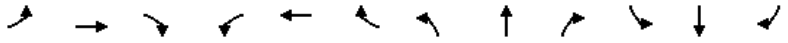
Intersection Summary

Area Type: CBD

~ 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.

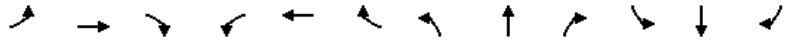
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1015	775	0	0	0	0	805	75	75	975	0
Future Volume (vph)	190	1015	775	0	0	0	0	805	75	75	975	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		1.00	1.00					1.00			1.00	
Frt		1.00	0.85					0.99			1.00	
Flt Protected		0.99	1.00					1.00			1.00	
Satd. Flow (prot)		3130	1454					3094			3129	
Flt Permitted		0.99	1.00					1.00			0.56	
Satd. Flow (perm)		3130	1454					3094			1772	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1103	842	0	0	0	0	875	82	82	1060	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1310	842	0	0	0	0	952	0	0	1142	0
Confl. Peds. (#/hr)	6		17						5	5		
Confl. Bikes (#/hr)			15									
Heavy Vehicles (%)	1%	3%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		56.8	56.8					51.0			63.0	
Effective Green, g (s)		56.8	56.8					51.0			63.0	
Actuated g/C Ratio		0.41	0.41					0.36			0.45	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1269	589					1127			874	
v/s Ratio Prot			c0.58					0.31			c0.07	
v/s Ratio Perm		0.42									c0.51	
v/c Ratio		1.03	1.43					0.84			1.31	
Uniform Delay, d1		41.6	41.6					40.9			38.5	
Progression Factor		0.71	0.73					1.00			1.00	
Incremental Delay, d2		28.6	199.3					5.7			146.3	
Delay (s)		58.3	229.5					46.6			184.8	
Level of Service		E	F					D			F	
Approach Delay (s)		125.3			0.0			46.6			184.8	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	123.5	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.35			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	111.3%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group



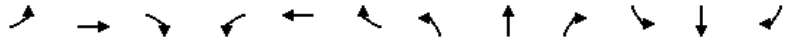
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	1030	110	395	615	0	0	990	255
Future Volume (vph)	0	0	0	110	1030	110	395	615	0	0	990	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		762			786			989			627	
Travel Time (s)		20.8			21.4			19.3			12.2	
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1360	0	429	668	0	0	1353	0
v/c Ratio					1.15		1.30	0.68			1.24	
Control Delay					118.0		193.6	21.3			150.4	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					118.0		193.6	21.3			150.4	
Queue Length 50th (ft)					~453		~383	335			~681	
Queue Length 95th (ft)					#551		#588	476			#822	
Internal Link Dist (ft)		682			706			909			547	
Turn Bay Length (ft)												
Base Capacity (vph)					1180		329	978			1089	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.15		1.30	0.68			1.24	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

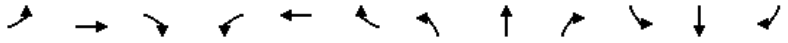
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	1030	110	395	615	0	0	990	255
Future Volume (vph)	0	0	0	110	1030	110	395	615	0	0	990	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		6.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.98		1.00	1.00			0.96	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4254		1570	1653			2923	
Flt Permitted					1.00		0.08	1.00			1.00	
Satd. Flow (perm)					4254		132	1653			2923	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	120	1120	120	429	668	0	0	1076	277
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	1351	0	429	668	0	0	1335	0
Confl. Peds. (#/hr)						69	65					65
Confl. Bikes (#/hr)						25						82
Heavy Vehicles (%)	2%	2%	2%	1%	3%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					33.0		71.0	71.0			44.0	
Effective Green, g (s)					33.0		71.0	71.0			44.0	
Actuated g/C Ratio					0.28		0.59	0.59			0.37	
Clearance Time (s)					10.0		6.0	6.0			6.0	
Vehicle Extension (s)					2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)					1169		329	978			1071	
v/s Ratio Prot					c0.32		c0.23	0.40			0.46	
v/s Ratio Perm							c0.54					
v/c Ratio					1.16		1.30	0.68			1.25	
Uniform Delay, d1					43.5		45.2	16.8			38.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					79.9		157.2	3.9			118.7	
Delay (s)					123.4		202.4	20.7			156.7	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			123.4			91.7			156.7	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	126.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	110.8%	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)	0	0	475	945	755	0	0	0	0	0	785	60
Future Volume (vph)	0	0	475	945	755	0	0	0	0	0	785	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		513			209			926			1840	
Travel Time (s)		14.0			5.7			21.0			41.8	
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	516	1027	821	0	0	0	0	0	918	0
v/c Ratio			0.83	1.43	0.98						1.19	
Control Delay			48.4	220.9	26.8						125.3	
Queue Delay			0.0	1.1	38.5						0.0	
Total Delay			48.4	222.0	65.4						125.3	
Queue Length 50th (ft)			177	~427	367						~380	
Queue Length 95th (ft)			#270	m86	m120						m#292	
Internal Link Dist (ft)		433			129			846			1760	
Turn Bay Length (ft)			100									
Base Capacity (vph)			618	716	834						774	
Starvation Cap Reductn			0	109	137						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.83	1.69	1.18						1.19	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

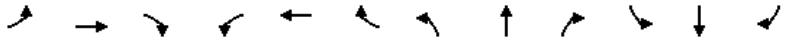
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	475	945	755	0	0	0	0	0	785	60
Future Volume (vph)	0	0	475	945	755	0	0	0	0	0	785	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3207	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3207	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	516	1027	821	0	0	0	0	0	853	65
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	516	1027	821	0	0	0	0	0	913	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			26.0	31.0	62.0						24.0	
Effective Green, g (s)			26.0	31.0	57.0						24.0	
Actuated g/C Ratio			0.26	0.31	0.57						0.24	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			618	925	897						769	
v/s Ratio Prot			0.22	c0.34	c0.52						c0.28	
v/s Ratio Perm												
v/c Ratio			0.83	1.11	0.92						1.19	
Uniform Delay, d1			35.0	34.5	19.3						38.0	
Progression Factor			1.00	0.65	1.08						1.08	
Incremental Delay, d2			9.1	51.3	1.6						88.8	
Delay (s)			44.1	73.8	22.5						129.7	
Level of Service			D	E	C						F	
Approach Delay (s)		44.1			51.0			0.0			129.7	
Approach LOS		D			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	71.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	400	50	105	590	120	25	15	75	0	0	0
Future Volume (Veh/h)	70	400	50	105	590	120	25	15	75	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	435	54	114	641	130	27	16	82	0	0	0
Pedestrians		40						50			19	
Lane Width (ft)		11.0						11.5			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		3						4			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		746			513							
pX, platoon unblocked	0.55						0.55	0.55		0.55	0.55	0.55
vC, conflicting volume	790			539			1573	1682	512	1630	1644	765
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	215			539			1632	1829	512	1735	1761	170
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			88			21	50	85	100	100	100
cM capacity (veh/h)	729			988			34	32	539	17	36	471

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	76	489	114	771	27	98
Volume Left	76	0	114	0	27	0
Volume Right	0	54	0	130	0	82
cSH	729	1700	988	1700	34	151
Volume to Capacity	0.10	0.29	0.12	0.45	0.79	0.65
Queue Length 95th (ft)	9	0	10	0	69	90
Control Delay (s)	10.5	0.0	9.1	0.0	263.9	64.8
Lane LOS	B		A		F	F
Approach Delay (s)	1.4		1.2		107.8	
Approach LOS					F	

Intersection Summary					
Average Delay	9.7				
Intersection Capacity Utilization	63.2%	ICU Level of Service		B	
Analysis Period (min)	15				

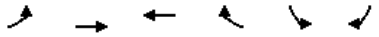
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	505	575	195	40	20
Future Volume (vph)	75	505	575	195	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	12	12
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		25	25		25	
Link Distance (ft)		605	253		150	
Travel Time (s)		16.5	6.9		4.1	
Confl. Peds. (#/hr)	17			17	1	3
Confl. Bikes (#/hr)				12		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	9%	7%	11%	9%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	549	837	0	65	0
v/c Ratio	0.30	0.51	0.81		0.50	
Control Delay	10.4	11.4	20.5		39.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	10.4	11.4	20.5		39.9	
Queue Length 50th (ft)	24	199	201		21	
Queue Length 95th (ft)	m11	#398	#773		#67	
Internal Link Dist (ft)		525	173		70	
Turn Bay Length (ft)	110					
Base Capacity (vph)	275	1080	1039		130	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.30	0.51	0.81		0.50	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

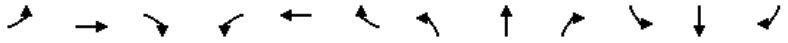
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	505	575	195	40	20
Future Volume (vph)	75	505	575	195	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)	7.0	7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.99		0.98	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.97		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1467	1464	1413		1468	
Flt Permitted	0.24	1.00	1.00		0.97	
Satd. Flow (perm)	374	1464	1413		1468	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	549	625	212	43	22
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	82	549	837	0	44	0
Confl. Peds. (#/hr)	17			17	1	3
Confl. Bikes (#/hr)				12		
Heavy Vehicles (%)	3%	9%	7%	11%	9%	0%
Turn Type	Perm	NA	NA		Prot	
Protected Phases		6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	53.0	53.0	53.0		4.8	
Effective Green, g (s)	53.0	53.0	53.0		4.8	
Actuated g/C Ratio	0.66	0.66	0.66		0.06	
Clearance Time (s)	7.0	7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0	1.0		2.0	
Lane Grp Cap (vph)	247	969	936		88	
v/s Ratio Prot		0.37	c0.59		c0.03	
v/s Ratio Perm	0.22					
v/c Ratio	0.33	0.57	0.89		0.50	
Uniform Delay, d1	5.8	7.3	11.2		36.4	
Progression Factor	0.80	1.01	1.00		1.00	
Incremental Delay, d2	2.5	1.7	12.8		1.6	
Delay (s)	7.2	9.1	24.0		38.1	
Level of Service	A	A	C		D	
Approach Delay (s)		8.8	24.0		38.1	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

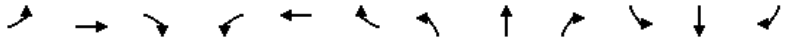
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	550	10	1	460	150	1	2	0	55	25	0
Future Volume (Veh/h)	1	550	10	1	460	150	1	2	0	55	25	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	598	11	1	500	163	1	2	0	60	27	0
Pedestrians		22			22			22			17	
Lane Width (ft)		12.0			11.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		592			467							
pX, platoon unblocked	0.70			0.72			0.84	0.84	0.72	0.84	0.84	0.70
vC, conflicting volume	680			631			1246	1310	648	1229	1234	620
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326			298			452	527	321	431	437	241
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	99	100	86	93	100
cM capacity (veh/h)	849			897			386	369	502	420	415	539

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	610	664	3	87
Volume Left	1	1	1	60
Volume Right	11	163	0	0
cSH	849	897	374	419
Volume to Capacity	0.00	0.00	0.01	0.21
Queue Length 95th (ft)	0	0	1	19
Control Delay (s)	0.0	0.0	14.7	15.8
Lane LOS	A	A	B	C
Approach Delay (s)	0.0	0.0	14.7	15.8
Approach LOS			B	C

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	56.4%	ICU Level of Service	B	
Analysis Period (min)	15			



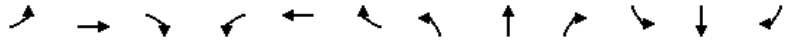
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Future Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		467			605			282			144	
Travel Time (s)		12.7			16.5			7.7			3.9	
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	664	0	0	647	0	0	82	0	0	3	0
v/c Ratio		0.70			0.68			0.57			0.02	
Control Delay		21.0			24.6			46.7			28.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.0			24.6			46.7			28.7	
Queue Length 50th (ft)		131			235			33			1	
Queue Length 95th (ft)		#623			m#547			#108			9	
Internal Link Dist (ft)		387			525			202			64	
Turn Bay Length (ft)												
Base Capacity (vph)		942			949			145			163	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.68			0.57			0.02	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

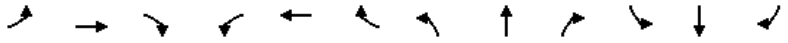
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Future Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.98			0.96	
Flpb, ped/bikes		1.00			1.00			0.93			0.98	
Frt		0.99			1.00			0.97			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1502			1544			1474			1480	
Flt Permitted		1.00			0.98			0.77			0.92	
Satd. Flow (perm)		1501			1516			1178			1378	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	614	49	16	630	1	65	1	16	1	1	1
RTOR Reduction (vph)	0	3	0	0	0	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	661	0	0	647	0	0	71	0	0	2	0
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		43.9			43.9			9.7			9.7	
Effective Green, g (s)		43.9			43.9			9.7			9.7	
Actuated g/C Ratio		0.55			0.55			0.12			0.12	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		823			831			142			167	
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.43			c0.06			0.00	
v/c Ratio		0.80			0.78			0.50			0.01	
Uniform Delay, d1		14.6			14.2			32.9			30.9	
Progression Factor		1.00			1.57			1.00			1.00	
Incremental Delay, d2		8.2			4.2			1.0			0.0	
Delay (s)		22.8			26.5			33.9			30.9	
Level of Service		C			C			C			C	
Approach Delay (s)		22.8			26.5			33.9			30.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	0	50	105	15	445	0	70	380	20
Future Volume (Veh/h)	10	10	10	0	50	105	15	445	0	70	380	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	11	0	54	114	16	484	0	76	413	22
Pedestrians		69			64						42	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		6			6						4	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								521				
pX, platoon unblocked	0.77	0.77		0.77	0.77	0.77				0.77		
vC, conflicting volume	1344	1225	493	1172	1236	590	504			548		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1299	1145	493	1077	1159	325	504			271		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	74	91	98	100	56	77	98			92		
cM capacity (veh/h)	42	124	543	111	122	504	1000			943		

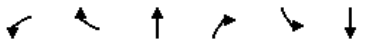
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	168	500	511
Volume Left	11	0	16	76
Volume Right	11	114	0	22
cSH	90	251	1000	943
Volume to Capacity	0.37	0.67	0.02	0.08
Queue Length 95th (ft)	36	107	1	7
Control Delay (s)	66.9	44.2	0.5	2.2
Lane LOS	F	E	A	A
Approach Delay (s)	66.9	44.2	0.5	2.2
Approach LOS	F	E		

Intersection Summary				
Average Delay			9.1	
Intersection Capacity Utilization			78.1%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	435	110	60	615	155	90
Future Volume (Veh/h)	435	110	60	615	155	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	473	120	65	668	168	98
Pedestrians	3			1	50	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			1006		
pX, platoon unblocked			0.81		0.78	0.81
vC, conflicting volume			643		1384	584
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			443		803	371
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		31	81
cM capacity (veh/h)			868		242	524

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	593	733	266
Volume Left	0	65	168
Volume Right	120	0	98
cSH	1700	868	302
Volume to Capacity	0.35	0.07	0.88
Queue Length 95th (ft)	0	6	200
Control Delay (s)	0.0	1.9	63.8
Lane LOS		A	F
Approach Delay (s)	0.0	1.9	63.8
Approach LOS			F

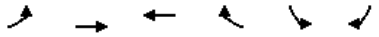
Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	35	330	120	70	45
Future Volume (Veh/h)	25	35	330	120	70	45
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	38	359	130	76	49
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	725	524			539	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	725	524			539	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	93			92	
cM capacity (veh/h)	331	508			983	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	65	489	125
Volume Left	27	0	76
Volume Right	38	130	0
cSH	416	1700	983
Volume to Capacity	0.16	0.29	0.08
Queue Length 95th (ft)	14	0	6
Control Delay (s)	15.3	0.0	5.7
Lane LOS	C		A
Approach Delay (s)	15.3	0.0	5.7
Approach LOS	C		

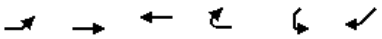
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	450	70	1	1	105
Future Volume (Veh/h)	60	450	70	1	1	105
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	489	76	1	1	114
Pedestrians		8	8		8	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		165				
pX, platoon unblocked						
vC, conflicting volume	85				712	92
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	85				712	92
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	88
cM capacity (veh/h)	1508				377	955

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	554	77	115
Volume Left	65	0	1
Volume Right	0	1	114
cSH	1508	1700	942
Volume to Capacity	0.04	0.05	0.12
Queue Length 95th (ft)	3	0	10
Control Delay (s)	1.3	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	1.3	0.0	9.4
Approach LOS			A

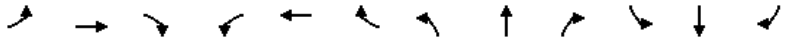
Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	820	340	0	0	2040
Future Volume (Veh/h)	0	820	340	0	0	2040
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	891	370	0	0	2217
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked	0.91				0.95	0.91
vC, conflicting volume	370				816	185
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	123				339	0
tC, single (s)	4.1				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1343				599	988

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	446	446	185	185	2217
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	2217
cSH	1700	1700	1700	1700	988
Volume to Capacity	0.26	0.26	0.11	0.11	2.24
Queue Length 95th (ft)	0	0	0	0	3970
Control Delay (s)	0.0	0.0	0.0	0.0	574.6
Lane LOS					F
Approach Delay (s)	0.0		0.0		574.6
Approach LOS					F

Intersection Summary			
Average Delay	366.3		
Intersection Capacity Utilization	142.4%	ICU Level of Service	H
Analysis Period (min)	15		



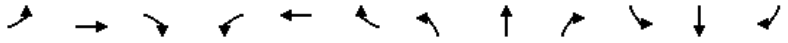
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1825	0	0	0	0	390	165	155	0	0	0
Future Volume (vph)	250	1825	0	0	0	0	390	165	155	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			784			304			1156	
Travel Time (s)		1.7			15.3			6.9			26.3	
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2256	0	0	0	0	343	428	0	0	0	0
v/c Ratio		0.72					1.11	1.47				
Control Delay		0.6					135.7	266.7				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.6					135.7	266.7				
Queue Length 50th (ft)		0					~375	~547				
Queue Length 95th (ft)		m0					#582	#775				
Internal Link Dist (ft)		6			704			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		3154					308	291				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.72					1.11	1.47				

Intersection Summary	
Area Type:	CBD

~ 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.

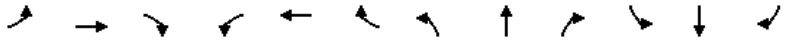
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1825	0	0	0	0	390	165	155	0	0	0
Future Volume (vph)	250	1825	0	0	0	0	390	165	155	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.94				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4330					1543	1375				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4330					1543	1375				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	1984	0	0	0	0	424	179	168	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	2256	0	0	0	0	343	411	0	0	0	0
Confl. Peds. (#/hr)	8								93			
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		99.0					28.0	28.0				
Effective Green, g (s)		99.0					28.0	28.0				
Actuated g/C Ratio		0.71					0.20	0.20				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		3061					308	275				
v/s Ratio Prot		c0.52					0.22	c0.30				
v/s Ratio Perm												
v/c Ratio		0.74					1.11	1.50				
Uniform Delay, d1		12.5					56.0	56.0				
Progression Factor		0.00					1.00	1.00				
Incremental Delay, d2		0.3					85.4	241.1				
Delay (s)		0.3					141.4	297.1				
Level of Service		A					F	F				
Approach Delay (s)		0.3			0.0			227.9			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	58.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



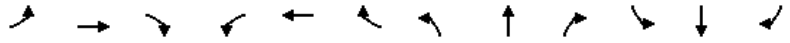
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	230	66	820	0	0	765	45
Future Volume (vph)	0	0	0	67	2	230	66	820	0	0	765	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			622	
Travel Time (s)		13.4			8.0			4.9			17.0	
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	75	250	0	963	0	0	881	0
v/c Ratio					0.80	0.57		0.75			1.24	
Control Delay					76.1	8.5		7.1			135.2	
Queue Delay					75.2	0.0		5.5			6.9	
Total Delay					151.3	8.5		12.6			142.1	
Queue Length 50th (ft)					52	26		44			~605	
Queue Length 95th (ft)					m51	m17		m31			m#606	
Internal Link Dist (ft)		510			273			98			542	
Turn Bay Length (ft)												
Base Capacity (vph)					94	631		1292			712	
Starvation Cap Reductn					0	0		269			0	
Spillback Cap Reductn					36	0		0			390	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					1.29	0.40		0.94			2.74	

Intersection Summary	
Area Type:	CBD

~ 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.

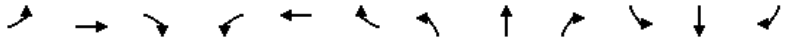
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	2	230	66	820	0	0	765	45
Future Volume (vph)	0	0	0	67	2	230	66	820	0	0	765	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.95	1.00		1.00			1.00	
Satd. Flow (prot)					1576	1405		2909			1512	
Flt Permitted					0.95	1.00		0.68			1.00	
Satd. Flow (perm)					1576	1405		1987			1512	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	73	2	250	72	891	0	0	832	49
RTOR Reduction (vph)	0	0	0	0	0	210	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	75	40	0	963	0	0	879	0
Confl. Peds. (#/hr)						56	196					196
Confl. Bikes (#/hr)						9						34
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	4%	0%	0%	3%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	16.0		63.0			47.0	
Effective Green, g (s)					6.0	16.0		57.0			47.0	
Actuated g/C Ratio					0.06	0.16		0.57			0.47	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	224		1132			710	
v/s Ratio Prot					c0.05	0.03					c0.58	
v/s Ratio Perm								c0.48				
v/c Ratio					0.80	0.18		0.85			1.24	
Uniform Delay, d1					46.4	36.3		17.9			26.5	
Progression Factor					1.53	1.84		0.45			1.04	
Incremental Delay, d2					4.0	0.0		2.4			108.2	
Delay (s)					75.3	67.0		10.4			135.7	
Level of Service					E	E		B			F	
Approach Delay (s)		0.0			68.9			10.4			135.7	
Approach LOS		A			E			B			F	

Intersection Summary				
HCM 2000 Control Delay	70.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.24			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	94.0%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

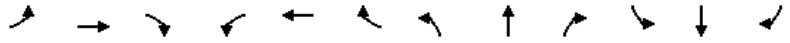


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Future Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		209			762			1156			2190	
Travel Time (s)		5.7			20.8			26.3			49.8	
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1826	0	0	451	0	0	0	0
v/c Ratio					1.77			0.61				
Control Delay					378.6			36.5				
Queue Delay					1.0			0.7				
Total Delay					379.6			37.3				
Queue Length 50th (ft)					~640			133				
Queue Length 95th (ft)					#736			186				
Internal Link Dist (ft)		129			682			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1030			745				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					183			93				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					2.16			0.69				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Future Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4293			2867				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4293			2867				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1560	266	288	163	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1826	0	0	451	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					24.0			26.0				
Effective Green, g (s)					24.0			26.0				
Actuated g/C Ratio					0.24			0.26				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1030			745				
v/s Ratio Prot					c0.43							
v/s Ratio Perm								0.16				
v/c Ratio					1.77			0.61				
Uniform Delay, d1					38.0			32.5				
Progression Factor					1.00			1.00				
Incremental Delay, d2					351.7			1.0				
Delay (s)					389.7			33.5				
Level of Service					F			C				
Approach Delay (s)		0.0			389.7			33.5			0.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	319.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	110.9%	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)	0	755	305	0	990	110	0	880	315	0	375	15
Future Volume (vph)	0	755	305	0	990	110	0	880	315	0	375	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			No			No			No			No
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		641			2767			774			646	
Travel Time (s)		12.5			53.9			21.1			22.0	
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1153	0	0	1196	0	0	1299	0	0	424	0
v/c Ratio		1.09			1.02			1.16			0.66	
Control Delay		86.5			63.5			108.5			29.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		86.5			63.5			108.5			29.8	
Queue Length 50th (ft)		~437			~412			~517			214	
Queue Length 95th (ft)		#568			#558			m#525			324	
Internal Link Dist (ft)		561			2687			694			566	
Turn Bay Length (ft)												
Base Capacity (vph)		1059			1173			1118			645	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.09			1.02			1.16			0.66	

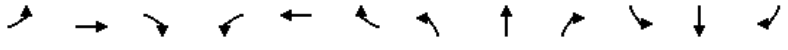
Intersection Summary

Area Type: CBD

~ 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)	0	755	305	0	990	110	0	880	315	0	375	15
Future Volume (vph)	0	755	305	0	990	110	0	880	315	0	375	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		11.0			11.0			11.0			11.0	
Lane Util. Factor		0.95			0.95			0.95			1.00	
Frpb, ped/bikes		0.93			0.99			0.91			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			0.96			0.99	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		2862			3172			2726			1575	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		2862			3172			2726			1575	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	821	332	0	1076	120	0	957	342	0	408	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1153	0	0	1196	0	0	1299	0	0	424	0
Confl. Peds. (#/hr)			109			54			323			243
Confl. Bikes (#/hr)			13						66			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%	0%	5%	0%	0%	7%	0%
Turn Type		NA			NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases												
Actuated Green, G (s)		37.0			37.0			41.0			41.0	
Effective Green, g (s)		37.0			37.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.37			0.41			0.41	
Clearance Time (s)		11.0			11.0			11.0			11.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		1058			1173			1117			645	
v/s Ratio Prot		c0.40			0.38			c0.48			0.27	
v/s Ratio Perm												
v/c Ratio		1.09			1.02			1.16			0.66	
Uniform Delay, d1		31.5			31.5			29.5			23.8	
Progression Factor		1.00			1.00			1.13			1.00	
Incremental Delay, d2		55.5			31.3			77.0			5.2	
Delay (s)		87.0			62.8			110.3			29.0	
Level of Service		F			E			F			C	
Approach Delay (s)		87.0			62.8			110.3			29.0	
Approach LOS		F			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	81.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
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)	381	20	130	0	0	0	0	705	35	267	525	0
Future Volume (vph)	381	20	130	0	0	0	0	705	35	267	525	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	12
Storage Length (ft)	0		0	0		0	0		300	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		595			501			1960			178	
Travel Time (s)		13.5			11.4			53.5			4.9	
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	269	308	0	0	0	0	0	804	0	0	861	0
v/c Ratio	1.59	1.79						0.80			1.68	
Control Delay	324.1	404.0						37.4			325.2	
Queue Delay	0.5	1.0						10.9			0.3	
Total Delay	324.6	405.1						48.4			325.4	
Queue Length 50th (ft)	~258	~292						234			~833	
Queue Length 95th (ft)	#425	#472						#376			m#698	
Internal Link Dist (ft)		515			421			1880			98	
Turn Bay Length (ft)												
Base Capacity (vph)	169	172						1008			513	
Starvation Cap Reductn	0	0						0			16	
Spillback Cap Reductn	5	10						187			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	1.64	1.90						0.98			1.73	

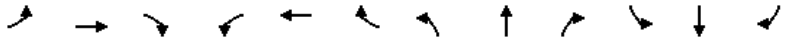
Intersection Summary

Area Type: CBD

~ 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.

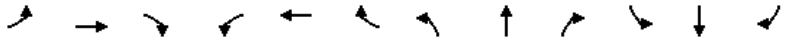
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	381	20	130	0	0	0	0	705	35	267	525	0
Future Volume (vph)	381	20	130	0	0	0	0	705	35	267	525	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	12
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	0.95	0.95						0.95			1.00	
Frpb, ped/bikes	1.00	0.88						0.98			1.00	
Flpb, ped/bikes	1.00	1.00						1.00			1.00	
Frt	1.00	0.93						0.99			1.00	
Flt Protected	0.95	0.98						1.00			0.98	
Satd. Flow (prot)	1543	1296						2929			1559	
Flt Permitted	0.95	0.98						1.00			0.36	
Satd. Flow (perm)	1543	1296						2929			571	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	414	22	141	0	0	0	0	766	38	290	571	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	269	278	0	0	0	0	0	804	0	0	861	0
Confl. Peds. (#/hr)			56						310	310		
Confl. Bikes (#/hr)									50			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Split	NA						NA		custom	NA	
Protected Phases	4	4						2		1	6 8 10 7	
Permitted Phases										6 8		
Actuated Green, G (s)	11.0	11.0						34.4			66.0	
Effective Green, g (s)	11.0	11.0						34.4			66.0	
Actuated g/C Ratio	0.11	0.11						0.34			0.66	
Clearance Time (s)	4.0	4.0						4.0				
Vehicle Extension (s)	2.0	2.0						2.0				
Lane Grp Cap (vph)	169	142						1007			491	
v/s Ratio Prot	0.17	c0.21						0.27			c0.20	
v/s Ratio Perm											c0.95	
v/c Ratio	1.59	1.96						0.80			1.75	
Uniform Delay, d1	44.5	44.5						29.7			17.0	
Progression Factor	1.00	1.00						1.00			1.36	
Incremental Delay, d2	292.4	454.7						6.6			339.9	
Delay (s)	336.9	499.2						36.3			363.1	
Level of Service	F	F						D			F	
Approach Delay (s)		423.5			0.0			36.3			363.1	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	261.4	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	2.05			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	98.2%	ICU Level of Service	F	
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)	215	300	40	130	650	5	200	220	25	5	330	305
Future Volume (vph)	215	300	40	130	650	5	200	220	25	5	330	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	125		0	0		160
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		548			547			255			491	
Travel Time (s)		14.9			14.9			7.0			13.4	
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	369	0	141	712	0	217	266	0	0	364	332
v/c Ratio	1.57	0.66		0.51	1.27		1.25	0.48			0.93	0.95
Control Delay	315.1	51.3		35.3	176.1		187.5	44.1			87.1	85.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	315.1	51.3		35.3	176.1		187.5	44.1			87.1	85.2
Queue Length 50th (ft)	~302	331		90	~937		~212	218			371	297
Queue Length 95th (ft)	#486	456		142	#1189		#391	313			#582	#450
Internal Link Dist (ft)		468			467			175			411	
Turn Bay Length (ft)	250			175			125					160
Base Capacity (vph)	149	555		287	560		174	558			393	351
Starvation Cap Reductn	0	0		0	0		0	0			0	0
Spillback Cap Reductn	0	0		0	0		0	0			0	0
Storage Cap Reductn	0	0		0	0		0	0			0	0
Reduced v/c Ratio	1.57	0.66		0.49	1.27		1.25	0.48			0.93	0.95

Intersection Summary

Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	300	40	130	650	5	200	220	25	5	330	305
Future Volume (vph)	215	300	40	130	650	5	200	220	25	5	330	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		4.0	4.0			6.0	6.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	0.98			1.00	0.82
Flpb, ped/bikes	1.00	1.00		0.98	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1577	1637		1584	1673		1559	1634			1687	1174
Flt Permitted	0.08	1.00		0.33	1.00		0.18	1.00			1.00	1.00
Satd. Flow (perm)	130	1637		558	1673		297	1634			1680	1174
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	234	326	43	141	707	5	217	239	27	5	359	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	234	369	0	141	712	0	217	266	0	0	364	332
Confl. Peds. (#/hr)	37		81	81		37	113		85	85		113
Confl. Bikes (#/hr)			9			23			17			32
Heavy Vehicles (%)	3%	1%	0%	1%	0%	0%	3%	1%	4%	10%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		D.P+P	NA		Perm	NA	pm+ov
Protected Phases	5	2		1	6		7	7 8			8	5
Permitted Phases	2			6			8			8		8
Actuated Green, G (s)	61.1	51.0		59.7	50.3		45.3	49.3			35.2	45.3
Effective Green, g (s)	61.1	51.0		59.7	50.3		45.3	49.3			35.2	45.3
Actuated g/C Ratio	0.40	0.34		0.39	0.33		0.30	0.33			0.23	0.30
Clearance Time (s)	6.0	6.0		6.0	6.0		4.0				6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0				2.0	2.0
Lane Grp Cap (vph)	148	550		283	555		172	531			390	397
v/s Ratio Prot	c0.10	0.23		0.03	0.43		c0.08	0.16				0.06
v/s Ratio Perm	c0.53			0.17			c0.29				0.22	0.23
v/c Ratio	1.58	0.67		0.50	1.28		1.26	0.50			0.93	0.84
Uniform Delay, d1	41.9	43.1		32.0	50.6		49.2	41.2			57.0	49.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	291.2	6.4		0.5	140.6		155.9	0.3			28.8	13.6
Delay (s)	333.1	49.5		32.5	191.3		205.0	41.5			85.9	63.3
Level of Service	F	D		C	F		F	D			F	E
Approach Delay (s)		159.5			165.0			115.0			75.1	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	130.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	151.6	Sum of lost time (s)	29.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		

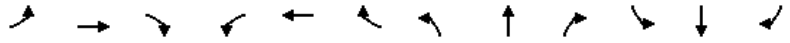
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	335	0	0	655	65
Future Volume (vph)	45	0	30	15	10	5	15	335	0	0	655	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		453			259			1811			202	
Travel Time (s)		12.4			7.1			49.4			5.5	
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	32	0	0	380	0	0	783	0
v/c Ratio		0.61			0.12			0.32			0.72	
Control Delay		22.1			24.2			7.6			16.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.1			24.2			7.6			16.5	
Queue Length 50th (ft)		0			6			0			0	
Queue Length 95th (ft)		#29			40			227			#745	
Internal Link Dist (ft)		373			179			1731			122	
Turn Bay Length (ft)												
Base Capacity (vph)		135			774			1188			1092	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.61			0.04			0.32			0.72	

Intersection Summary

Area Type: CBD

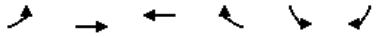
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	30	15	10	5	15	335	0	0	655	65
Future Volume (vph)	45	0	30	15	10	5	15	335	0	0	655	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	10	10	12	12	10	10
Total Lost time (s)		4.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.81			0.98			1.00			0.99	
Flpb, ped/bikes		0.87			0.94			1.00			1.00	
Frt		0.95			0.98			1.00			0.99	
Flt Protected		0.97			0.98			1.00			1.00	
Satd. Flow (prot)		998			1267			1482			1326	
Flt Permitted		0.97			0.98			0.97			1.00	
Satd. Flow (perm)		998			1267			1434			1326	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	0	33	16	11	5	16	364	0	0	712	71
RTOR Reduction (vph)	0	82	0	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	27	0	0	380	0	0	783	0
Confl. Peds. (#/hr)	7		14	14		7	75					75
Confl. Bikes (#/hr)			2			5			10			9
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	5%	0%	0%	6%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	6	6	6	0	0	0
Parking (#/hr)				0	0	0					0	0
Turn Type	D.Pm	NA		Perm	NA		Perm	NA			NA	
Protected Phases					5			1			1	
Permitted Phases	5			5			1					
Actuated Green, G (s)		0.0			3.3			42.6			42.6	
Effective Green, g (s)		0.0			3.3			42.6			42.6	
Actuated g/C Ratio		0.00			0.05			0.68			0.68	
Clearance Time (s)					5.0			5.0			5.0	
Vehicle Extension (s)					4.0			4.0			4.0	
Lane Grp Cap (vph)		0			66			977			903	
v/s Ratio Prot											c0.59	
v/s Ratio Perm					0.02			0.27				
v/c Ratio		0.00			0.41			0.39			0.87	
Uniform Delay, d1		31.2			28.7			4.3			7.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			5.6			1.2			11.0	
Delay (s)		31.2			34.3			5.5			18.7	
Level of Service		C			C			A			B	
Approach Delay (s)		31.2			34.3			5.5			18.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	1530	1487	385	415	285
Future Volume (vph)	222	1530	1487	385	415	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	11
Storage Length (ft)	200			200	0	85
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		511	949		1811	
Travel Time (s)		10.0	18.5		41.2	
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	1663	1616	418	451	310
v/c Ratio	1.14	0.87	1.23	0.76	1.04	0.47
Control Delay	148.8	23.2	128.4	20.9	93.7	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	148.8	23.2	128.4	20.9	93.7	22.3
Queue Length 50th (ft)	~199	468	~741	207	~344	141
Queue Length 95th (ft)	#357	594	m#597	m277	#543	220
Internal Link Dist (ft)		431	869		1731	
Turn Bay Length (ft)	200			200		85
Base Capacity (vph)	211	1921	1314	552	434	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.87	1.23	0.76	1.04	0.47

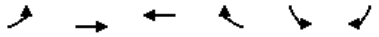
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	222	1530	1487	385	415	285
Future Volume (vph)	222	1530	1487	385	415	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	12	12	11
Total Lost time (s)	6.5	5.5	5.5	5.5	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.93	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1501	3085	3110	1306	1593	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1501	3085	3110	1306	1593	1391
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	241	1663	1616	418	451	310
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	241	1663	1616	418	451	307
Confl. Peds. (#/hr)	21			21		9
Confl. Bikes (#/hr)				6		
Heavy Vehicles (%)	1%	1%	1%	3%	2%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0
Turn Type	Prot	NA	NA	Perm	Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases				1		
Actuated Green, G (s)	15.5	68.5	46.5	46.5	30.0	51.5
Effective Green, g (s)	15.5	62.0	46.5	46.5	30.0	51.5
Actuated g/C Ratio	0.14	0.56	0.42	0.42	0.27	0.47
Clearance Time (s)	6.5		5.5	5.5	6.0	
Vehicle Extension (s)	2.0		3.0	3.0	2.0	
Lane Grp Cap (vph)	211	1738	1314	552	434	651
v/s Ratio Prot	c0.16	0.54	c0.52		c0.28	0.22
v/s Ratio Perm				0.32		
v/c Ratio	1.14	0.96	1.23	0.76	1.04	0.47
Uniform Delay, d1	47.2	22.7	31.8	27.0	40.0	20.0
Progression Factor	1.00	1.00	0.73	0.71	1.00	1.00
Incremental Delay, d2	105.5	13.5	104.1	0.9	53.7	2.4
Delay (s)	152.8	36.3	127.1	20.0	93.7	22.4
Level of Service	F	D	F	B	F	C
Approach Delay (s)		51.0	105.1		64.7	
Approach LOS		D	F		E	

Intersection Summary			
HCM 2000 Control Delay	76.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	46	860	1820	215	135	140
Future Volume (vph)	46	860	1820	215	135	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		181	
Travel Time (s)		18.5	20.6		4.9	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	935	2212	0	299	0
v/c Ratio	0.56	0.41	1.11		2.27	
Control Delay	54.9	8.7	79.4		617.3	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	54.9	8.7	79.4		617.3	
Queue Length 50th (ft)	36	71	~875		~343	
Queue Length 95th (ft)	m38	m313	#1357		#515	
Internal Link Dist (ft)		869	980		101	
Turn Bay Length (ft)	170					
Base Capacity (vph)	89	2304	1986		132	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.56	0.41	1.11		2.27	

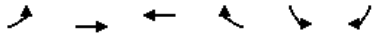
Intersection Summary

Area Type: CBD

~ 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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	46	860	1820	215	135	140
Future Volume (vph)	46	860	1820	215	135	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1516	3032	3054		1537	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1516	3032	3054		1537	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	935	1978	234	147	152
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	50	935	2212	0	299	0
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	
Protected Phases	6	1 6	1		5	
Permitted Phases						
Actuated Green, G (s)	6.5	78.0	66.0		9.5	
Effective Green, g (s)	6.5	72.5	66.0		9.5	
Actuated g/C Ratio	0.06	0.66	0.60		0.09	
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	89	1998	1832		132	
v/s Ratio Prot	c0.03	0.31	c0.72		c0.19	
v/s Ratio Perm						
v/c Ratio	0.56	0.47	1.21		2.27	
Uniform Delay, d1	50.4	9.2	22.0		50.2	
Progression Factor	0.86	1.23	1.00		1.00	
Incremental Delay, d2	2.0	0.0	98.7		592.8	
Delay (s)	45.5	11.4	120.7		643.0	
Level of Service	D	B	F		F	
Approach Delay (s)		13.1	120.7		643.0	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	135.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	75	930	325	190	5	15	65	5	2	1175
Future Volume (vph)	75	930	325	190	5	15	65	5	2	1175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0		0		0	0
Storage Lanes	1			0	0		0		1	2
Taper Length (ft)	25				25				25	
Right Turn on Red				Yes			Yes			
Link Speed (mph)		35	35			25			30	
Link Distance (ft)		279	170			125			548	
Travel Time (s)		5.4	3.3			3.4			12.5	
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)										33%
Lane Group Flow (vph)	82	1011	560	0	0	92	0	0	428	856
v/c Ratio	0.29	1.85	0.38			0.56			0.65	0.72
Control Delay	54.0	420.6	7.0			34.2			35.1	34.8
Queue Delay	0.0	0.1	0.7			1.7			57.9	52.7
Total Delay	54.0	420.7	7.7			35.8			93.0	87.5
Queue Length 50th (ft)	66	~733	33			19			296	340
Queue Length 95th (ft)	119	#869	50			78			421	425
Internal Link Dist (ft)		199	90			45			468	
Turn Bay Length (ft)	100									
Base Capacity (vph)	278	547	1467			164			658	1197
Starvation Cap Reductn	0	0	543			0			0	0
Spillback Cap Reductn	0	7	0			16			347	631
Storage Cap Reductn	0	0	0			0			0	0
Reduced v/c Ratio	0.29	1.87	0.61			0.62			1.38	1.51

Intersection Summary

Area Type: CBD

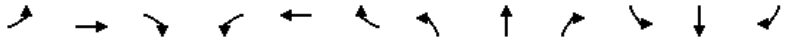
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	NEL2	NEL	NER
Lane Configurations										
Traffic Volume (vph)	75	930	325	190	5	15	65	5	2	1175
Future Volume (vph)	75	930	325	190	5	15	65	5	2	1175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	8.0			5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	0.95			1.00			1.00	0.91
Frpb, ped/bikes	1.00	1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.94			0.90			0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1624	3191	3029			1528			1442	2619
Flt Permitted	0.95	1.00	1.00			1.00			1.00	1.00
Satd. Flow (perm)	1624	3191	3029			1528			1442	2619
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	1011	353	207	5	16	71	5	2	1277
RTOR Reduction (vph)	0	0	58	0	0	66	0	0	0	0
Lane Group Flow (vph)	82	1011	502	0	0	26	0	0	428	856
Confl. Peds. (#/hr)	3			3					3	
Confl. Bikes (#/hr)				3						
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0
Turn Type	Split	NA	NA		Split	NA		Perm	pm+pt	custom
Protected Phases	3	3	4 5		2	2			1	1 5
Permitted Phases								1 5	5	1 5
Actuated Green, G (s)	24.0	24.0	68.0			9.0			59.0	64.0
Effective Green, g (s)	24.0	24.0	68.0			9.0			59.0	64.0
Actuated g/C Ratio	0.17	0.17	0.49			0.06			0.42	0.46
Clearance Time (s)	5.0	5.0				5.0			5.0	
Vehicle Extension (s)	2.0	2.0				2.0			2.0	
Lane Grp Cap (vph)	278	547	1471			98			659	1197
v/s Ratio Prot	0.05	c0.32	c0.17			c0.02			0.09	c0.33
v/s Ratio Perm									0.21	
v/c Ratio	0.29	1.85	0.34			0.26			0.65	0.72
Uniform Delay, d1	50.6	58.0	22.2			62.3			33.3	30.6
Progression Factor	1.00	1.00	0.33			1.00			1.00	1.00
Incremental Delay, d2	2.7	388.8	0.0			0.5			2.5	2.2
Delay (s)	53.3	446.8	7.3			62.9			35.8	32.9
Level of Service	D	F	A			E			D	C
Approach Delay (s)		417.2	7.3			62.9			33.8	
Approach LOS		F	A			E			C	

Intersection Summary			
HCM 2000 Control Delay	168.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



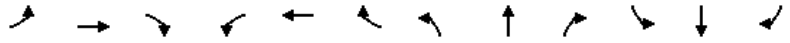
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1620	550	10	335	0	0	0	0	390	345	180
Future Volume (vph)	0	1620	550	10	335	0	0	0	0	390	345	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	13	12	12	12	12	12	12	11	11	11
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		170			86			306			262	
Travel Time (s)		3.3			1.7			7.0			6.0	
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)			0%							43%		
Lane Group Flow (vph)	0	1761	598	0	375	0	0	0	0	242	557	196
v/c Ratio		0.94	0.74		0.34					1.19	1.32	0.55
Control Delay		29.8	12.5		1.0					172.6	205.2	13.2
Queue Delay		46.5	53.4		0.0					0.0	0.0	0.0
Total Delay		76.3	65.9		1.0					172.6	205.2	13.2
Queue Length 50th (ft)		427	205		1					~290	~358	0
Queue Length 95th (ft)		m343	m161		1					#483	#485	76
Internal Link Dist (ft)		90			6			226			182	
Turn Bay Length (ft)												
Base Capacity (vph)		1870	805		1104					204	422	356
Starvation Cap Reductn		921	338		0					0	0	0
Spillback Cap Reductn		0	0		0					0	0	0
Storage Cap Reductn		0	0		0					0	0	0
Reduced v/c Ratio		1.86	1.28		0.34					1.19	1.32	0.55

Intersection Summary	
Area Type:	CBD

~ 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)	0	1620	550	10	335	0	0	0	0	390	345	180
Future Volume (vph)	0	1620	550	10	335	0	0	0	0	390	345	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	13	12	12	12	12	12	12	11	11	11
Total Lost time (s)		5.0	5.0		5.0					8.0	8.0	8.0
Lane Util. Factor		0.86	0.86		0.95					0.91	0.91	1.00
Frpb, ped/bikes		1.00	0.98		1.00					1.00	1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00					1.00	1.00	1.00
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	0.98	1.00
Satd. Flow (prot)		4223	1260		3244					1429	2960	1319
Flt Permitted		1.00	1.00		0.95					0.95	0.98	1.00
Satd. Flow (perm)		4223	1260		3103					1429	2960	1319
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1761	598	11	364	0	0	0	0	424	375	196
RTOR Reduction (vph)	0	0	248	0	0	0	0	0	0	0	0	168
Lane Group Flow (vph)	0	1761	350	0	375	0	0	0	0	242	557	28
Confl. Peds. (#/hr)			16	16								24
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		1 2 3		5	1 5					4	4	
Permitted Phases			1 2 3									4
Actuated Green, G (s)		62.0	62.0		59.0					20.0	20.0	20.0
Effective Green, g (s)		62.0	62.0		59.0					20.0	20.0	20.0
Actuated g/C Ratio		0.44	0.44		0.42					0.14	0.14	0.14
Clearance Time (s)										8.0	8.0	8.0
Vehicle Extension (s)										2.0	2.0	2.0
Lane Grp Cap (vph)		1870	558		1347					204	422	188
v/s Ratio Prot		c0.42			c0.08					0.17	c0.19	
v/s Ratio Perm			0.28		0.04							0.02
v/c Ratio		0.94	0.63		0.28					1.19	1.32	0.15
Uniform Delay, d1		37.3	30.1		26.5					60.0	60.0	52.5
Progression Factor		0.75	1.50		0.02					1.00	1.00	1.00
Incremental Delay, d2		1.2	0.1		0.1					122.3	159.8	0.1
Delay (s)		29.2	45.4		0.5					182.3	219.8	52.7
Level of Service		C	D		A					F	F	D
Approach Delay (s)		33.3			0.5			0.0			177.8	
Approach LOS		C			A			A			F	

Intersection Summary				
HCM 2000 Control Delay	68.5	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0	
Intersection Capacity Utilization	67.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

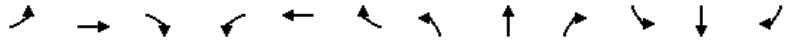
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	930	550	0	0	0	0	1025	35	85	730	0
Future Volume (vph)	280	930	550	0	0	0	0	1025	35	85	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	11	11
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		25			20			35			35	
Link Distance (ft)		951			939			563			1007	
Travel Time (s)		25.9			32.0			11.0			19.6	
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1315	598	0	0	0	0	1152	0	0	885	0
v/c Ratio		1.05	1.03					0.94			1.06	
Control Delay		69.4	73.4					55.5			82.3	
Queue Delay		0.0	0.0					0.0			0.0	
Total Delay		69.4	73.4					55.5			82.3	
Queue Length 50th (ft)		658	569					525			~336	
Queue Length 95th (ft)		#1071	#1036					#673			#501	
Internal Link Dist (ft)		871			859			483			927	
Turn Bay Length (ft)												
Base Capacity (vph)		1256	581					1228			833	
Starvation Cap Reductn		0	0					0			0	
Spillback Cap Reductn		0	0					0			0	
Storage Cap Reductn		0	0					0			0	
Reduced v/c Ratio		1.05	1.03					0.94			1.06	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

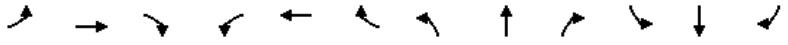
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	930	550	0	0	0	0	1025	35	85	730	0
Future Volume (vph)	280	930	550	0	0	0	0	1025	35	85	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	11	11	12	11	11
Total Lost time (s)		6.0	6.0					5.0			6.0	
Lane Util. Factor		0.95	1.00					0.95			0.95	
Frpb, ped/bikes		1.00	1.00					1.00			1.00	
Flpb, ped/bikes		0.99	1.00					1.00			1.00	
Frt		1.00	0.85					1.00			1.00	
Flt Protected		0.99	1.00					1.00			0.99	
Satd. Flow (prot)		3139	1454					3123			3124	
Flt Permitted		0.99	1.00					1.00			0.50	
Satd. Flow (perm)		3139	1454					3123			1579	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	304	1011	598	0	0	0	0	1114	38	92	793	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1315	598	0	0	0	0	1150	0	0	885	0
Confl. Peds. (#/hr)	11		28						3	3		
Confl. Bikes (#/hr)			9									9
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Prot					NA		pm+pt	NA	
Protected Phases		4	4					2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		52.8	52.8					55.0			67.0	
Effective Green, g (s)		52.8	52.8					55.0			67.0	
Actuated g/C Ratio		0.38	0.38					0.39			0.48	
Clearance Time (s)		6.0	6.0					5.0			6.0	
Vehicle Extension (s)		2.0	2.0					2.0			2.0	
Lane Grp Cap (vph)		1183	548					1226			843	
v/s Ratio Prot			0.41					0.37			c0.06	
v/s Ratio Perm		0.42									c0.44	
v/c Ratio		1.11	1.09					0.94			1.05	
Uniform Delay, d1		43.6	43.6					40.9			36.5	
Progression Factor		0.87	0.87					1.00			1.00	
Incremental Delay, d2		58.3	58.3					13.2			44.9	
Delay (s)		96.5	96.2					54.1			81.4	
Level of Service		F	F					D			F	
Approach Delay (s)		96.4			0.0			54.1			81.4	
Approach LOS		F			A			D			F	

Intersection Summary				
HCM 2000 Control Delay	80.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.06			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	109.7%	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)	0	0	0	100	1135	115	555	765	0	0	735	360
Future Volume (vph)	0	0	0	100	1135	115	555	765	0	0	735	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		280	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			Yes			No			Yes
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		984			1074			1007			813	
Travel Time (s)		26.8			29.3			19.6			15.8	
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1468	0	603	832	0	0	1190	0
v/c Ratio					1.30		1.48	0.83			1.22	
Control Delay					177.4		260.1	27.4			142.8	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					177.4		260.1	27.4			142.8	
Queue Length 50th (ft)					~533		~602	478			~591	
Queue Length 95th (ft)					#631		#830	691			#730	
Internal Link Dist (ft)		904			994			927			733	
Turn Bay Length (ft)												
Base Capacity (vph)					1131		408	1005			976	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					1.30		1.48	0.83			1.22	

Intersection Summary

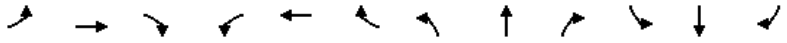
Area Type: CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	100	1135	115	555	765	0	0	735	360
Future Volume (vph)	0	0	0	100	1135	115	555	765	0	0	735	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	12	11	11	12	12	11	11
Total Lost time (s)					10.0		5.0	6.0			6.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.95	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					4348		1570	1653			2816	
Flt Permitted					1.00		0.09	1.00			1.00	
Satd. Flow (perm)					4348		141	1653			2816	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	109	1234	125	603	832	0	0	799	391
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	0	0	0	1459	0	603	832	0	0	1176	0
Confl. Peds. (#/hr)						54	73		27			73
Confl. Bikes (#/hr)						17						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%
Turn Type				Split	NA		pm+pt	NA			NA	
Protected Phases				4	4		1	6			2	
Permitted Phases							6					
Actuated Green, G (s)					31.0		74.0	73.0			41.0	
Effective Green, g (s)					31.0		74.0	73.0			41.0	
Actuated g/C Ratio					0.26		0.62	0.61			0.34	
Clearance Time (s)					10.0		5.0	6.0			6.0	
Lane Grp Cap (vph)					1123		408	1005			962	
v/s Ratio Prot					c0.34		c0.33	0.50			0.42	
v/s Ratio Perm							c0.58					
v/c Ratio					1.30		1.48	0.83			1.22	
Uniform Delay, d1					44.5		40.5	18.5			39.5	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					141.3		227.9	7.8			109.3	
Delay (s)					185.8		268.5	26.4			148.8	
Level of Service					F		F	C			F	
Approach Delay (s)		0.0			185.8			128.1			148.8	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	154.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	118.5%	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)	0	0	865	1080	665	0	0	0	0	0	685	45
Future Volume (vph)	0	0	865	1080	665	0	0	0	0	0	685	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		515			260			938			1824	
Travel Time (s)		14.0			7.1			21.3			41.5	
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	940	1174	723	0	0	0	0	0	794	0
v/c Ratio			2.01	1.06	0.74						1.58	
Control Delay			484.4	48.8	7.7						297.4	
Queue Delay			0.0	15.8	2.1						0.0	
Total Delay			484.4	64.6	9.9						297.4	
Queue Length 50th (ft)			~489	~359	116						~343	
Queue Length 95th (ft)			m#610	m79	m67						#461	
Internal Link Dist (ft)		435			180			858			1744	
Turn Bay Length (ft)			100									
Base Capacity (vph)			467	1105	973						504	
Starvation Cap Reductn			0	161	132						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			2.01	1.24	0.86						1.58	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

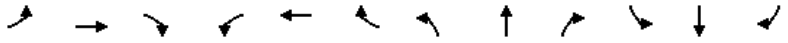
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	865	1080	665	0	0	0	0	0	685	45
Future Volume (vph)	0	0	865	1080	665	0	0	0	0	0	685	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3212	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3212	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	940	1174	723	0	0	0	0	0	745	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	940	1174	723	0	0	0	0	0	789	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	Prot	NA						NA	
Protected Phases			2	1 4	1 2 4						3	
Permitted Phases												
Actuated Green, G (s)			17.0	40.0	62.0						14.0	
Effective Green, g (s)			17.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.19	0.44	0.63						0.16	
Clearance Time (s)			9.0								5.0	
Vehicle Extension (s)			2.0								2.0	
Lane Grp Cap (vph)			467	1340	1046						499	
v/s Ratio Prot			c0.38	c0.39	0.44						c0.25	
v/s Ratio Perm												
v/c Ratio			2.01	0.88	0.69						1.58	
Uniform Delay, d1			36.5	22.7	10.8						38.0	
Progression Factor			0.76	0.54	0.90						1.00	
Incremental Delay, d2			462.6	0.7	0.1						270.9	
Delay (s)			490.2	12.9	9.9						308.9	
Level of Service			F	B	A						F	
Approach Delay (s)		490.2			11.7			0.0			308.9	
Approach LOS		F			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	200.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		

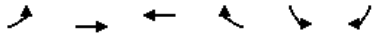
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	670	30	65	590	55	60	5	195	0	0	0
Future Volume (Veh/h)	25	670	30	65	590	55	60	5	195	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	728	33	71	641	60	65	5	212	0	0	0
Pedestrians		59						77			19	
Lane Width (ft)		11.0						11.5			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		5						6			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		740			515							
pX, platoon unblocked	0.73			0.77			0.84	0.84	0.77	0.84	0.84	0.73
vC, conflicting volume	720			838			1718	1738	822	1828	1724	749
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	424			645			1152	1176	623	1285	1160	464
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			89			42	96	40	100	100	100
cM capacity (veh/h)	819			656			112	130	353	39	133	414

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	27	761	71	701	65	217
Volume Left	27	0	71	0	65	0
Volume Right	0	33	0	60	0	212
cSH	819	1700	656	1700	112	339
Volume to Capacity	0.03	0.45	0.11	0.41	0.58	0.64
Queue Length 95th (ft)	3	0	9	0	70	104
Control Delay (s)	9.5	0.0	11.2	0.0	74.4	32.6
Lane LOS	A		B		F	D
Approach Delay (s)	0.3		1.0		42.2	
Approach LOS					E	

Intersection Summary					
Average Delay	7.0				
Intersection Capacity Utilization	69.1%	ICU Level of Service		C	
Analysis Period (min)	15				



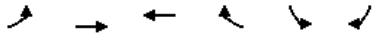
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	580	670	75	110	65
Future Volume (vph)	25	580	670	75	110	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	12	12
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		25	25		25	
Link Distance (ft)		606	253		150	
Travel Time (s)		16.5	6.9		4.1	
Confl. Peds. (#/hr)	21			21		4
Confl. Bikes (#/hr)				46		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	3%	12%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	630	810	0	191	0
v/c Ratio	0.14	0.68	0.89		0.88	
Control Delay	21.8	20.4	35.2		70.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	21.8	20.4	35.2		70.1	
Queue Length 50th (ft)	1	18	305		92	
Queue Length 95th (ft)	m13	m#480	m#794		#212	
Internal Link Dist (ft)		526	173		70	
Turn Bay Length (ft)	110					
Base Capacity (vph)	188	931	910		228	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.14	0.68	0.89		0.84	

Intersection Summary

Area Type: CBD

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	580	670	75	110	65
Future Volume (vph)	25	580	670	75	110	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)	7.0	7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.99		0.98	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1509	1535	1505		1539	
Flt Permitted	0.19	1.00	1.00		0.97	
Satd. Flow (perm)	310	1535	1505		1539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	630	728	82	120	71
RTOR Reduction (vph)	0	0	0	0	24	0
Lane Group Flow (vph)	27	630	810	0	167	0
Confl. Peds. (#/hr)	21			21		4
Confl. Bikes (#/hr)				46		2
Heavy Vehicles (%)	0%	4%	3%	12%	0%	2%
Turn Type	Perm	NA	NA		Prot	
Protected Phases		6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	52.2	52.2	52.2		11.4	
Effective Green, g (s)	52.2	52.2	52.2		11.4	
Actuated g/C Ratio	0.58	0.58	0.58		0.13	
Clearance Time (s)	7.0	7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0	1.0		2.0	
Lane Grp Cap (vph)	179	890	872		194	
v/s Ratio Prot		0.41	c0.54		c0.11	
v/s Ratio Perm	0.09					
v/c Ratio	0.15	0.71	0.93		0.86	
Uniform Delay, d1	8.7	13.5	17.2		38.5	
Progression Factor	1.44	1.04	1.27		1.00	
Incremental Delay, d2	1.0	2.6	15.0		29.6	
Delay (s)	13.5	16.6	36.9		68.1	
Level of Service	B	B	D		E	
Approach Delay (s)		16.5	36.9		68.1	
Approach LOS		B	D		E	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	1	480	1	1	710	140	5	20	0	75	10	0
Future Volume (Veh/h)	1	480	1	1	710	140	5	20	0	75	10	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	522	1	1	772	152	5	22	0	82	11	0
Pedestrians					29			29			21	
Lane Width (ft)					11.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					2			2			2	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		547			464							
pX, platoon unblocked	0.61			0.83			0.69	0.69	0.83	0.69	0.69	0.61
vC, conflicting volume	945			552			1409	1500	580	1436	1425	869
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	588			355			811	943	389	850	835	463
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	87	100	50	95	100
cM capacity (veh/h)	590			973			187	174	521	164	202	358

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	524	925	27	93
Volume Left	1	1	5	82
Volume Right	1	152	0	0
cSH	590	973	177	167
Volume to Capacity	0.00	0.00	0.15	0.56
Queue Length 95th (ft)	0	0	13	72
Control Delay (s)	0.0	0.0	29.0	50.5
Lane LOS	A	A	D	F
Approach Delay (s)	0.0	0.0	29.0	50.5
Approach LOS			D	F

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	70.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Future Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		464			606			294			154	
Travel Time (s)		12.7			16.5			8.0			4.2	
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	800	0	0	186	0	0	3	0
v/c Ratio		0.83			1.02			0.59			0.01	
Control Delay		33.8			47.5			40.3			27.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		33.8			47.5			40.3			27.3	
Queue Length 50th (ft)		224			222			86			1	
Queue Length 95th (ft)		#626			m#700			#260			9	
Internal Link Dist (ft)		384			526			214			74	
Turn Bay Length (ft)												
Base Capacity (vph)		777			782			315			389	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.83			1.02			0.59			0.01	

Intersection Summary

Area Type: CBD

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)	1	575	20	10	725	1	140	1	30	1	1	1
Future Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			0.96			0.99	
Frt		1.00			1.00			0.98			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1579			1603			1535			1519	
Flt Permitted		1.00			0.99			0.76			0.95	
Satd. Flow (perm)		1578			1588			1219			1464	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	625	22	11	788	1	152	1	33	1	1	1
RTOR Reduction (vph)	0	1	0	0	0	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	647	0	0	800	0	0	179	0	0	2	0
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		37.3			37.3			24.7			24.7	
Effective Green, g (s)		37.3			37.3			24.7			24.7	
Actuated g/C Ratio		0.41			0.41			0.27			0.27	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		653			658			334			401	
v/s Ratio Prot												
v/s Ratio Perm		0.41			c0.50			c0.15			0.00	
v/c Ratio		0.99			1.22			0.54			0.01	
Uniform Delay, d1		26.2			26.4			27.8			23.7	
Progression Factor		1.00			0.62			1.00			1.00	
Incremental Delay, d2		33.0			103.5			0.8			0.0	
Delay (s)		59.2			119.9			28.6			23.7	
Level of Service		E			F			C			C	
Approach Delay (s)		59.2			119.9			28.6			23.7	
Approach LOS		E			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	85.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	45	45	0	10	150	5	435	0	40	600	5
Future Volume (Veh/h)	30	45	45	0	10	150	5	435	0	40	600	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	49	49	0	11	163	5	473	0	43	652	5
Pedestrians		113			85						37	
Lane Width (ft)		12.0			13.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		9			8						3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								491				
pX, platoon unblocked	0.79	0.79		0.79	0.79	0.79				0.79		
vC, conflicting volume	1542	1422	768	1382	1424	595	770			558		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1553	1400	768	1350	1403	348	770			301		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	44	87	100	87	67	99			95		
cM capacity (veh/h)	32	87	364	38	87	489	765			914		

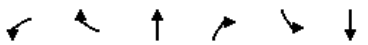
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	131	174	478	700
Volume Left	33	0	5	43
Volume Right	49	163	0	5
cSH	76	378	765	914
Volume to Capacity	1.72	0.46	0.01	0.05
Queue Length 95th (ft)	281	59	0	4
Control Delay (s)	465.0	22.4	0.2	1.2
Lane LOS	F	C	A	A
Approach Delay (s)	465.0	22.4	0.2	1.2
Approach LOS	F	C		

Intersection Summary				
Average Delay		44.3		
Intersection Capacity Utilization		94.5%	ICU Level of Service	F
Analysis Period (min)		15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	610	80	45	615	130	105
Future Volume (Veh/h)	610	80	45	615	130	105
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	87	49	668	141	114
Pedestrians	2			2	71	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			1002		
pX, platoon unblocked			0.71		0.82	0.71
vC, conflicting volume			821		1546	780
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			546		958	488
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		31	71
cM capacity (veh/h)			685		204	388

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	750	717	255
Volume Left	0	49	141
Volume Right	87	0	114
cSH	1700	685	259
Volume to Capacity	0.44	0.07	0.98
Queue Length 95th (ft)	0	6	238
Control Delay (s)	0.0	1.9	93.9
Lane LOS		A	F
Approach Delay (s)	0.0	1.9	93.9
Approach LOS			F

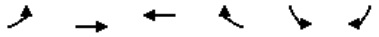
Intersection Summary			
Average Delay	14.7		
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	100	155	60	35	120
Future Volume (Veh/h)	70	100	155	60	35	120
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	109	168	65	38	130
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	506	300			283	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	506	300			283	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	84			97	
cM capacity (veh/h)	466	679			1222	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	185	233	168
Volume Left	76	0	38
Volume Right	109	65	0
cSH	572	1700	1222
Volume to Capacity	0.32	0.14	0.03
Queue Length 95th (ft)	35	0	2
Control Delay (s)	14.3	0.0	2.0
Lane LOS	B		A
Approach Delay (s)	14.3	0.0	2.0
Approach LOS	B		

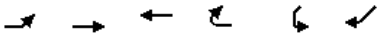
Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	215	190	1	1	85
Future Volume (Veh/h)	45	215	190	1	1	85
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	234	207	1	1	92
Pedestrians		3	3		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		181				
pX, platoon unblocked						
vC, conflicting volume	211				546	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211				546	214
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	89
cM capacity (veh/h)	1356				479	822

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	283	208	93
Volume Left	49	0	1
Volume Right	0	1	92
cSH	1356	1700	816
Volume to Capacity	0.04	0.12	0.11
Queue Length 95th (ft)	3	0	10
Control Delay (s)	1.6	0.0	10.0
Lane LOS	A		A
Approach Delay (s)	1.6	0.0	10.0
Approach LOS			A

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑			↱
Traffic Volume (veh/h)	0	1005	335	0	0	1700
Future Volume (Veh/h)	0	1005	335	0	0	1700
Sign Control		Free	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1092	364	0	0	1848
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1190	279			
pX, platoon unblocked					0.88	
vC, conflicting volume	364				910	182
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364				621	182
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	0
cM capacity (veh/h)	1198				369	829

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SW 1
Volume Total	546	546	182	182	1848
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1848
cSH	1700	1700	1700	1700	829
Volume to Capacity	0.32	0.32	0.11	0.11	2.23
Queue Length 95th (ft)	0	0	0	0	3314
Control Delay (s)	0.0	0.0	0.0	0.0	569.8
Lane LOS					F
Approach Delay (s)	0.0		0.0		569.8
Approach LOS					F

Intersection Summary			
Average Delay	318.7		
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	370	1640	0	0	0	0	345	110	120	0	0	0
Future Volume (vph)	370	1640	0	0	0	0	345	110	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	11	11	12	12	12
Right Turn on Red			No			No			Yes			No
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		86			951			304			1156	
Travel Time (s)		1.7			18.5			6.9			26.3	
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)							19%					
Lane Group Flow (vph)	0	2185	0	0	0	0	304	321	0	0	0	0
v/c Ratio		0.77					0.69	0.75				
Control Delay		0.3					54.0	54.2				
Queue Delay		0.0					0.0	0.0				
Total Delay		0.3					54.0	54.2				
Queue Length 50th (ft)		0					260	261				
Queue Length 95th (ft)		m0					375	386				
Internal Link Dist (ft)		6			871			224			1076	
Turn Bay Length (ft)												
Base Capacity (vph)		2851					440	427				
Starvation Cap Reductn		0					0	0				
Spillback Cap Reductn		0					0	0				
Storage Cap Reductn		0					0	0				
Reduced v/c Ratio		0.77					0.69	0.75				

Intersection Summary	
Area Type:	CBD

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)	370	1640	0	0	0	0	345	110	120	0	0	0
Future Volume (vph)	370	1640	0	0	0	0	345	110	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	11	11	12	12	12
Total Lost time (s)		5.0					5.0	5.0				
Lane Util. Factor		0.91					0.95	0.95				
Frpb, ped/bikes		1.00					1.00	0.98				
Flpb, ped/bikes		1.00					1.00	1.00				
Frt		1.00					1.00	0.94				
Flt Protected		0.99					0.95	0.99				
Satd. Flow (prot)		4435					1543	1433				
Flt Permitted		0.99					0.95	0.99				
Satd. Flow (perm)		4435					1543	1433				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	402	1783	0	0	0	0	375	120	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	2185	0	0	0	0	304	303	0	0	0	0
Confl. Peds. (#/hr)	3								24			
Confl. Bikes (#/hr)									9			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split	NA					Split	NA				
Protected Phases	1 2 3 4	1 2 3 4					5	5				
Permitted Phases												
Actuated Green, G (s)		87.0					40.0	40.0				
Effective Green, g (s)		87.0					40.0	40.0				
Actuated g/C Ratio		0.62					0.29	0.29				
Clearance Time (s)							5.0	5.0				
Vehicle Extension (s)							4.0	4.0				
Lane Grp Cap (vph)		2756					440	409				
v/s Ratio Prot		c0.49					0.20	c0.21				
v/s Ratio Perm												
v/c Ratio		0.79					0.69	0.74				
Uniform Delay, d1		19.8					44.5	45.3				
Progression Factor		0.01					1.00	1.00				
Incremental Delay, d2		0.1					5.0	7.5				
Delay (s)		0.3					49.5	52.8				
Level of Service		A					D	D				
Approach Delay (s)		0.3			0.0			51.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
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)	0	0	0	142	10	320	211	875	0	0	650	30
Future Volume (vph)	0	0	0	142	10	320	211	875	0	0	650	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	12	12	10	10
Right Turn on Red			Yes			Yes			No			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		590			353			178			774	
Travel Time (s)		13.4			8.0			4.9			21.1	
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	165	348	0	1180	0	0	740	0
v/c Ratio					1.76	0.77		1.04			0.95	
Control Delay					409.9	22.1		36.3			36.6	
Queue Delay					19.3	0.0		24.5			37.9	
Total Delay					429.2	22.1		60.8			74.6	
Queue Length 50th (ft)					~157	49		~353			367	
Queue Length 95th (ft)					#288	131		m#424			m#265	
Internal Link Dist (ft)		510			273			98			694	
Turn Bay Length (ft)												
Base Capacity (vph)					94	504		1135			775	
Starvation Cap Reductn					0	0		232			0	
Spillback Cap Reductn					45	0		0			95	
Storage Cap Reductn					0	0		0			0	
Reduced v/c Ratio					3.37	0.69		1.31			1.09	

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

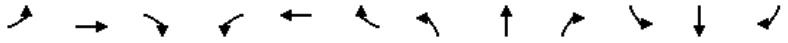
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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)	0	0	0	142	10	320	211	875	0	0	650	30
Future Volume (vph)	0	0	0	142	10	320	211	875	0	0	650	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	10	10	12	12	10	10
Total Lost time (s)					4.0	4.0		4.0			4.0	
Lane Util. Factor					1.00	1.00		0.95			1.00	
Frpb, ped/bikes					1.00	1.00		1.00			0.98	
Flpb, ped/bikes					1.00	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.99	
Flt Protected					0.96	1.00		0.99			1.00	
Satd. Flow (prot)					1579	1405		3003			1547	
Flt Permitted					0.96	1.00		0.60			1.00	
Satd. Flow (perm)					1579	1405		1817			1547	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	154	11	348	229	951	0	0	707	33
RTOR Reduction (vph)	0	0	0	0	0	207	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	165	141	0	1180	0	0	739	0
Confl. Peds. (#/hr)						56	224					224
Confl. Bikes (#/hr)						32						39
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type				Split	NA	custom	custom	NA			NA	
Protected Phases				8	8	1 8		2 4 9 11			6	
Permitted Phases							2 4					
Actuated Green, G (s)					6.0	17.6		61.4			50.0	
Effective Green, g (s)					6.0	17.6		55.4			50.0	
Actuated g/C Ratio					0.06	0.18		0.55			0.50	
Clearance Time (s)					4.0						4.0	
Vehicle Extension (s)					2.0						2.0	
Lane Grp Cap (vph)					94	247		1006			773	
v/s Ratio Prot					c0.10	0.10					c0.48	
v/s Ratio Perm								c0.65				
v/c Ratio					1.76	0.57		1.17			0.96	
Uniform Delay, d1					47.0	37.7		22.3			23.9	
Progression Factor					1.00	1.00		0.66			0.86	
Incremental Delay, d2					379.7	2.0		78.9			14.4	
Delay (s)					426.7	39.7		93.7			35.0	
Level of Service					F	D		F			C	
Approach Delay (s)		0.0			164.2			93.7			35.0	
Approach LOS		A			F			F			C	

Intersection Summary				
HCM 2000 Control Delay	90.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.33			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	34.0	
Intersection Capacity Utilization	93.4%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

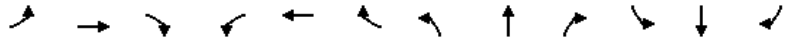


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		260			984			1156			2190	
Travel Time (s)		7.1			26.8			26.3			49.8	
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2229	0	0	522	0	0	0	0
v/c Ratio					1.40			0.89				
Control Delay					211.5			55.4				
Queue Delay					0.3			4.3				
Total Delay					211.7			59.8				
Queue Length 50th (ft)					~627			153				
Queue Length 95th (ft)					#723			#246				
Internal Link Dist (ft)		180			904			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1590			584				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					118			30				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.51			0.94				

Intersection Summary	
Area Type:	CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

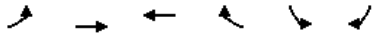
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.98				
Satd. Flow (prot)					4337			3092				
Flt Permitted					1.00			0.98				
Satd. Flow (perm)					4337			3092				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1734	495	163	359	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2229	0	0	522	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1590			584				
v/s Ratio Prot					c0.51							
v/s Ratio Perm								0.17				
v/c Ratio					1.40			0.89				
Uniform Delay, d1					28.5			35.6				
Progression Factor					1.00			1.00				
Incremental Delay, d2					184.7			15.7				
Delay (s)					213.2			51.3				
Level of Service					F			D				
Approach Delay (s)		0.0			213.2			51.3			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	182.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	665	1845	355	120	40
Future Volume (vph)	50	665	1845	355	120	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		165	
Travel Time (s)		18.5	20.6		4.5	
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	723	2391	0	130	43
v/c Ratio	0.77	0.33	1.28		0.80	0.16
Control Delay	57.9	8.4	150.1		81.3	37.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	57.9	8.4	150.1		81.3	37.0
Queue Length 50th (ft)	39	48	~1069		90	25
Queue Length 95th (ft)	m39	m183	#1535		#185	57
Internal Link Dist (ft)		869	980		85	
Turn Bay Length (ft)	170					80
Base Capacity (vph)	70	2214	1874		175	262
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	0.77	0.33	1.28		0.74	0.16

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

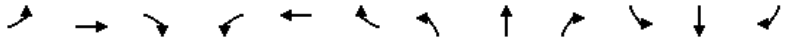
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	665	1845	355	120	40
Future Volume (vph)	50	665	1845	355	120	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	4.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1285	2973	2928		1608	1333
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1285	2973	2928		1608	1333
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	723	2005	386	130	43
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	54	723	2391	0	130	43
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases						
Actuated Green, G (s)	6.0	76.3	64.8		11.2	21.7
Effective Green, g (s)	6.0	70.8	64.8		11.2	21.7
Actuated g/C Ratio	0.05	0.64	0.59		0.10	0.20
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	70	1913	1724		163	262
v/s Ratio Prot	c0.04	0.24	c0.82		c0.08	0.03
v/s Ratio Perm						
v/c Ratio	0.77	0.38	1.39		0.80	0.16
Uniform Delay, d1	51.3	9.2	22.6		48.3	36.6
Progression Factor	0.95	1.18	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.0	177.8		21.8	0.1
Delay (s)	53.0	10.9	200.4		70.1	36.7
Level of Service	D	B	F		E	D
Approach Delay (s)		13.9	200.4		61.8	
Approach LOS		B	F		E	

Intersection Summary			
HCM 2000 Control Delay	149.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
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)	0	0	420	905	710	0	0	0	0	0	765	55
Future Volume (vph)	0	0	420	905	710	0	0	0	0	0	765	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		513			209			926			1840	
Travel Time (s)		14.0			5.7			21.0			41.8	
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	457	984	772	0	0	0	0	0	892	0
v/c Ratio			0.36	1.32	0.93						1.15	
Control Delay			11.3	169.7	20.2						112.7	
Queue Delay			0.0	1.0	40.4						0.0	
Total Delay			11.3	170.7	60.6						112.7	
Queue Length 50th (ft)			52	~398	330						~361	
Queue Length 95th (ft)			100	m85	m122						m#295	
Internal Link Dist (ft)		433			129			846			1760	
Turn Bay Length (ft)			100									
Base Capacity (vph)			1264	746	850						775	
Starvation Cap Reductn			0	105	138						0	
Spillback Cap Reductn			0	0	40						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.36	1.54	1.08						1.15	

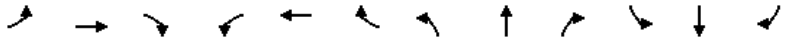
Intersection Summary

Area Type: CBD

~ 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.

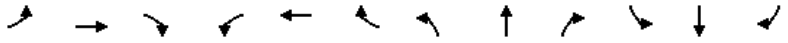
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	420	905	710	0	0	0	0	0	765	55
Future Volume (vph)	0	0	420	905	710	0	0	0	0	0	765	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3209	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3209	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	457	984	772	0	0	0	0	0	832	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	457	984	772	0	0	0	0	0	887	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			custom	Prot	NA						NA	
Protected Phases			2 3!	1 4	1 2 4						3!	
Permitted Phases												
Actuated Green, G (s)			58.0	32.0	62.0						24.0	
Effective Green, g (s)			58.0	32.0	57.0						24.0	
Actuated g/C Ratio			0.58	0.32	0.57						0.24	
Clearance Time (s)											5.0	
Vehicle Extension (s)											2.0	
Lane Grp Cap (vph)			1379	955	897						770	
v/s Ratio Prot			0.19	c0.33	c0.49						c0.28	
v/s Ratio Perm												
v/c Ratio			0.33	1.03	0.86						1.15	
Uniform Delay, d1			10.9	34.0	18.1						38.0	
Progression Factor			0.81	0.64	1.03						1.06	
Incremental Delay, d2			0.0	18.0	0.8						75.8	
Delay (s)			8.9	39.6	19.4						116.2	
Level of Service			A	D	B						F	
Approach Delay (s)		8.9			30.8			0.0			116.2	
Approach LOS		A			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	52.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		

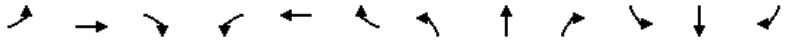
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	370	40	70	535	160	30	85	50	0	0	0
Future Volume (vph)	55	370	40	70	535	160	30	85	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	12	12	12	12	12
Storage Length (ft)	80		0	100		0	150		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			513			533			149	
Travel Time (s)		13.4			14.0			14.5			4.1	
Confl. Peds. (#/hr)	19		50	50		19	75					
Confl. Bikes (#/hr)			37			13						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	9%	2%	2%	9%	7%	2%	2%	2%	0%	0%	0%
Parking (#/hr)								0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	445	0	76	756	0	33	146	0	0	0	0
v/c Ratio	0.18	0.41		0.14	0.69		0.13	0.55				
Control Delay	6.5	7.0		5.0	10.8		34.7	37.6				
Queue Delay	0.0	0.0		0.0	4.1		0.0	0.0				
Total Delay	6.5	7.0		5.0	14.9		34.7	37.6				
Queue Length 50th (ft)	11	98		5	211		17	66				
Queue Length 95th (ft)	28	161		m15	m137		m42	m126				
Internal Link Dist (ft)		413			433			453			69	
Turn Bay Length (ft)	80			100			150					
Base Capacity (vph)	340	1084		552	1100		385	377				
Starvation Cap Reductn	0	0		0	260		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.18	0.41		0.14	0.90		0.09	0.39				

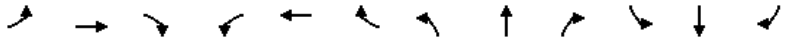
Intersection Summary	
Area Type:	CBD

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)	55	370	40	70	535	160	30	85	50	0	0	0
Future Volume (vph)	55	370	40	70	535	160	30	85	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	11	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00				
Flpb, ped/bikes	0.99	1.00		0.94	1.00		1.00	1.00				
Frt	1.00	0.99		1.00	0.97		1.00	0.94				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1438	1480		1491	1495		1540	1425				
Flt Permitted	0.30	1.00		0.48	1.00		0.95	1.00				
Satd. Flow (perm)	460	1480		751	1495		1540	1425				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	402	43	76	582	174	33	92	54	0	0	0
RTOR Reduction (vph)	0	3	0	0	8	0	0	23	0	0	0	0
Lane Group Flow (vph)	60	442	0	76	748	0	33	123	0	0	0	0
Confl. Peds. (#/hr)	19		50	50		19	75					
Confl. Bikes (#/hr)			37			13						
Heavy Vehicles (%)	8%	9%	2%	2%	9%	7%	2%	2%	2%	0%	0%	0%
Parking (#/hr)								0	0			
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	73.1	73.1		73.1	73.1		16.9	16.9				
Effective Green, g (s)	73.1	73.1		73.1	73.1		16.9	16.9				
Actuated g/C Ratio	0.73	0.73		0.73	0.73		0.17	0.17				
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)	336	1081		548	1092		260	240				
v/s Ratio Prot		0.30			c0.50		0.02	c0.09				
v/s Ratio Perm	0.13			0.10								
v/c Ratio	0.18	0.41		0.14	0.68		0.13	0.51				
Uniform Delay, d1	4.2	5.2		4.0	7.2		35.3	37.8				
Progression Factor	1.00	1.00		0.96	1.13		1.00	0.99				
Incremental Delay, d2	1.2	1.1		0.0	0.7		0.2	1.8				
Delay (s)	5.3	6.3		3.9	8.9		35.7	39.3				
Level of Service	A	A		A	A		D	D				
Approach Delay (s)		6.2			8.4			38.6			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

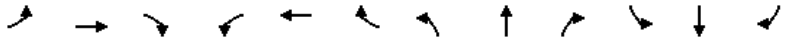


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	430	5	30	615	95	5	5	40	40	1	20
Future Volume (vph)	75	430	5	30	615	95	5	5	40	40	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		605			253			131			150	
Travel Time (s)		16.5			6.9			3.6			4.1	
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	472	0	33	771	0	0	10	43	0	66	0
v/c Ratio	0.34	0.47		0.10	0.78			0.08	0.42		0.52	
Control Delay	22.5	17.1		15.8	25.3			44.4	57.8		49.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	22.5	17.1		15.8	25.3			44.4	57.8		49.1	
Queue Length 50th (ft)	23	149		8	354			6	28		31	
Queue Length 95th (ft)	#125	#497		40	#951			22	62		74	
Internal Link Dist (ft)		525			173			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	244	1002		332	991			233	186		157	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.34	0.47		0.10	0.78			0.04	0.23		0.42	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	430	5	30	615	95	5	5	40	40	1	20
Future Volume (vph)	75	430	5	30	615	95	5	5	40	40	1	20
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99			1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.98			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1466	1460		1066	1446			1636	1295		1473	
Flt Permitted	0.23	1.00		0.43	1.00			0.98	1.00		0.97	
Satd. Flow (perm)	356	1460		484	1446			1636	1295		1473	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	467	5	33	668	103	5	5	43	43	1	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	18	0
Lane Group Flow (vph)	82	472	0	33	771	0	0	10	43	0	48	0
Confl. Peds. (#/hr)	17		22	22		17	3		1	1		3
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	3%	9%	14%	41%	7%	11%	4%	0%	9%	9%	0%	0%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	63.3	63.3		63.3	63.3			5.8	5.8		6.7	
Effective Green, g (s)	63.3	63.3		63.3	63.3			5.8	5.8		6.7	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.06	0.06		0.06	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	214	880		291	871			90	71		93	
v/s Ratio Prot		0.32			c0.53			0.01			c0.03	
v/s Ratio Perm	0.23			0.07					c0.03			
v/c Ratio	0.38	0.54		0.11	0.89			0.11	0.61		0.52	
Uniform Delay, d1	10.8	12.2		8.9	17.8			47.1	48.5		47.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	5.1	2.3		0.8	12.8			0.2	9.6		2.0	
Delay (s)	15.9	14.6		9.7	30.5			47.3	58.1		49.6	
Level of Service	B	B		A	C			D	E		D	
Approach Delay (s)		14.8			29.7			56.1			49.6	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

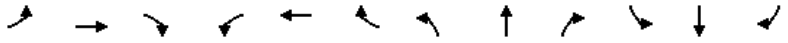
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Future Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		209			762			1156			2190	
Travel Time (s)		5.7			20.8			26.3			49.8	
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1750	0	0	396	0	0	0	0
v/c Ratio					1.63			0.55				
Control Delay					315.2			35.8				
Queue Delay					0.9			0.3				
Total Delay					316.0			36.0				
Queue Length 50th (ft)					~602			114				
Queue Length 95th (ft)					#699			162				
Internal Link Dist (ft)		129			682			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1075			744				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					173			66				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.94			0.58				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Future Volume (vph)	0	0	0	0	1380	230	235	130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4298			2864				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4298			2864				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1500	250	255	141	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1750	0	0	396	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					25.0			25.0				
Effective Green, g (s)					25.0			25.0				
Actuated g/C Ratio					0.25			0.25				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1074			716				
v/s Ratio Prot					c0.41							
v/s Ratio Perm								0.14				
v/c Ratio					1.63			0.55				
Uniform Delay, d1					37.5			32.6				
Progression Factor					1.00			1.00				
Incremental Delay, d2					287.5			0.5				
Delay (s)					325.0			33.2				
Level of Service					F			C				
Approach Delay (s)		0.0			325.0			33.2			0.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	271.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	70	20	595	145	30
Future Volume (Veh/h)	440	70	20	595	145	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	478	76	22	647	158	33
Pedestrians	3			1	50	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			493		
pX, platoon unblocked			0.82		0.89	0.82
vC, conflicting volume			604		1260	567
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			412		782	367
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		47	94
cM capacity (veh/h)			905		300	535

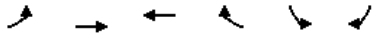
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	554	669	191
Volume Left	0	22	158
Volume Right	76	0	33
cSH	1700	905	325
Volume to Capacity	0.33	0.02	0.59
Queue Length 95th (ft)	0	2	88
Control Delay (s)	0.0	0.6	30.7
Lane LOS		A	D
Approach Delay (s)	0.0	0.6	30.7
Approach LOS			D

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	25	150	195	65	25
Future Volume (Veh/h)	30	25	150	195	65	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	27	163	212	71	27
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	538	369			425	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	538	369			425	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	96			93	
cM capacity (veh/h)	431	621			1083	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	60	375	98
Volume Left	33	0	71
Volume Right	27	212	0
cSH	500	1700	1083
Volume to Capacity	0.12	0.22	0.07
Queue Length 95th (ft)	10	0	5
Control Delay (s)	13.2	0.0	6.4
Lane LOS	B		A
Approach Delay (s)	13.2	0.0	6.4
Approach LOS	B		

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	825	1755	180	110	110
Future Volume (vph)	31	825	1755	180	110	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		181	
Travel Time (s)		18.5	20.6		4.9	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	897	2104	0	120	120
v/c Ratio	0.41	0.39	1.05		0.85	0.43
Control Delay	51.7	8.7	55.7		92.7	44.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	51.7	8.7	55.7		92.7	44.4
Queue Length 50th (ft)	24	57	641		85	75
Queue Length 95th (ft)	m28	m313	#1273		#187	134
Internal Link Dist (ft)		869	980		101	
Turn Bay Length (ft)	170					80
Base Capacity (vph)	82	2299	2000		147	272
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	0.41	0.39	1.05		0.82	0.44

Intersection Summary

Area Type: CBD

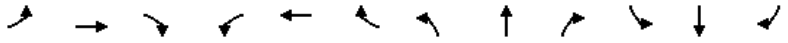
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	825	1755	180	110	110
Future Volume (vph)	31	825	1755	180	110	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	4.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1516	3032	3061		1624	1454
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1516	3032	3061		1624	1454
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	897	1908	196	120	120
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	34	897	2104	0	120	120
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases						
Actuated Green, G (s)	6.0	77.8	66.3		9.7	20.2
Effective Green, g (s)	6.0	72.3	66.3		9.7	20.2
Actuated g/C Ratio	0.05	0.66	0.60		0.09	0.18
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	82	1992	1844		143	267
v/s Ratio Prot	0.02	0.30	c0.69		c0.07	c0.08
v/s Ratio Perm						
v/c Ratio	0.41	0.45	1.14		0.84	0.45
Uniform Delay, d1	50.3	9.2	21.9		49.4	40.0
Progression Factor	0.87	1.23	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.0	70.6		31.7	0.4
Delay (s)	44.3	11.3	92.4		81.1	40.4
Level of Service	D	B	F		F	D
Approach Delay (s)		12.5	92.4		60.7	
Approach LOS		B	F		E	

Intersection Summary			
HCM 2000 Control Delay	67.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
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)	0	0	725	995	635	0	0	0	0	0	650	40
Future Volume (vph)	0	0	725	995	635	0	0	0	0	0	650	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		515			260			938			1824	
Travel Time (s)		14.0			7.1			21.3			41.5	
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	788	1082	690	0	0	0	0	0	750	0
v/c Ratio			0.80	0.98	0.71						1.49	
Control Delay			25.6	22.0	6.7						260.2	
Queue Delay			0.0	39.9	1.5						0.0	
Total Delay			25.6	61.9	8.2						260.2	
Queue Length 50th (ft)			222	96	100						~314	
Queue Length 95th (ft)			243	m75	m67						#432	
Internal Link Dist (ft)		435			180			858			1744	
Turn Bay Length (ft)			100									
Base Capacity (vph)			989	1105	973						504	
Starvation Cap Reductn			0	169	130						0	
Spillback Cap Reductn			0	0	37						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.80	1.16	0.82						1.49	

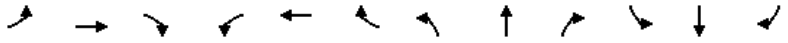
Intersection Summary

Area Type: CBD

~ 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)	0	0	725	995	635	0	0	0	0	0	650	40
Future Volume (vph)	0	0	725	995	635	0	0	0	0	0	650	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3214	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3214	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	788	1082	690	0	0	0	0	0	707	43
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	788	1082	690	0	0	0	0	0	745	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			custom	Prot	NA						NA	
Protected Phases			2 3!	1 4	1 2 4						3!	
Permitted Phases												
Actuated Green, G (s)			40.0	40.0	62.0						14.0	
Effective Green, g (s)			40.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.44	0.44	0.63						0.16	
Clearance Time (s)											5.0	
Vehicle Extension (s)											2.0	
Lane Grp Cap (vph)			1099	1340	1046						499	
v/s Ratio Prot			c0.32	c0.36	0.42						c0.23	
v/s Ratio Perm												
v/c Ratio			0.72	0.81	0.66						1.49	
Uniform Delay, d1			20.4	21.7	10.4						38.0	
Progression Factor			0.81	0.53	0.82						1.00	
Incremental Delay, d2			1.6	0.3	0.1						232.2	
Delay (s)			18.1	11.9	8.6						270.2	
Level of Service			B	B	A						F	
Approach Delay (s)		18.1			10.6			0.0			270.2	
Approach LOS		B			B			A			F	

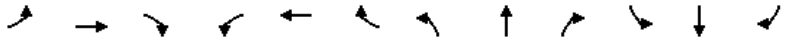
Intersection Summary			
HCM 2000 Control Delay	71.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	600	25	45	545	85	60	30	125	0	0	0
Future Volume (vph)	25	600	25	45	545	85	60	30	125	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	12	12	12	12	12
Storage Length (ft)	80		0	100		0	150		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		487			515			528			149	
Travel Time (s)		13.3			14.0			14.4			4.1	
Confl. Peds. (#/hr)	19		77	77		19	59					
Confl. Bikes (#/hr)			16			41						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	6%	10%	4%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	679	0	49	684	0	65	169	0	0	0	0
v/c Ratio	0.07	0.60		0.14	0.61		0.23	0.48				
Control Delay	5.6	10.3		3.9	6.7		31.8	13.5				
Queue Delay	0.0	0.0		0.0	0.5		0.0	0.0				
Total Delay	5.6	10.3		3.9	7.2		31.8	13.5				
Queue Length 50th (ft)	5	187		2	15		30	14				
Queue Length 95th (ft)	14	293		m14	m290		m65	70				
Internal Link Dist (ft)		407			435			448			69	
Turn Bay Length (ft)	80			100			150					
Base Capacity (vph)	374	1128		350	1128		325	387				
Starvation Cap Reductn	0	0		0	144		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.07	0.60		0.14	0.70		0.20	0.44				

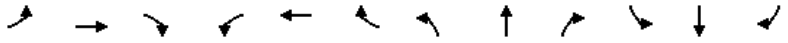
Intersection Summary	
Area Type:	CBD

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)	25	600	25	45	545	85	60	30	125	0	0	0
Future Volume (vph)	25	600	25	45	545	85	60	30	125	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	11	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00				
Flpb, ped/bikes	0.99	1.00		0.95	1.00		1.00	1.00				
Frt	1.00	0.99		1.00	0.98		1.00	0.88				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1506	1595		1402	1589		1540	1327				
Flt Permitted	0.33	1.00		0.34	1.00		0.95	1.00				
Satd. Flow (perm)	529	1595		497	1589		1540	1327				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	652	27	49	592	92	65	33	136	0	0	0
RTOR Reduction (vph)	0	1	0	0	6	0	0	111	0	0	0	0
Lane Group Flow (vph)	27	678	0	49	678	0	65	58	0	0	0	0
Confl. Peds. (#/hr)	19		77	77		19	59					
Confl. Bikes (#/hr)			16			41						
Heavy Vehicles (%)	3%	2%	6%	10%	4%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0	0			
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	63.6	63.6		63.6	63.6		16.4	16.4				
Effective Green, g (s)	63.6	63.6		63.6	63.6		16.4	16.4				
Actuated g/C Ratio	0.71	0.71		0.71	0.71		0.18	0.18				
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)	373	1127		351	1122		280	241				
v/s Ratio Prot		0.42			c0.43		0.04	c0.04				
v/s Ratio Perm	0.05			0.10								
v/c Ratio	0.07	0.60		0.14	0.60		0.23	0.24				
Uniform Delay, d1	4.1	6.7		4.3	6.8		31.4	31.5				
Progression Factor	1.00	1.00		0.61	0.66		1.00	0.99				
Incremental Delay, d2	0.4	2.4		0.1	0.6		0.4	0.5				
Delay (s)	4.5	9.1		2.7	5.1		31.9	31.6				
Level of Service	A	A		A	A		C	C				
Approach Delay (s)		8.9			4.9			31.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

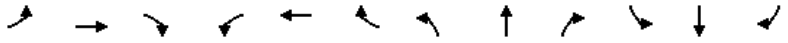


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	560	5	20	665	25	10	1	30	110	0	65
Future Volume (vph)	25	560	5	20	665	25	10	1	30	110	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	110		0	140		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No			No			No			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		606			253			131			150	
Travel Time (s)		16.5			6.9			3.6			4.1	
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	614	0	22	750	0	0	12	33	0	191	0
v/c Ratio	0.15	0.68		0.10	0.83			0.10	0.35		0.71	
Control Delay	22.7	26.8		21.1	33.2			43.5	53.4		25.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	22.7	26.8		21.1	33.2			43.5	53.4		25.7	
Queue Length 50th (ft)	6	203		5	291			7	20		17	
Queue Length 95th (ft)	38	#689		31	#883			24	50		85	
Internal Link Dist (ft)		526			173			51			70	
Turn Bay Length (ft)	110			140								
Base Capacity (vph)	184	902		222	903			228	174		301	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.15	0.68		0.10	0.83			0.05	0.19		0.63	

Intersection Summary

Area Type: CBD

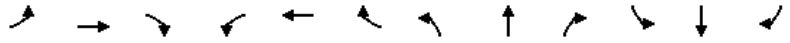
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	560	5	20	665	25	10	1	30	110	0	65
Future Volume (vph)	25	560	5	20	665	25	10	1	30	110	0	65
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	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	0.97		0.98	
Flpb, ped/bikes	0.99	1.00		0.99	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.97	
Satd. Flow (prot)	1508	1530		1211	1532			1635	1231		1531	
Flt Permitted	0.20	1.00		0.30	1.00			0.96	1.00		0.97	
Satd. Flow (perm)	312	1530		378	1532			1635	1231		1531	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	609	5	22	723	27	11	1	33	120	0	71
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	152	0
Lane Group Flow (vph)	27	614	0	22	750	0	0	12	33	0	39	0
Confl. Peds. (#/hr)	21		29	29		21	4					4
Confl. Bikes (#/hr)			16			46			2			2
Heavy Vehicles (%)	0%	4%	22%	24%	3%	12%	0%	0%	14%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	Split	NA	
Protected Phases		6			2		8	8		4	4	
Permitted Phases	6			2					8			
Actuated Green, G (s)	53.8	53.8		53.8	53.8			5.2	5.2		7.6	
Effective Green, g (s)	53.8	53.8		53.8	53.8			5.2	5.2		7.6	
Actuated g/C Ratio	0.54	0.54		0.54	0.54			0.05	0.05		0.08	
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0			2.0	2.0		2.0	
Lane Grp Cap (vph)	167	823		203	824			85	64		116	
v/s Ratio Prot		0.40			c0.49			0.01			c0.03	
v/s Ratio Perm	0.09			0.06					c0.03			
v/c Ratio	0.16	0.75		0.11	0.91			0.14	0.52		0.34	
Uniform Delay, d1	11.7	17.8		11.3	20.9			45.3	46.2		43.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.1	6.1		1.1	15.9			0.3	2.9		0.6	
Delay (s)	13.8	23.9		12.4	36.8			45.5	49.1		44.5	
Level of Service	B	C		B	D			D	D		D	
Approach Delay (s)		23.5			36.1			48.1			44.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

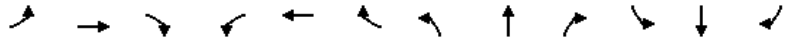


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Future Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		260			984			1156			2190	
Travel Time (s)		7.1			26.8			26.3			49.8	
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2114	0	0	489	0	0	0	0
v/c Ratio					1.33			0.84				
Control Delay					181.1			49.5				
Queue Delay					0.1			2.0				
Total Delay					181.3			51.5				
Queue Length 50th (ft)					~578			142				
Queue Length 95th (ft)					#673			#223				
Internal Link Dist (ft)		180			904			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1587			584				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					70			30				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.39			0.88				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Future Volume (vph)	0	0	0	0	1500	445	130	320	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					4328			3096				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					4328			3096				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1630	484	141	348	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2114	0	0	489	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1586			584				
v/s Ratio Prot					c0.49							
v/s Ratio Perm								0.16				
v/c Ratio					1.33			0.84				
Uniform Delay, d1					28.5			35.2				
Progression Factor					1.00			1.00				
Incremental Delay, d2					154.2			9.7				
Delay (s)					182.7			44.9				
Level of Service					F			D				
Approach Delay (s)		0.0			182.7			44.9			0.0	
Approach LOS		A			F			D			A	

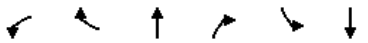
Intersection Summary			
HCM 2000 Control Delay	156.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	610	90	20	595	115	30
Future Volume (Veh/h)	610	90	20	595	115	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	98	22	647	125	33
Pedestrians	2			2	71	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			487		
pX, platoon unblocked			0.70		0.79	0.70
vC, conflicting volume			832		1476	785
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			540		929	473
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		41	91
cM capacity (veh/h)			673		214	387

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	761	669	158
Volume Left	0	22	125
Volume Right	98	0	33
cSH	1700	673	236
Volume to Capacity	0.45	0.03	0.67
Queue Length 95th (ft)	0	3	106
Control Delay (s)	0.0	0.9	46.7
Lane LOS		A	E
Approach Delay (s)	0.0	0.9	46.7
Approach LOS			E

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		



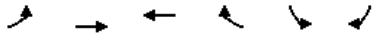
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	65	65	80	85	40	70
Future Volume (Veh/h)	65	65	80	85	40	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	71	71	87	92	43	76
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	395	233			229	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	395	233			229	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	90			97	
cM capacity (veh/h)	539	740			1279	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	142	179	119
Volume Left	71	0	43
Volume Right	71	92	0
cSH	624	1700	1279
Volume to Capacity	0.23	0.11	0.03
Queue Length 95th (ft)	22	0	3
Control Delay (s)	12.5	0.0	3.0
Lane LOS	B		A
Approach Delay (s)	12.5	0.0	3.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Capacity Analysis Worksheets

2030 Build Conditions with Mitigation



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	690	1950	430	125	50
Future Volume (vph)	80	690	1950	430	125	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		165	
Travel Time (s)		18.5	20.6		4.5	
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	87	750	2587	0	136	54
v/c Ratio	1.24	0.34	1.39		0.82	0.20
Control Delay	162.5	8.5	200.0		83.8	37.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	162.5	8.5	200.0		83.8	37.7
Queue Length 50th (ft)	~78	51	~1223		95	31
Queue Length 95th (ft)	m#71	m182	#1686		#196	68
Internal Link Dist (ft)		869	980		85	
Turn Bay Length (ft)	170					80
Base Capacity (vph)	70	2209	1863		175	273
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	1.24	0.34	1.39		0.78	0.20

Intersection Summary

Area Type: CBD

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

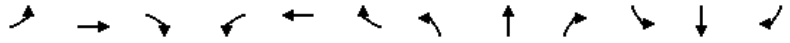
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	690	1950	430	125	50
Future Volume (vph)	80	690	1950	430	125	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	4.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1285	2973	2920		1608	1333
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1285	2973	2920		1608	1333
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	750	2120	467	136	54
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	87	750	2587	0	136	54
Confl. Peds. (#/hr)	9			9		8
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	18%	2%	5%	0%	1%	9%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases						
Actuated Green, G (s)	6.0	76.1	64.6		11.4	21.9
Effective Green, g (s)	6.0	70.6	64.6		11.4	21.9
Actuated g/C Ratio	0.05	0.64	0.59		0.10	0.20
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	70	1908	1714		166	265
v/s Ratio Prot	c0.07	0.25	c0.89		c0.08	0.04
v/s Ratio Perm						
v/c Ratio	1.24	0.39	1.51		0.82	0.20
Uniform Delay, d1	52.0	9.4	22.7		48.3	36.8
Progression Factor	0.95	1.18	1.00		1.00	1.00
Incremental Delay, d2	120.1	0.0	232.3		24.8	0.1
Delay (s)	169.3	11.2	255.0		73.1	36.9
Level of Service	F	B	F		E	D
Approach Delay (s)		27.6	255.0		62.8	
Approach LOS		C	F		E	

Intersection Summary			
HCM 2000 Control Delay	192.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
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)	0	0	475	945	755	0	0	0	0	0	785	60
Future Volume (vph)	0	0	475	945	755	0	0	0	0	0	785	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		513			209			926			1840	
Travel Time (s)		14.0			5.7			21.0			41.8	
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	516	1027	821	0	0	0	0	0	918	0
v/c Ratio			0.39	1.43	0.98						1.19	
Control Delay			15.2	220.9	26.8						125.3	
Queue Delay			0.0	1.1	38.5						0.0	
Total Delay			15.2	222.0	65.4						125.3	
Queue Length 50th (ft)			124	~427	367						~380	
Queue Length 95th (ft)			116	m86	m120						m#292	
Internal Link Dist (ft)		433			129			846			1760	
Turn Bay Length (ft)			100									
Base Capacity (vph)			1307	716	834						774	
Starvation Cap Reductn			0	109	137						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.39	1.69	1.18						1.19	

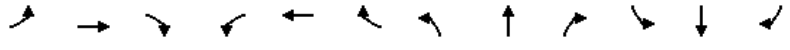
Intersection Summary

Area Type: CBD

~ 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.

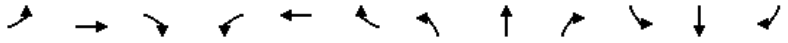
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	475	945	755	0	0	0	0	0	785	60
Future Volume (vph)	0	0	475	945	755	0	0	0	0	0	785	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2378	2987	1574						3207	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2378	2987	1574						3207	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	516	1027	821	0	0	0	0	0	853	65
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	516	1027	821	0	0	0	0	0	913	0
Confl. Peds. (#/hr)			4	17								4
Confl. Bikes (#/hr)			35									2
Heavy Vehicles (%)	0%	0%	4%	2%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type			custom	Prot	NA						NA	
Protected Phases			2 3!	1 4	1 2 4						3!	
Permitted Phases												
Actuated Green, G (s)			59.0	31.0	62.0						24.0	
Effective Green, g (s)			59.0	31.0	57.0						24.0	
Actuated g/C Ratio			0.59	0.31	0.57						0.24	
Clearance Time (s)											5.0	
Vehicle Extension (s)											2.0	
Lane Grp Cap (vph)			1403	925	897						769	
v/s Ratio Prot			0.22	c0.34	c0.52						c0.28	
v/s Ratio Perm												
v/c Ratio			0.37	1.11	0.92						1.19	
Uniform Delay, d1			10.7	34.5	19.3						38.0	
Progression Factor			1.09	0.65	1.08						1.08	
Incremental Delay, d2			0.1	51.3	1.6						88.8	
Delay (s)			11.8	73.8	22.5						129.7	
Level of Service			B	E	C						F	
Approach Delay (s)		11.8			51.0			0.0			129.7	
Approach LOS		B			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	66.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

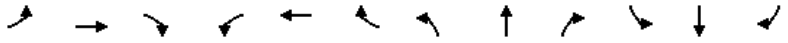
! Phase conflict between lane groups.
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	395	50	105	550	160	50	85	80	0	0	0
Future Volume (vph)	55	395	50	105	550	160	50	85	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	12	12	12	12	12
Storage Length (ft)	80		0	100		0	150		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			513			533			149	
Travel Time (s)		13.4			14.0			14.5			4.1	
Confl. Peds. (#/hr)	19		50	50		19	40					
Confl. Bikes (#/hr)			37			13						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	9%	2%	2%	9%	7%	2%	2%	2%	0%	0%	0%
Parking (#/hr)								0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	483	0	114	772	0	54	179	0	0	0	0
v/c Ratio	0.19	0.45		0.22	0.71		0.20	0.64				
Control Delay	7.1	7.8		5.2	9.0		35.0	37.8				
Queue Delay	0.0	0.0		0.0	1.7		0.0	0.0				
Total Delay	7.1	7.8		5.2	10.6		35.0	37.8				
Queue Length 50th (ft)	11	111		29	199		29	77				
Queue Length 95th (ft)	31	199		m6	m30		m58	m142				
Internal Link Dist (ft)		413			433			453			69	
Turn Bay Length (ft)	80			100			150					
Base Capacity (vph)	324	1072		522	1093		385	383				
Starvation Cap Reductn	0	0		0	169		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.19	0.45		0.22	0.84		0.14	0.47				

Intersection Summary	
Area Type:	CBD

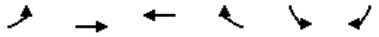
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	395	50	105	550	160	50	85	80	0	0	0
Future Volume (vph)	55	395	50	105	550	160	50	85	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	11	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00				
Flpb, ped/bikes	0.99	1.00		0.94	1.00		1.00	1.00				
Frt	1.00	0.98		1.00	0.97		1.00	0.93				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1439	1474		1500	1496		1540	1399				
Flt Permitted	0.29	1.00		0.45	1.00		0.95	1.00				
Satd. Flow (perm)	443	1474		716	1496		1540	1399				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	429	54	114	598	174	54	92	87	0	0	0
RTOR Reduction (vph)	0	4	0	0	8	0	0	37	0	0	0	0
Lane Group Flow (vph)	60	479	0	114	764	0	54	142	0	0	0	0
Confl. Peds. (#/hr)	19		50	50		19	40					
Confl. Bikes (#/hr)			37			13						
Heavy Vehicles (%)	8%	9%	2%	2%	9%	7%	2%	2%	2%	0%	0%	0%
Parking (#/hr)								0	0			
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	72.5	72.5		72.5	72.5		17.5	17.5				
Effective Green, g (s)	72.5	72.5		72.5	72.5		17.5	17.5				
Actuated g/C Ratio	0.72	0.72		0.72	0.72		0.18	0.18				
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)	321	1068		519	1084		269	244				
v/s Ratio Prot		0.33			c0.51		0.04	c0.10				
v/s Ratio Perm	0.14			0.16								
v/c Ratio	0.19	0.45		0.22	0.70		0.20	0.58				
Uniform Delay, d1	4.4	5.6		4.5	7.7		35.3	37.9				
Progression Factor	1.00	1.00		0.89	0.88		1.00	0.99				
Incremental Delay, d2	1.3	1.4		0.0	0.5		0.4	3.5				
Delay (s)	5.7	7.0		4.0	7.3		35.5	40.9				
Level of Service	A	A		A	A		D	D				
Approach Delay (s)		6.8			6.9			39.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	505	575	100	40	20
Future Volume (vph)	75	505	575	100	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	12	12
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		25	25		25	
Link Distance (ft)		605	253		150	
Travel Time (s)		16.5	6.9		4.1	
Confl. Peds. (#/hr)	17			17	1	3
Confl. Bikes (#/hr)				12		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	9%	7%	11%	9%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	549	734	0	65	0
v/c Ratio	0.24	0.51	0.69		0.50	
Control Delay	6.5	11.4	16.1		39.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	6.5	11.4	16.1		39.9	
Queue Length 50th (ft)	23	199	146		21	
Queue Length 95th (ft)	m11	#398	#649		#67	
Internal Link Dist (ft)		525	173		70	
Turn Bay Length (ft)	110					
Base Capacity (vph)	343	1080	1064		130	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.24	0.51	0.69		0.50	

Intersection Summary

Area Type: CBD

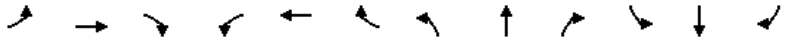
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	505	575	100	40	20
Future Volume (vph)	75	505	575	100	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)	7.0	7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	0.99		0.98	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.98		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1466	1464	1445		1468	
Flt Permitted	0.30	1.00	1.00		0.97	
Satd. Flow (perm)	466	1464	1445		1468	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	549	625	109	43	22
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	82	549	734	0	44	0
Confl. Peds. (#/hr)	17			17	1	3
Confl. Bikes (#/hr)				12		
Heavy Vehicles (%)	3%	9%	7%	11%	9%	0%
Turn Type	Perm	NA	NA		Prot	
Protected Phases		6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	53.0	53.0	53.0		4.8	
Effective Green, g (s)	53.0	53.0	53.0		4.8	
Actuated g/C Ratio	0.66	0.66	0.66		0.06	
Clearance Time (s)	7.0	7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0	1.0		2.0	
Lane Grp Cap (vph)	308	969	957		88	
v/s Ratio Prot		0.37	c0.51		c0.03	
v/s Ratio Perm	0.18					
v/c Ratio	0.27	0.57	0.77		0.50	
Uniform Delay, d1	5.5	7.3	9.3		36.4	
Progression Factor	0.57	1.01	1.00		1.00	
Incremental Delay, d2	1.5	1.7	5.9		1.6	
Delay (s)	4.7	9.1	15.1		38.1	
Level of Service	A	A	B		D	
Approach Delay (s)		8.5	15.1		38.1	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

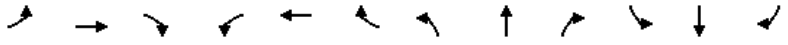
c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Future Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		467			605			282			144	
Travel Time (s)		12.7			16.5			7.7			3.9	
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	664	0	0	647	0	0	82	0	0	3	0
v/c Ratio		0.70			0.68			0.57			0.02	
Control Delay		21.0			25.1			46.7			28.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.0			25.1			46.7			28.7	
Queue Length 50th (ft)		131			220			33			1	
Queue Length 95th (ft)		#623			#578			#108			9	
Internal Link Dist (ft)		387			525			202			64	
Turn Bay Length (ft)												
Base Capacity (vph)		942			949			145			163	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.68			0.57			0.02	

Intersection Summary	
Area Type:	CBD

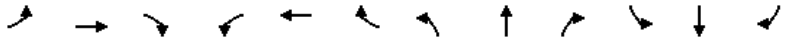
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Future Volume (vph)	1	565	45	15	580	1	60	1	15	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.98			0.96	
Flpb, ped/bikes		1.00			1.00			0.93			0.98	
Frt		0.99			1.00			0.97			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1502			1544			1474			1480	
Flt Permitted		1.00			0.98			0.77			0.92	
Satd. Flow (perm)		1501			1516			1178			1378	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	614	49	16	630	1	65	1	16	1	1	1
RTOR Reduction (vph)	0	3	0	0	0	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	661	0	0	647	0	0	71	0	0	2	0
Confl. Peds. (#/hr)	17		22	22		17	22		22	22		22
Confl. Bikes (#/hr)			33			12						
Heavy Vehicles (%)	2%	9%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		43.9			43.9			9.7			9.7	
Effective Green, g (s)		43.9			43.9			9.7			9.7	
Actuated g/C Ratio		0.55			0.55			0.12			0.12	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		823			831			142			167	
v/s Ratio Prot												
v/s Ratio Perm		c0.44			0.43			c0.06			0.00	
v/c Ratio		0.80			0.78			0.50			0.01	
Uniform Delay, d1		14.6			14.2			32.9			30.9	
Progression Factor		1.00			1.56			1.00			1.00	
Incremental Delay, d2		8.2			5.2			1.0			0.0	
Delay (s)		22.8			27.4			33.9			30.9	
Level of Service		C			C			C			C	
Approach Delay (s)		22.8			27.4			33.9			30.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

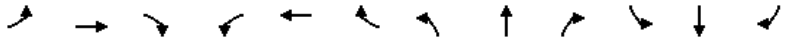


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Future Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		209			762			1156			2190	
Travel Time (s)		5.7			20.8			26.3			49.8	
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1826	0	0	451	0	0	0	0
v/c Ratio					1.77			0.61				
Control Delay					378.6			36.5				
Queue Delay					1.0			0.7				
Total Delay					379.6			37.3				
Queue Length 50th (ft)					~640			133				
Queue Length 95th (ft)					#736			186				
Internal Link Dist (ft)		129			682			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1030			745				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					183			93				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					2.16			0.69				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Future Volume (vph)	0	0	0	0	1435	245	265	150	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.96			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.98			1.00				
Flt Protected					1.00			0.97				
Satd. Flow (prot)					4293			2867				
Flt Permitted					1.00			0.97				
Satd. Flow (perm)					4293			2867				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1560	266	288	163	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1826	0	0	451	0	0	0	0
Confl. Peds. (#/hr)						170	4					
Confl. Bikes (#/hr)						33						
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	9%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					24.0			26.0				
Effective Green, g (s)					24.0			26.0				
Actuated g/C Ratio					0.24			0.26				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1030			745				
v/s Ratio Prot					c0.43							
v/s Ratio Perm								0.16				
v/c Ratio					1.77			0.61				
Uniform Delay, d1					38.0			32.5				
Progression Factor					1.00			1.00				
Incremental Delay, d2					351.7			1.0				
Delay (s)					389.7			33.5				
Level of Service					F			C				
Approach Delay (s)		0.0			389.7			33.5			0.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	319.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	435	110	60	600	75	65
Future Volume (Veh/h)	435	110	60	600	75	65
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	473	120	65	652	82	71
Pedestrians	3			1	50	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			493		
pX, platoon unblocked			0.81		0.87	0.81
vC, conflicting volume			643		1368	584
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			443		861	371
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		67	86
cM capacity (veh/h)			868		251	524

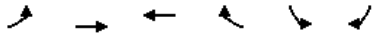
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	593	717	153
Volume Left	0	65	82
Volume Right	120	0	71
cSH	1700	868	331
Volume to Capacity	0.35	0.07	0.46
Queue Length 95th (ft)	0	6	58
Control Delay (s)	0.0	1.9	24.8
Lane LOS		A	C
Approach Delay (s)	0.0	1.9	24.8
Approach LOS			C

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	20	255	195	70	45
Future Volume (Veh/h)	25	20	255	195	70	45
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	22	277	212	76	49
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	684	483			539	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	684	483			539	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	96			92	
cM capacity (veh/h)	350	536			983	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	49	489	125
Volume Left	27	0	76
Volume Right	22	212	0
cSH	414	1700	983
Volume to Capacity	0.12	0.29	0.08
Queue Length 95th (ft)	10	0	6
Control Delay (s)	14.8	0.0	5.7
Lane LOS	B		A
Approach Delay (s)	14.8	0.0	5.7
Approach LOS	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	46	860	1820	215	135	140
Future Volume (vph)	46	860	1820	215	135	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	12	12
Storage Length (ft)	170			250	0	80
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				No		No
Link Speed (mph)		35	35		25	
Link Distance (ft)		949	1060		181	
Travel Time (s)		18.5	20.6		4.9	
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	935	2212	0	147	152
v/c Ratio	0.61	0.41	1.11		1.00	0.54
Control Delay	58.7	8.9	79.4		125.5	47.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	58.7	8.9	79.4		125.5	47.7
Queue Length 50th (ft)	36	73	~875		106	97
Queue Length 95th (ft)	m38	m315	#1357		#237	165
Internal Link Dist (ft)		869	980		101	
Turn Bay Length (ft)	170					80
Base Capacity (vph)	82	2290	1986		147	284
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	0.61	0.41	1.11		1.00	0.54

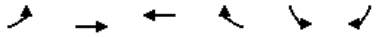
Intersection Summary

Area Type: CBD

~ 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.

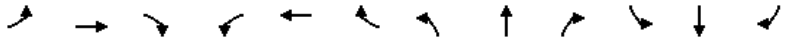
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	46	860	1820	215	135	140
Future Volume (vph)	46	860	1820	215	135	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	11	12	12
Total Lost time (s)	5.5	6.0	6.0		4.5	4.5
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1516	3032	3054		1624	1454
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1516	3032	3054		1624	1454
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	935	1978	234	147	152
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	50	935	2212	0	147	152
Confl. Peds. (#/hr)	7			7		3
Confl. Bikes (#/hr)				4		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	NA	NA		Prot	pt+ov
Protected Phases	6	1 6	1		5	5 6
Permitted Phases						
Actuated Green, G (s)	6.0	77.5	66.0		10.0	20.5
Effective Green, g (s)	6.0	72.0	66.0		10.0	20.5
Actuated g/C Ratio	0.05	0.65	0.60		0.09	0.19
Clearance Time (s)	5.5		6.0		4.5	
Vehicle Extension (s)	2.0		3.0		2.0	
Lane Grp Cap (vph)	82	1984	1832		147	270
v/s Ratio Prot	0.03	0.31	c0.72		c0.09	c0.10
v/s Ratio Perm						
v/c Ratio	0.61	0.47	1.21		1.00	0.56
Uniform Delay, d1	50.9	9.5	22.0		50.0	40.7
Progression Factor	0.86	1.23	1.00		1.00	1.00
Incremental Delay, d2	3.6	0.0	98.7		74.2	1.6
Delay (s)	47.5	11.7	120.7		124.2	42.3
Level of Service	D	B	F		F	D
Approach Delay (s)		13.5	120.7		82.6	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	87.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
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)	0	0	865	1080	665	0	0	0	0	0	685	45
Future Volume (vph)	0	0	865	1080	665	0	0	0	0	0	685	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		1	2		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			No	No		No			No			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		515			260			938			1824	
Travel Time (s)		14.0			7.1			21.3			41.5	
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	940	1174	723	0	0	0	0	0	794	0
v/c Ratio			0.95	1.06	0.74						1.58	
Control Delay			41.3	48.8	7.7						297.4	
Queue Delay			0.0	15.8	2.1						0.0	
Total Delay			41.3	64.6	9.9						297.4	
Queue Length 50th (ft)			264	~359	116						~343	
Queue Length 95th (ft)			#430	m79	m67						#461	
Internal Link Dist (ft)		435			180			858			1744	
Turn Bay Length (ft)			100									
Base Capacity (vph)			989	1105	973						504	
Starvation Cap Reductn			0	161	132						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.95	1.24	0.86						1.58	

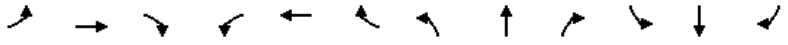
Intersection Summary

Area Type: CBD

~ 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)	0	0	865	1080	665	0	0	0	0	0	685	45
Future Volume (vph)	0	0	865	1080	665	0	0	0	0	0	685	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	12	12	12	12	12	12
Total Lost time (s)			9.0	6.0	6.0						5.0	
Lane Util. Factor			0.88	0.97	1.00						0.95	
Frpb, ped/bikes			1.00	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	1.00	1.00						1.00	
Frt			0.85	1.00	1.00						0.99	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			2473	3016	1653						3212	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			2473	3016	1653						3212	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	940	1174	723	0	0	0	0	0	745	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	940	1174	723	0	0	0	0	0	789	0
Confl. Peds. (#/hr)			21	21								7
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			custom	Prot	NA						NA	
Protected Phases			2 3!	1 4	1 2 4						3!	
Permitted Phases												
Actuated Green, G (s)			40.0	40.0	62.0						14.0	
Effective Green, g (s)			40.0	40.0	57.0						14.0	
Actuated g/C Ratio			0.44	0.44	0.63						0.16	
Clearance Time (s)											5.0	
Vehicle Extension (s)											2.0	
Lane Grp Cap (vph)			1099	1340	1046						499	
v/s Ratio Prot			c0.38	c0.39	0.44						c0.25	
v/s Ratio Perm												
v/c Ratio			0.86	0.88	0.69						1.58	
Uniform Delay, d1			22.4	22.7	10.8						38.0	
Progression Factor			0.93	0.54	0.90						1.00	
Incremental Delay, d2			5.0	0.7	0.1						270.9	
Delay (s)			25.7	12.9	9.9						308.9	
Level of Service			C	B	A						F	
Approach Delay (s)		25.7			11.7			0.0			308.9	
Approach LOS		C			B			A			F	

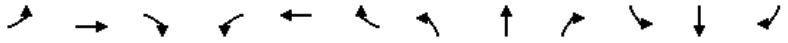
Intersection Summary			
HCM 2000 Control Delay	80.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	650	30	65	560	85	115	30	215	0	0	0
Future Volume (vph)	20	650	30	65	560	85	115	30	215	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	11	12	12	12	12	12
Storage Length (ft)	80		0	100		0	150		0	0		0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		487			515			528			149	
Travel Time (s)		13.3			14.0			14.4			4.1	
Confl. Peds. (#/hr)	19		77	77		19	59					
Confl. Bikes (#/hr)			16			41						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	6%	10%	4%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	740	0	71	701	0	125	267	0	0	0	0
v/c Ratio	0.06	0.66		0.22	0.62		0.44	0.65				
Control Delay	5.5	11.8		7.6	10.9		36.3	16.4				
Queue Delay	0.0	0.0		0.0	1.1		0.0	0.0				
Total Delay	5.5	11.8		7.6	12.0		36.3	16.4				
Queue Length 50th (ft)	4	219		11	283		61	27				
Queue Length 95th (ft)	12	354		m18	m158		m113	106				
Internal Link Dist (ft)		407			435			448			69	
Turn Bay Length (ft)	80			100			150					
Base Capacity (vph)	359	1121		317	1123		327	441				
Starvation Cap Reductn	0	0		0	204		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.06	0.66		0.22	0.76		0.38	0.61				

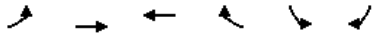
Intersection Summary	
Area Type:	CBD

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)	20	650	30	65	560	85	115	30	215	0	0	0
Future Volume (vph)	20	650	30	65	560	85	115	30	215	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	11	12	12	12	12	12
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00				
Flpb, ped/bikes	0.99	1.00		0.96	1.00		1.00	1.00				
Frt	1.00	0.99		1.00	0.98		1.00	0.87				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1507	1592		1415	1590		1540	1310				
Flt Permitted	0.32	1.00		0.30	1.00		0.95	1.00				
Satd. Flow (perm)	511	1592		448	1590		1540	1310				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	707	33	71	609	92	125	33	234	0	0	0
RTOR Reduction (vph)	0	2	0	0	6	0	0	168	0	0	0	0
Lane Group Flow (vph)	22	738	0	71	695	0	125	99	0	0	0	0
Confl. Peds. (#/hr)	19		77	77		19	59					
Confl. Bikes (#/hr)			16			41						
Heavy Vehicles (%)	3%	2%	6%	10%	4%	6%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0	0			
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	63.2	63.2		63.2	63.2		16.8	16.8				
Effective Green, g (s)	63.2	63.2		63.2	63.2		16.8	16.8				
Actuated g/C Ratio	0.70	0.70		0.70	0.70		0.19	0.19				
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)	358	1117		314	1116		287	244				
v/s Ratio Prot		c0.46			0.44		c0.08	0.08				
v/s Ratio Perm	0.04			0.16								
v/c Ratio	0.06	0.66		0.23	0.62		0.44	0.40				
Uniform Delay, d1	4.2	7.4		4.7	7.1		32.4	32.2				
Progression Factor	1.00	1.00		1.09	1.16		1.00	0.98				
Incremental Delay, d2	0.3	3.1		0.2	0.6		1.1	1.1				
Delay (s)	4.5	10.5		5.4	8.8		33.4	32.8				
Level of Service	A	B		A	A		C	C				
Approach Delay (s)		10.4			8.5			33.0			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



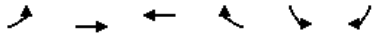
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	580	670	25	110	65
Future Volume (vph)	25	580	670	25	110	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	12	12
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				No		Yes
Link Speed (mph)		25	25		25	
Link Distance (ft)		606	253		150	
Travel Time (s)		16.5	6.9		4.1	
Confl. Peds. (#/hr)	21			21		4
Confl. Bikes (#/hr)				46		2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	3%	12%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	630	755	0	191	0
v/c Ratio	0.11	0.65	0.78		0.90	
Control Delay	22.9	22.8	24.8		78.6	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	22.9	22.9	24.8		78.6	
Queue Length 50th (ft)	1	32	218		106	
Queue Length 95th (ft)	m17	#534	#741		#232	
Internal Link Dist (ft)		526	173		70	
Turn Bay Length (ft)	110					
Base Capacity (vph)	250	974	973		221	
Starvation Cap Reductn	0	12	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.11	0.65	0.78		0.86	

Intersection Summary

Area Type: CBD

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	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	580	670	25	110	65
Future Volume (vph)	25	580	670	25	110	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	12	12
Total Lost time (s)	7.0	7.0	7.0		7.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00	1.00		0.98	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.95	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1509	1535	1534		1539	
Flt Permitted	0.25	1.00	1.00		0.97	
Satd. Flow (perm)	394	1535	1534		1539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	630	728	27	120	71
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	27	630	755	0	170	0
Confl. Peds. (#/hr)	21			21		4
Confl. Bikes (#/hr)				46		2
Heavy Vehicles (%)	0%	4%	3%	12%	0%	2%
Turn Type	Perm	NA	NA		Prot	
Protected Phases		6	2		4	
Permitted Phases	6					
Actuated Green, G (s)	61.1	61.1	61.1		12.5	
Effective Green, g (s)	61.1	61.1	61.1		12.5	
Actuated g/C Ratio	0.61	0.61	0.61		0.12	
Clearance Time (s)	7.0	7.0	7.0		7.0	
Vehicle Extension (s)	1.0	1.0	1.0		2.0	
Lane Grp Cap (vph)	240	937	937		192	
v/s Ratio Prot		0.41	c0.49		c0.11	
v/s Ratio Perm	0.07					
v/c Ratio	0.11	0.67	0.81		0.89	
Uniform Delay, d1	8.1	12.8	14.9		43.0	
Progression Factor	1.75	1.30	1.00		1.00	
Incremental Delay, d2	0.6	2.6	7.4		34.2	
Delay (s)	14.9	19.3	22.3		77.2	
Level of Service	B	B	C		E	
Approach Delay (s)		19.1	22.3		77.2	
Approach LOS		B	C		E	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

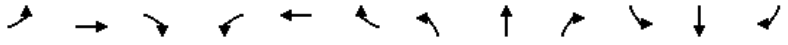
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Future Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	13	13	13	12	12	12
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		464			606			294			154	
Travel Time (s)		12.7			16.5			8.0			4.2	
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	800	0	0	186	0	0	3	0
v/c Ratio		0.73			0.90			0.78			0.01	
Control Delay		27.4			26.4			60.2			31.0	
Queue Delay		0.3			0.0			0.0			0.0	
Total Delay		27.7			26.4			60.2			31.0	
Queue Length 50th (ft)		215			187			103			1	
Queue Length 95th (ft)		#667			m#857			#250			9	
Internal Link Dist (ft)		384			526			214			74	
Turn Bay Length (ft)												
Base Capacity (vph)		884			890			240			285	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		28			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.76			0.90			0.78			0.01	

Intersection Summary

Area Type: CBD

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

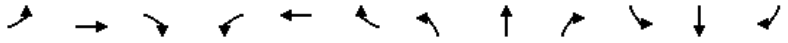
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Future Volume (vph)	1	575	20	10	725	1	140	1	30	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	13	13	13	12	12	12
Total Lost time (s)		5.5			5.5			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.98			0.97	
Flpb, ped/bikes		1.00			1.00			0.94			0.99	
Frt		1.00			1.00			0.98			0.95	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		1580			1603			1505			1505	
Flt Permitted		1.00			0.99			0.76			0.94	
Satd. Flow (perm)		1579			1589			1195			1436	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	625	22	11	788	1	152	1	33	1	1	1
RTOR Reduction (vph)	0	1	0	0	0	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	647	0	0	800	0	0	179	0	0	2	0
Confl. Peds. (#/hr)	21		29	29		21	29		29	29		29
Confl. Bikes (#/hr)			16			46						
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			5			5	
Permitted Phases	1			1			5			5		
Actuated Green, G (s)		50.3			50.3			20.1			20.1	
Effective Green, g (s)		50.3			50.3			20.1			20.1	
Actuated g/C Ratio		0.50			0.50			0.20			0.20	
Clearance Time (s)		5.5			5.5			5.0			5.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		794			799			240			288	
v/s Ratio Prot												
v/s Ratio Perm		0.41			c0.50			c0.15			0.00	
v/c Ratio		0.81			1.00			0.75			0.01	
Uniform Delay, d1		20.9			24.9			37.5			32.0	
Progression Factor		1.00			0.51			1.00			1.00	
Incremental Delay, d2		9.0			24.9			10.4			0.0	
Delay (s)		29.9			37.7			48.0			32.0	
Level of Service		C			D			D			C	
Approach Delay (s)		29.9			37.7			48.0			32.0	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

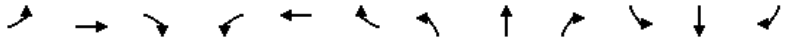


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	11	12	12	12
Right Turn on Red			No			No	No		Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		260			984			1156			2190	
Travel Time (s)		7.1			26.8			26.3			49.8	
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2229	0	0	522	0	0	0	0
v/c Ratio					1.40			0.89				
Control Delay					211.5			55.4				
Queue Delay					0.3			4.3				
Total Delay					211.7			59.8				
Queue Length 50th (ft)					~627			153				
Queue Length 95th (ft)					#723			#246				
Internal Link Dist (ft)		180			904			1076			2110	
Turn Bay Length (ft)												
Base Capacity (vph)					1590			584				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					118			30				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					1.51			0.94				

Intersection Summary	
Area Type:	CBD

~ 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	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Future Volume (vph)	0	0	0	0	1595	455	150	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)					6.0			9.0				
Lane Util. Factor					0.91			0.95				
Frpb, ped/bikes					0.97			1.00				
Flpb, ped/bikes					1.00			1.00				
Frt					0.97			1.00				
Flt Protected					1.00			0.98				
Satd. Flow (prot)					4337			3092				
Flt Permitted					1.00			0.98				
Satd. Flow (perm)					4337			3092				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1734	495	163	359	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	2229	0	0	522	0	0	0	0
Confl. Peds. (#/hr)						83						
Confl. Bikes (#/hr)						30						
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type					NA		Perm	NA				
Protected Phases					1			2				
Permitted Phases							2					
Actuated Green, G (s)					33.0			17.0				
Effective Green, g (s)					33.0			17.0				
Actuated g/C Ratio					0.37			0.19				
Clearance Time (s)					6.0			9.0				
Vehicle Extension (s)					2.0			2.0				
Lane Grp Cap (vph)					1590			584				
v/s Ratio Prot					c0.51							
v/s Ratio Perm								0.17				
v/c Ratio					1.40			0.89				
Uniform Delay, d1					28.5			35.6				
Progression Factor					1.00			1.00				
Incremental Delay, d2					184.7			15.7				
Delay (s)					213.2			51.3				
Level of Service					F			D				
Approach Delay (s)		0.0			213.2			51.3			0.0	
Approach LOS		A			F			D			A	

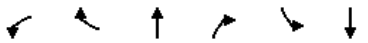
Intersection Summary			
HCM 2000 Control Delay	182.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	610	80	45	635	60	80
Future Volume (Veh/h)	610	80	45	635	60	80
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	87	49	690	65	87
Pedestrians	2			2	71	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	253			487		
pX, platoon unblocked			0.71		0.81	0.71
vC, conflicting volume			821		1568	780
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			546		1015	488
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		65	78
cM capacity (veh/h)			685		187	388

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	750	739	152
Volume Left	0	49	65
Volume Right	87	0	87
cSH	1700	685	266
Volume to Capacity	0.44	0.07	0.57
Queue Length 95th (ft)	0	6	81
Control Delay (s)	0.0	1.9	35.1
Lane LOS		A	E
Approach Delay (s)	0.0	1.9	35.1
Approach LOS			E

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	60	130	85	35	120
Future Volume (Veh/h)	70	60	130	85	35	120
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	65	141	92	38	130
Pedestrians	50		50			50
Lane Width (ft)	13.0		12.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		4			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	493	287			283	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	287			283	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	91			97	
cM capacity (veh/h)	475	691			1222	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	141	233	168
Volume Left	76	0	38
Volume Right	65	92	0
cSH	555	1700	1222
Volume to Capacity	0.25	0.14	0.03
Queue Length 95th (ft)	25	0	2
Control Delay (s)	13.7	0.0	2.0
Lane LOS	B		A
Approach Delay (s)	13.7	0.0	2.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2021 Existing Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	650
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	610	1285
Peak Hour Factor (PHF)	0.96	0.96
Total Trucks, %	3.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.971
Flow Rate (vi),pc/h	654	1379
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.15	0.71

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.500
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	654	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	7.6
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	4.0

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2021 Existing Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	650
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	700	735
Peak Hour Factor (PHF)	0.89	0.89
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	794	834
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.18	0.43

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.451
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	794	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	9.2
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	5.2

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2025 No Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	675	1395
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.971
Flow Rate (vi),pc/h	756	1562
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.17	0.81

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.517
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	42.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	756	Ramp Junction Speed (S), mi/h	42.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	8.8
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	9.9

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2025 No Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	840	990
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	922	1087
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.21	0.56

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.474
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	922	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	10.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.3

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2025 Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	715	1395
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.971
Flow Rate (vi),pc/h	800	1562
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.18	0.81

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.517
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	42.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	800	Ramp Junction Speed (S), mi/h	42.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	9.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	10.2

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2025 Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	860	990
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	944	1087
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.22	0.56

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.474
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	944	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	11.0
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.5

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2030 No Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	705	1440
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.971
Flow Rate (vi),pc/h	789	1612
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.18	0.83

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.521
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	42.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	789	Ramp Junction Speed (S), mi/h	42.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	9.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	10.1

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2030 No Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	875	1055
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	961	1158
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.22	0.60

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.480
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	961	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	11.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.6

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2030 Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	765	1440
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.971
Flow Rate (vi),pc/h	856	1612
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.20	0.83

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.521
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	42.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	856	Ramp Junction Speed (S), mi/h	42.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	10.0
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	10.7

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Diverge Report

Project Information			
Analyst	MD	Date	4/16/2021
Agency	VHB	Analysis Year	2030 Build Conditions
Jurisdiction	MassDOT	Time Period Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street EB at I-90 On-Ramp	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	650	100
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	905	1055
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	994	1158
Capacity (c), pc/h	4356	1936
Volume-to-Capacity Ratio (v/c)	0.23	0.60

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.480
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	43.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	1.000	Outer Lanes Freeway Speed (SO), mi/h	48.2
Flow in Lanes 1 and 2 (v12), pc/h	994	Ramp Junction Speed (S), mi/h	43.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	11.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.9

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information

Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2021 Existing Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	175	1755
Peak Hour Factor (PHF)	0.78	0.96
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	227	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.47	1.00

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.308
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	227	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2066	Average Density (D), pc/mi/ln	23.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.2

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information

Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2021 Existing Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	240	1595
Peak Hour Factor (PHF)	0.97	0.91
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	250	1770
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.46	0.96

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.306
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	250	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2020	Average Density (D), pc/mi/ln	23.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	14.8

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2025 No Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	280	1720
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	307	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.49	1.00

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	307	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2146	Average Density (D), pc/mi/ln	24.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.8

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2025 No Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	300	1560
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	329	1713
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.47	0.93

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.307
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	329	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2042	Average Density (D), pc/mi/ln	23.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.0

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2025 Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	310	1890
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	340	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.50	1.00

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.312
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	340	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2179	Average Density (D), pc/mi/ln	25.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	16.1

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2025 Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	310	1625
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	340	1784
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.49	0.97

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	340	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2124	Average Density (D), pc/mi/ln	24.5
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.7

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2030 No Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	300	1800
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	329	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.50	1.00

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.311
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	329	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2168	Average Density (D), pc/mi/ln	25.0
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	16.0

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information

Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2030 No Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	320	1610
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	351	1768
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.49	0.96

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	351	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2119	Average Density (D), pc/mi/ln	24.5
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.6

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information			
Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2030 Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Morning Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	340	2040
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	373	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.51	1.00

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.313
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	373	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2212	Average Density (D), pc/mi/ln	25.5
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	16.3

Copyright © 2021 University of Florida. All Rights Reserved.

HCS7 Freeway Merge Report

Project Information

Analyst	MD	Date	4/19/2021
Agency	VHB	Analysis Year	2030 Build Conditions
Jurisdiction	MassDOT	Time Analyzed	Weekday Evening Peak Hour
Project Description	Cambridge Street Westbound Merge with I-90 Off-Ramp	Units	U.S. Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	900	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	Mostly Familiar	Mostly Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.975	0.975
Final Capacity Adjustment Factor (CAF)	0.968	0.968
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	335	1700
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.990
Flow Rate (vi),pc/h	368	1839
Capacity (c), pc/h	4356	1839
Volume-to-Capacity Ratio (v/c)	0.51	1.00

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.313
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	43.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	43.9
Flow in Lanes 1 and 2 (v12), pc/h	368	Ramp Junction Speed (S), mi/h	43.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2207	Average Density (D), pc/mi/ln	25.5
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	16.3

Copyright © 2021 University of Florida. All Rights Reserved.

Signal Warrant Analysis Worksheets

Build without Mitigation Condition

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: N Harvard St at Academic Way

Major Street Direction: Northbound-Southbound

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Northbound	Southbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	52	199	357	555	No	No	No	No	No
7:00 - 8:00 AM	85	326	411	737	No	No	No	No	No
8:00 - 9:00 AM	121	450	430	880	No	Yes	Yes	Verify	No
9:00 - 10:00 AM	94	357	461	818	No	Yes	No	No	No
10:00 - 11:00 AM	74	281	391	672	No	No	No	No	No
11:00 - 12:00 AM	62	236	366	602	No	No	No	No	No
12:00 - 1:00 PM	65	248	378	627	No	No	No	No	No
1:00 - 2:00 PM	69	263	373	636	No	No	No	No	No
2:00 - 3:00 PM	70	266	397	663	No	No	No	No	No
3:00 - 4:00 PM	79	300	379	679	No	No	No	No	No
4:00 - 5:00 PM	100	381	392	774	No	Yes	No	No	No
5:00 - 6:00 PM	104	410	610	1020	No	Yes	No	Verify	No
6:00 - 7:00 PM	104	398	531	929	No	Yes	No	Verify	No
					No	**No**	**No**	**No**	**No**
				Warrants Met?	**1**			**2**	**3**
					NO			**No**	**No**

Note: 25% of right-turning traffic from minor street approach not included in analysis (75% included to be conservative due to heavy right-turning volumes)

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: No

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Academic Way

Major Street Direction: Eastbound-Westbound

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	62	230	552	783	No	No	No	No	No
7:00 - 8:00 AM	56	417	502	919	No	No	No	No	No
8:00 - 9:00 AM	70	485	560	1045	No	No	No	No	No
9:00 - 10:00 AM	61	432	543	975	No	No	No	No	No
10:00 - 11:00 AM	53	291	474	766	No	No	No	No	No
11:00 - 12:00 AM	61	272	540	812	No	No	No	No	No
12:00 - 1:00 PM	57	255	505	761	No	No	No	No	No
1:00 - 2:00 PM	61	285	548	832	No	No	No	No	No
2:00 - 3:00 PM	62	454	555	1010	No	No	No	No	No
3:00 - 4:00 PM	64	350	573	923	No	No	No	No	No
4:00 - 5:00 PM	84	370	745	1115	No	Yes	No	Verify	No
5:00 - 6:00 PM	75	431	740	1171	No	No	No	No	No
6:00 - 7:00 PM	87	272	773	1045	No	Yes	No	Verify	No
					No	**No**	**No**	**No**	**No**
				Warrants Met?	**1**			**2**	**3**
					NO			**No**	**No**

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: No

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Cattle Drive

Major Street Direction: Eastbound-Westbound

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 3

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Required approach volumes Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road Eastbound	Entering Vol. on Major Road Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	162	313	540	854	Yes	Yes	Yes	Yes	No
7:00 - 8:00 AM	147	567	491	1058	No	Yes	Yes	Yes	No
8:00 - 9:00 AM	215	510	640	1150	Yes	Yes	Yes	Yes	Yes
9:00 - 10:00 AM	159	588	531	1119	Yes	Yes	Yes	Yes	**No**
10:00 - 11:00 AM	139	396	464	860	No	Yes	Yes	**Yes**	No
11:00 - 12:00 AM	158	370	528	898	Yes	Yes	Yes	Yes	No
12:00 - 1:00 PM	148	347	494	841	No	Yes	Yes	**Yes**	No
1:00 - 2:00 PM	161	387	535	923	Yes	Yes	Yes	Yes	No
2:00 - 3:00 PM	163	618	543	1161	Yes	Yes	Yes	Yes	**No**
3:00 - 4:00 PM	168	477	560	1037	Yes	Yes	Yes	Yes	No
4:00 - 5:00 PM	218	504	728	1232	Yes	Yes	Yes	Yes	Yes
5:00 - 6:00 PM	160	700	620	1320	Yes	Yes	Yes	Yes	Yes
6:00 - 7:00 PM	227	370	756	1126	Yes	Yes	Yes	Yes	Yes
					Yes	**Yes**	**Yes**	**Yes**	**Yes**
				Warrants Met?	**1**			**2**	**3**
					Yes			**Yes**	**Yes**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: **No**

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: **n/a**

See MUTCD for details.

Warrant 6, Coordinated Signal System: **n/a**

See MUTCD for details.

Warrant 7, Crash Experience: **No**

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: **n/a**

See MUTCD for details.

Warrant 9, Grade Crossing: **n/a**

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at East Drive

Major Street Direction: Eastbound-Westbound

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

		Required approach volumes	
			Adjusted
Warrant 1	**EIGHT-HOUR VEHICULAR VOLUME**	Minimum*	Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Note: Minor Street analyzed as 1 lane as 100% of right-turning traffic is not included in analysis.

Warrant 2 FOUR HOUR VEHICULAR VOLUME

Major Street : 1 Lane(s) on each approach — If "verify" indicated, see Figure 4C-1 or 4C-2.

Minor Street : 1 Lane(s) on each approach — 25 = accuracy of regression equations

Warrant 3 PEAK HOUR VOLUME

Major Street : 1 Lane(s) on each approach — If "verify" indicated, see Figure 4C-3 or 4C-4.

Minor Street : 1 Lane(s) on each approach — 25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road Eastbound	Entering Vol. on Major Road Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	32	296	619	915	No	No	No	No	No
7:00 - 8:00 AM	29	537	563	1099	No	No	No	No	No
8:00 - 9:00 AM	35	485	765	1250	No	No	No	No	No
9:00 - 10:00 AM	31	556	608	1164	No	No	No	No	No
10:00 - 11:00 AM	27	375	531	906	No	No	No	No	No
11:00 - 12:00 AM	31	350	605	955	No	No	No	No	No
12:00 - 1:00 PM	29	328	566	895	No	No	No	No	No
1:00 - 2:00 PM	32	366	614	980	No	No	No	No	No
2:00 - 3:00 PM	32	584	622	1207	No	No	No	No	No
3:00 - 4:00 PM	33	451	642	1092	No	No	No	No	No
4:00 - 5:00 PM	43	477	834	1311	No	No	No	No	No
5:00 - 6:00 PM	40	660	675	1335	No	No	No	No	No
6:00 - 7:00 PM	45	350	866	1216	No	No	No	No	No
					No	**No**	**No**	**No**	**No**
			Warrants Met?		**1**			**2**	**3**
					NO			**No**	**No**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: Yes

Peak Four Hour Pedestrian Volumes: 113

(non-concurrent) 130

139

116

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (WARRANT 4 - PEDESTRIAN VOLUMES)

Intersection: Western Ave at East Drive
Year: 2025
Condition: Build

Four Hour Pedestrian Volume Warrant

	Total Major	Needed Ped Vols	Estimated Ped Vols: HBS Connection	Estimated Ped Vols: # 70 Bus	Existing Peds	Total Ped Volumes	Warrant Met?
3:00 - 4:00	1079	111	20	41	52	113	YES
4:00 - 5:00	1297	107	20	47	63	130	YES
5:00 - 6:00	1320	107	20	60	59	139	YES
6:00 - 7:00	1206	107	20	42	54	116	YES
							Yes

From MUTCD:

2009 Edition Part 4 Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

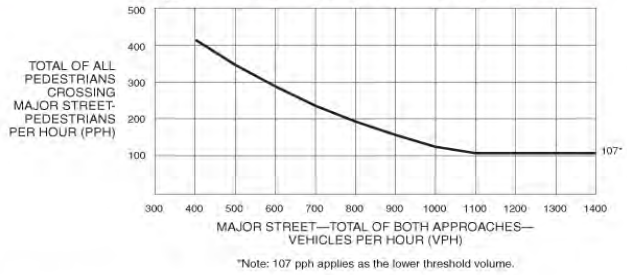


Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

This figure shows a graph depicting numerical values for Warrant 4, Pedestrian Four-Hour Volume. The figure displays one curve.

The table below shows the approximate vehicles per hour (VPH) on the major street and corresponding pedestrians per hour (PPH) for the total of all pedestrians crossing the major street.

Table for Figure 4C-5

Pedestrian Four-Hour Volume	
VPH on the major street (Total of both approaches)	**PPH for the total of all pedestrians crossing the major street**
1400	107*
1300	107*
1200	107*
1100	107*
1000	125
900	150
800	200
700	225
600	300
500	350
400	400

* Note: 107 pph applies as the lower threshold volume.

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: N Harvard St at Academic Way

Major Street Direction: Northbound-Southbound

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Northbound	Southbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	58	208	382	590	No	No	No	No	No
7:00 - 8:00 AM	95	341	441	782	No	Yes	No	No	No
8:00 - 9:00 AM	129	460	470	930	No	Yes	Yes	Verify	No
9:00 - 10:00 AM	104	374	494	868	No	Yes	No	No	No
10:00 - 11:00 AM	82	294	419	713	No	No	No	No	No
11:00 - 12:00 AM	69	247	393	639	No	No	No	No	No
12:00 - 1:00 PM	73	260	406	666	No	No	No	No	No
1:00 - 2:00 PM	77	275	401	676	No	No	No	No	No
2:00 - 3:00 PM	78	278	426	704	No	No	No	No	No
3:00 - 4:00 PM	88	314	407	721	No	No	No	No	No
4:00 - 5:00 PM	111	399	421	820	No	Yes	No	No	No
5:00 - 6:00 PM	123	440	645	1085	No	Yes	Yes	Yes	No
6:00 - 7:00 PM	116	416	570	986	No	Yes	No	Verify	No
					No	**No**	**No**	**No**	**No**
				Warrants Met?	**1**			**2**	**3**
					NO			**No**	**No**

Note: 25% of right-turning traffic from minor street approach not included in analysis (75% included to be conservative due to heavy right-turning volumes)

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: No

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Academic Way

Major Street Direction: Eastbound-Westbound

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME	Required approach volumes Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME	
	Major Street : 1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street : 1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road Eastbound	Entering Vol. on Major Road Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	71	261	619	881	No	No	No	No	No
7:00 - 8:00 AM	64	473	563	1036	No	No	No	No	No
8:00 - 9:00 AM	80	560	610	1170	No	Yes	No	No	No
9:00 - 10:00 AM	69	490	609	1099	No	No	No	No	No
10:00 - 11:00 AM	61	330	532	862	No	No	No	No	No
11:00 - 12:00 AM	69	309	605	914	No	No	No	No	No
12:00 - 1:00 PM	65	289	567	856	No	No	No	No	No
1:00 - 2:00 PM	70	323	614	937	No	No	No	No	No
2:00 - 3:00 PM	71	515	623	1138	No	No	No	No	No
3:00 - 4:00 PM	73	397	642	1040	No	No	No	No	No
4:00 - 5:00 PM	95	420	835	1255	No	Yes	No	Yes	No
5:00 - 6:00 PM	85	481	850	1331	No	Yes	No	Verify	No
6:00 - 7:00 PM	99	309	867	1176	No	Yes	No	Verify	No
					No	**No**	**No**	**No**	**No**
				Warrants Met?	**1**			**2**	**3**
					NO			**No**	**No**

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: No

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Cattle Drive

Major Street Direction: Eastbound-Westbound

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 3

Warrant 1 EIGHT-HOUR VEHICULAR VOLUME		Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A MINIMUM VEHICULAR VOLUME (8 hours of day)			
Major Street :	1 Lane(s) on each approach	500	500
Minor Street :	1 Lane(s) on each approach	150	150
Warrant 1B INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)			
Major Street :	1 Lane(s) on each approach	750	750
Minor Street :	1 Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B		Warrant 1A	Warrant 1B
Major Street :	1 Lane(s) on each approach	400	600
Minor Street :	1 Lane(s) on each approach	120	60

Warrant 2 FOUR HOUR VEHICULAR VOLUME		
Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3 PEAK HOUR VOLUME		
Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	123	318	572	890	No	Yes	Yes	Verify	No
7:00 - 8:00 AM	112	576	520	1096	No	Yes	No	Yes	No
8:00 - 9:00 AM	155	545	675	1220	Yes	Yes	Yes	Yes	Verify
9:00 - 10:00 AM	121	597	562	1159	No	Yes	Yes	Yes	No
10:00 - 11:00 AM	105	402	491	893	No	Yes	No	Verify	No
11:00 - 12:00 AM	120	376	559	935	No	Yes	No	Verify	No
12:00 - 1:00 PM	112	352	523	876	No	Yes	No	Verify	No
1:00 - 2:00 PM	122	393	567	960	No	Yes	Yes	Verify	No
2:00 - 3:00 PM	123	627	575	1203	No	Yes	Yes	Yes	No
3:00 - 4:00 PM	127	484	593	1077	No	Yes	Yes	Yes	No
4:00 - 5:00 PM	165	512	771	1283	Yes	Yes	Yes	Yes	Yes
5:00 - 6:00 PM	130	690	660	1350	No	Yes	Yes	Yes	Verify
6:00 - 7:00 PM	172	376	801	1177	Yes	Yes	Yes	Yes	Verify
					No	**Yes**	**Yes**	**Yes**	**Yes**
			Warrants Met?			**1**		**2**	**3**
						Yes		**Yes**	**Yes**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: **No**

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: **n/a**

See MUTCD for details.

Warrant 6, Coordinated Signal System: **n/a**

See MUTCD for details.

Warrant 7, Crash Experience: **No**

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: **n/a**

See MUTCD for details.

Warrant 9, Grade Crossing: **n/a**

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at East Drive

Major Street Direction: Eastbound-Westbound

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

		Required approach volumes	
Warrant 1	**EIGHT-HOUR VEHICULAR VOLUME**	Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B	Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Note: Minor Street analyzed as 1 lane as 100% of right-turning traffic is not included in analysis.

Warrant 2 FOUR HOUR VEHICULAR VOLUME

Major Street : 1 Lane(s) on each approach — If "verify" indicated, see Figure 4C-1 or 4C-2.

Minor Street : 1 Lane(s) on each approach — 25 = accuracy of regression equations

Warrant 3 PEAK HOUR VOLUME

Major Street : 1 Lane(s) on each approach — If "verify" indicated, see Figure 4C-3 or 4C-4.

Minor Street : 1 Lane(s) on each approach — 25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road Eastbound	Entering Vol. on Major Road Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	44	323	656	978	No	No	No	No	No
7:00 - 8:00 AM	40	584	596	1181	No	No	No	No	No
8:00 - 9:00 AM	40	520	815	1335	No	No	No	No	No
9:00 - 10:00 AM	44	606	644	1250	No	No	No	No	No
10:00 - 11:00 AM	38	408	563	971	No	No	No	No	No
11:00 - 12:00 AM	43	382	641	1022	No	No	No	No	No
12:00 - 1:00 PM	41	358	600	957	No	No	No	No	No
1:00 - 2:00 PM	44	399	650	1049	No	No	No	No	No
2:00 - 3:00 PM	45	636	659	1296	No	No	No	No	No
3:00 - 4:00 PM	46	491	680	1171	No	No	No	No	No
4:00 - 5:00 PM	60	519	884	1403	No	No	No	No	No
5:00 - 6:00 PM	65	725	710	1435	No	No	No	No	No
6:00 - 7:00 PM	62	382	917	1299	No	No	No	No	No
					No	**No**	**No**	**No**	**No**
			Warrants Met?		**1**			**2**	**3**
					NO			**No**	**No**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: Yes

Peak Four Hour Pedestrian Volumes: 170

(non-concurrent) 197

224

176

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (WARRANT 4 - PEDESTRIAN VOLUMES)

Intersection: Western Ave at East Drive
Year: 2030
Condition: Build

Four Hour Pedestrian Volume Warrant

	Total Major	Needed Ped Vols	HBS Connection	Estimated Ped Vols # 70 Bus	Estimated Ped Vols Existing Peds	Total Ped Volumes	Warrant Met?
3:00 - 4:00	1153	107	20	98	52	170	YES
4:00 - 5:00	1384	107	20	114	63	197	YES
5:00 - 6:00	1410	107	20	145	59	224	YES
6:00 - 7:00	1285	107	20	102	54	176	YES
							Yes

From MUTCD:

2009 Edition Part 4 Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

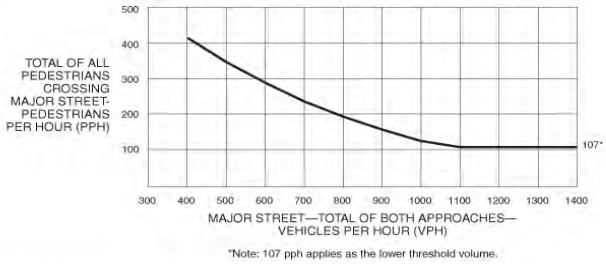


Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

This figure shows a graph depicting numerical values for Warrant 4, Pedestrian Four-Hour Volume. The figure displays one curve.

The table below shows the approximate vehicles per hour (VPH) on the major street and corresponding pedestrians per hour (PPH) for the total of all pedestrians crossing the major street.

Table for Figure 4C-5

Pedestrian Four-Hour Volume	
VPH on the major street (Total of both approaches)	**PPH for the total of all pedestrians crossing the major street**
1400	107*
1300	107*
1200	107*
1100	107*
1000	125
900	150
800	200
700	225
600	300
500	350
400	400

* Note: 107 pph applies as the lower threshold volume.

Signal Warrant Analysis Worksheets

Build with Mitigation Condition

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Cattle Drive

Major Street Direction: Eastbound-Westbound

Build with Mitigation

Revised ERC Site Distribution & Revised HBS Access

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 3

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME		Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	500	500
	Minor Street :	1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	750	750
	Minor Street :	1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B		Warrant 1A	Warrant 1B
	Major Street :	1 Lane(s) on each approach	400	600
	Minor Street :	1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	85	313	527	840	No	Yes	No	No	No
7:00 - 8:00 AM	77	567	479	1046	No	Yes	No	No	No
8:00 - 9:00 AM	125	510	615	1125	No	Yes	Yes	Yes	No
9:00 - 10:00 AM	83	588	518	1106	No	Yes	No	**Yes**	No
10:00 - 11:00 AM	73	396	452	848	No	No	No	No	No
11:00 - 12:00 AM	83	370	515	885	No	Yes	No	No	No
12:00 - 1:00 PM	78	347	482	829	No	Yes	No	No	No
1:00 - 2:00 PM	84	387	522	910	No	Yes	No	No	No
2:00 - 3:00 PM	85	618	530	1148	No	Yes	No	**Yes**	No
3:00 - 4:00 PM	88	477	546	1023	No	Yes	No	**No**	No
4:00 - 5:00 PM	114	504	710	1214	No	Yes	No	Yes	No
5:00 - 6:00 PM	70	700	615	1315	No	No	No	No	No
6:00 - 7:00 PM	119	370	737	1108	No	Yes	No	Yes	No
					No	**Yes**	**No**	**Yes**	**No**
			Warrants Met?		**1**			**2**	**3**
					Yes			**Yes**	**No**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: No

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at East Drive

Major Street Direction: Eastbound-Westbound

Build with Mitigation

Revised ERC Site Distribution & Revised HBS Access

Year: 2025 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1 EIGHT-HOUR VEHICULAR VOLUME		Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	500	500
	Minor Street : 1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)		
	Major Street : 1 Lane(s) on each approach	750	750
	Minor Street : 1 Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B		Warrant 1A	Warrant 1B
	Major Street : 1 Lane(s) on each approach	400	600
	Minor Street : 1 Lane(s) on each approach	120	60

Note: Minor Street analyzed as 1 lane as 100% of right-turning traffic is not included in analysis.

Warrant 2 FOUR HOUR VEHICULAR VOLUME

Major Street : 1 Lane(s) on each approach

Minor Street : 1 Lane(s) on each approach

If "verify" indicated, see Figure 4C-1 or 4C-2.

25 = accuracy of regression equations

Warrant 3 PEAK HOUR VOLUME

Major Street : 1 Lane(s) on each approach

Minor Street : 1 Lane(s) on each approach

If "verify" indicated, see Figure 4C-3 or 4C-4.

25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	88	288	619	907	No	Yes	No	No	No
7:00 - 8:00 AM	80	521	563	1084	No	Yes	No	Verify	No
8:00 - 9:00 AM	115	465	765	1230	No	Yes	No	Yes	No
9:00 - 10:00 AM	87	540	608	1148	No	Yes	No	Verify	No
10:00 - 11:00 AM	76	364	531	895	No	Yes	No	No	No
11:00 - 12:00 AM	86	340	605	945	No	Yes	No	No	No
12:00 - 1:00 PM	81	319	566	885	No	Yes	No	No	No
1:00 - 2:00 PM	88	356	614	969	No	Yes	No	Verify	No
2:00 - 3:00 PM	89	567	622	1190	No	Yes	No	Verify	No
3:00 - 4:00 PM	92	438	642	1079	No	Yes	No	Verify	No
4:00 - 5:00 PM	119	463	834	1297	No	Yes	No	Yes	No
5:00 - 6:00 PM	90	645	675	1320	No	Yes	No	Yes	No
6:00 - 7:00 PM	124	340	866	1206	No	Yes	Yes	Yes	No
					No	**Yes**	**No**	**Yes**	**No**
				Warrants Met?	**1**			**2**	**3**
					Yes			**Yes**	**No**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: Yes

Peak Four Hour Pedestrian Volumes: 113

(non-concurrent) 130

139

116

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

last updated: 12/12/01

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at Cattle Drive

Major Street Direction: Eastbound-Westbound

Build with Mitigation

Revised ERC Site Distribution & Revised HBS Access

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 3

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME		Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	500	500
	Minor Street :	1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	750	750
	Minor Street :	1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B		Warrant 1A	Warrant 1B
	Major Street :	1 Lane(s) on each approach	400	600
	Minor Street :	1 Lane(s) on each approach	120	60

Warrant 2	FOUR HOUR VEHICULAR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	74	317	573	890	No	No	No	No	No
7:00 - 8:00 AM	67	574	521	1095	No	No	No	No	No
8:00 - 9:00 AM	91	540	660	1200	No	Yes	No	Verify	No
9:00 - 10:00 AM	72	595	564	1159	No	No	No	No	No
10:00 - 11:00 AM	63	401	492	893	No	No	No	No	No
11:00 - 12:00 AM	72	375	560	935	No	No	No	No	No
12:00 - 1:00 PM	67	351	525	876	No	No	No	No	No
1:00 - 2:00 PM	73	392	568	960	No	No	No	No	No
2:00 - 3:00 PM	74	625	577	1202	No	No	No	No	No
3:00 - 4:00 PM	76	482	594	1077	No	Yes	No	No	No
4:00 - 5:00 PM	99	510	773	1283	No	Yes	No	Yes	No
5:00 - 6:00 PM	80	690	680	1370	No	Yes	No	No	No
6:00 - 7:00 PM	103	375	802	1177	No	Yes	No	Yes	No
					No	**No**	**No**	**No**	**No**
			Warrants Met?		**1**			**2**	**3**
					NO			**No**	**No**

Note: 75% of right-turning traffic from minor street approach not included in analysis (25% included to be conservative)

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: **No**

Peak Four Hour Pedestrian Volumes: <107

(non-concurrent) <107

<107

<107

Warrant 5, School Crossing: **n/a**

See MUTCD for details.

Warrant 6, Coordinated Signal System: **n/a**

See MUTCD for details.

Warrant 7, Crash Experience: **No**

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: **n/a**

See MUTCD for details.

Warrant 9, Grade Crossing: **n/a**

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

MUTCD 2009 Edition with Revisions 1 and 2 (May 2012)

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: Western Ave at East Drive

Major Street Direction: Eastbound-Westbound

Build with Mitigation

Revised ERC Site Distribution & Revised HBS Access

Year: 2030 **Condition:** Build

Operating speed on major roadway: 25 mph

Number of approaches: 4

Warrant 1	EIGHT-HOUR VEHICULAR VOLUME		Required approach volumes: Minimum*	Adjusted Minimum**
Warrant 1A	MINIMUM VEHICULAR VOLUME (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	500	500
	Minor Street :	1 Lane(s) on each approach	150	150
Warrant 1B	INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)			
	Major Street :	1 Lane(s) on each approach	750	750
	Minor Street :	1 Lane(s) on each approach	75	75
	80 PERCENT SATISFACTION OF WARRANT 1A **AND** WARRANT 1B		Warrant 1A	Warrant 1B
	Major Street :	1 Lane(s) on each approach	400	600
	Minor Street :	1 Lane(s) on each approach	120	60

Note: Minor Street analyzed as 1 lane as 100% of right-turning traffic is not included in analysis.

Warrant 2	FOUR HOUR VEHICULAR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Warrant 3	PEAK HOUR VOLUME		
	Major Street :	1 Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4.
	Minor Street :	1 Lane(s) on each approach	25 = accuracy of regression equations

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road: Eastbound	Entering Vol. on Major Road: Westbound	Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants? 1A	1B	80%(1A&1B)	2	3
	Proj. Driveway								
6:00 - 7:00 AM	120	311	654	965	No	Yes	No	Verify	No
7:00 - 8:00 AM	109	563	594	1158	No	Yes	No	Yes	No
8:00 - 9:00 AM	135	500	815	1315	No	Yes	Yes	Yes	Verify
9:00 - 10:00 AM	118	584	642	1226	No	Yes	No	Yes	No
10:00 - 11:00 AM	103	394	561	955	No	Yes	No	Verify	No
11:00 - 12:00 AM	117	368	639	1007	No	Yes	No	Verify	No
12:00 - 1:00 PM	109	345	598	943	No	Yes	No	Verify	No
1:00 - 2:00 PM	119	385	648	1033	No	Yes	No	Verify	No
2:00 - 3:00 PM	120	614	657	1271	No	Yes	Yes	Yes	Verify
3:00 - 4:00 PM	124	473	678	1151	No	Yes	Yes	Yes	No
4:00 - 5:00 PM	161	500	881	1382	Yes	Yes	Yes	Yes	Yes
5:00 - 6:00 PM	145	700	705	1405	No	Yes	Yes	Yes	Yes
6:00 - 7:00 PM	167	368	915	1283	Yes	Yes	Yes	Yes	Yes
					No	**Yes**	**No**	**Yes**	**Yes**
			Warrants Met?		**1**			**2**	**3**
					Yes			**Yes**	**Yes**

Note: 100% of right-turning traffic from minor street approach not included in analysis.

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

NON-VOLUME-BASED WARRANTS

Warrant 4, Minimum Pedestrian Volume: Yes

Peak Four Hour Pedestrian Volumes: 170

(non-concurrent) 197

224

176

Warrant 5, School Crossing: n/a

See MUTCD for details.

Warrant 6, Coordinated Signal System: n/a

See MUTCD for details.

Warrant 7, Crash Experience: No

# of accidents "correctable by signalization" occuring in the last 12 months: 0

Warrant 8, Roadway Network: n/a

See MUTCD for details.

Warrant 9, Grade Crossing: n/a

See MUTCD for details.

Source: *Manual on Uniform Traffic Control Devices* (MUTCD); 2009 Edition with Revisions 1 and 2, May 2012

Massachusetts Bay Transportation Authority
Route 64
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

	05:30 (64.0)(B009) [3] {FA19}			05:50 (64.0)(B011) [7] {FA19}			06:20 (64.6)(B016) [3] {FA19}			**06:40 (64.6)(B010) [2] {WI19}**			07:00 (64.6)(B011) [3] {FA19}			07:20 (64.6)(B013) [9] {FA19}		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 1214 - FANEUIL ST @ OAK SQUARE	1	0	1	4.3	0	4.3	3	0	3	2.5	0	2.5	6.3	0	6.3	12.7	0	14.6
2 - 1093 - FANEUIL ST @ BRACKETT ST	0	0	1	3	0	7.3	0	0	3	0	0	2.5	4.3	0	10.7	2.1	0	16.7
3 - 1094 - FANEUIL ST @ FAIRBANKS ST	1.3	0	2.3	1.3	0	8.6	0.3	0	3.3	4	0	6.5	4.7	0	15.3	2.2	0	18.9
4 - 1095 - FANEUIL ST @ OAKLAND ST	0	0	2.3	0.9	0	9.4	0	0	3.3	0.5	0	7	1.7	0	17	1.8	0.1	20.6
5 - 1097 - FANEUIL ST @ S HOBART ST	0	0	2.3	0	0	9.4	0	0	3.3	1.5	0	8.5	1.7	0	18.7	0.6	0	21.1
6 - 1098 - HOBART ST @ FALKLAND ST	0	0	2.3	0.1	0	9.6	0.3	0	3.7	1	0	9.5	1.7	0	20.3	1.6	0	22.7
7 - 1100 - HOBART ST @ BROOKS ST	1.3	0	3.7	1.4	0	11	3	0	6.7	5	0	14.5	3.7	0	24	6.1	0	28.8
8 - 1102 - N BEACON ST @ PARSONS ST	2	0	5.7	0.4	0	11.4	0.7	0	7.3	0.5	0	15	1.3	0	25.3	1	0	29.8
9 - 1103 - N BEACON ST @ GOODENOUGH ST	0	0	5.7	0	0	11.4	0	0	7.3	0	0	15	0	0	25.3	0	0	29.8
10 - 1104 - N BEACON ST OPP VINELAND ST	3.3	0	9	9	0	20.4	11.7	0	19	7	0.5	21.5	14.7	0.3	39.7	7.1	0.4	36.4
11 - 1105 - N BEACON @ MARKET ST	1.7	0	10.7	2.7	1.4	21.7	1.3	0	20.3	5	1.5	25	7	1.3	45.3	3.7	1	39.1
12 - 1107 - N BEACON ST @ ETNA ST	0	0	10.7	1.1	0	22.9	0.3	0	20.7	2	0	27	3	0.3	48	3.9	0.3	42.7
13 - 11070 - LIFE ST @ GUEST ST	0	0	10.7	0	0	22.9	0	0	20.7	0	0	27	0	0	48	0	0	43.4
14 - 11071 - ARTHUR ST @ GUEST ST - STOP &	0	0.3	10.3	0	0.1	22.7	0	0	20.7	0	0	27	0.7	0.7	48	1.3	1	43.6
15 - 1109 - N BEACON ST @ SAUNDERS ST	0.7	0	11	0	0	22.7	0.7	0	21.3	3.5	0	30.5	0.3	0.3	48	3.2	0	46.1
16 - 1110 - N BEACON ST @ CAMBRIDGE ST	0.7	2	9.7	1.6	1.3	23	2.7	9.7	14.3	2.5	9.5	23.5	6	13.3	40.7	6.9	7.2	45.8
17 - 1111 - CAMBRIDGE ST OPP HANO ST	0.3	0	10	0.9	2.4	21.4	3.7	0	18	3	1	25.5	3.3	0.7	43.3	5.8	0.8	50.8
18 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0	0	10	0	0.4	21	0	0	18	3	0	28.5	0.7	1	43	0.7	0.1	51.3
19 - 1113 - CAMBRIDGE ST @ LINDEN ST	0.7	0	10.7	1.4	0.3	22.1	2.3	0.3	20	3.5	0.5	31.5	3.7	0	46.7	6.6	0.1	57.8
20 - 1114 - CAMBRIDGE ST @ N HARVARD ST	0.7	0	11.3	0.6	0	22.7	0.3	0	20.3	1	0	32.5	1	0	47.7	2	0.7	59.1
21 - 1115 - CAMBRIDGE ST @ SEATTLE ST	0.3	0	11.7	0	0	22.7	0.7	0	21	2	0	34.5	0.7	0	48.3	0.9	0.1	59.9
22 - 1116 - CAMBRIDGE ST @ MASS PIKE EXIT	0	0.3	11.3	0	0	22.7	0	0	21	0.5	0	35	0	0	48.3	0	0	59.9
23 - 1055 - RIVER ST OPP BLACKSTONE ST	0.7	0.3	11.7	1.1	0.3	23.6	0	0	21	1	2	34	2	0.7	49.7	2.9	2.2	60.6
24 - 1117 - PUTNAM AVE @ ALLSTON ST	0	0	11.7	0.1	0	23.7	0	0.3	20.7	0.5	0	34.5	0.7	0.7	49.7	0.2	0.1	60.7
25 - 1118 - MAGAZINE ST @ PUTNAM AVE	0	0	11.7	0.7	0	24.4	0	0	20.7	3	0	37.5	1.7	0.3	51	2	0.1	62.9
26 - 1119 - MAGAZINE ST @ ERIE ST	0	0	11.7	0.1	0	24.6	0.3	0	21	0	0	37.5	0	0	51	1.2	0.1	63.2
27 - 1120 - MAGAZINE ST @ MCTERNAN ST	0	0	11.7	0	0	24.6	0	0	21	0	0	37.5	0	0	51	0	0	63.2
28 - 1121 - MAGAZINE ST @ PERRY ST	0.7	0	12.3	0	0	24.6	0	0	21	0	0	37.5	0	0	51	0.1	0.2	63.1
29 - 1122 - MAGAZINE ST @ AUBURN ST	0	0	12.3	0	0	24.6	0	0	21	0	1.5	36	0	0.3	50.7	0.6	0.3	63.3
30 - 1060 - MAGAZINE ST @ GREEN ST	0	9	3.3	0	21.7	2.9	1	12	10	0.5	25.5	11	0.7	27.7	23.7	4.1	30.6	36.9
31 - 2446 - PROSPECT ST @ BISHOP ALLEN DR	.	.	.	.	.	.	0.3	0	10.3	0	0	11	0	0.3	23.3	0	0	36.9
32 - 2447 - PROSPECT ST @ HARVARD ST	.	.	.	.	.	.	0.3	0	10.7	0	0.5	10.5	0	3	20.3	0	0.6	36.3
33 - 2448 - PROSPECT ST @ BROADWAY	.	.	.	.	.	.	0	1	9.7	0.5	0	11	0.7	0.7	20.3	0.7	0.9	36.1
34 - 24482 - BROADWAY @ NORFOLK ST	.	.	.	.	.	.	0	0	9.7	0	0	11	0.3	2.3	18.3	0	1.9	34.2
35 - 24483 - BROADWAY @ COLUMBIA ST	.	.	.	.	.	.	0	0.7	9	0.5	0.5	11	1.3	0	19.7	0.7	0.9	34
36 - 24484 - BROADWAY @ WINDSOR ST	.	.	.	.	.	.	0.3	0.3	9	2.5	2.5	11	0.3	1.3	18.7	1	2.3	32.7
37 - 24485 - BROADWAY OPP HAMPSHIRE ST	.	.	.	.	.	.	0.3	3.3	6	1	8	4	0.3	7	12	0.2	11.9	21
38 - 2228 - BROADWAY @ GALILEO WAY	.	.	.	.	.	.	0	2	4	0	2	2	0	4	8	0	7.8	13.2
39 - 2231 - MAIN ST @ KENDALL STATION - R	.	.	.	.	.	.	0	4	0	0	1.5	0.5	0	8	0	0	13.2	0
40 - 72 - MASSACHUSETTS AVE @ PEARL ST	0	0.7	2.7	0	0	2.9	.	.	.	.	.	.	.	.	.	.	.	.
41 - 73 - MASSACHUSETTS AVE @ SIDNEY ST	0	1.3	1.3	0	1.9	1	.	.	.	.	.	.	.	.	.	.	.	.
42 - 730 - FRANKLIN ST @ SIDNEY ST	0	1.3	0	0	1	0	.	.	.	.	.	.	.	.	.	.	.	.
Maximum			12.3			24.6			21.3			37.5			51			63.3
Total	15.4	15.2		30.7	30.8		33.5	33.6		57.5	57		74.5	74.2		83.9	84.9	

07:40 (64.6)(B015) [37] {FA19}			07:55 (64.6)(B016) [2] {FA19}			08:15 (64.6)(B009) [1] {FA19}			08:40 (64.6)(B011) [5] {FA19}			09:05 (64.0)(B013) [5] {FA19}			09:25 (64.0)(B015) [11] {FA19}			09:55 (64.0)(B012) [1] {FA19}			10:30 (64.0)(B013) [8] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
9	0	9.1	8	0	8.5	13	0	13	7.4	0	7.4	3.6	0	5.4	5.5	0	5.6	4	0	4	4.5	0	5.5
2.6	0.2	11.7	9	0	17.5	0	0	13	3.8	0	11.3	1.4	0	6.8	0.7	0	6.4	1	0	5	1.6	0	7.1
4.1	0	16	0	0	17.5	0	0	13	1.3	0.3	12.3	0	0	6.8	1.1	0	7.5	0	0	5	0.8	0	7.9
2.2	0	18.2	3.5	0	21	2	0	15	2.8	0	15	1	0	7.8	0.9	0	8.4	4	0	9	0.6	0	8.5
1.1	0	19.3	0	0	21	1	0	16	2	0	17	0.4	0	8.2	0.7	0	8.7	1	0	10	0.9	0	9.4
0.7	0	20	1	0	22	4	0	20	0.8	0	17.8	0.2	0	8.4	0.4	0	9.1	0	0	10	0.4	0	9.8
4.7	0	24.6	3.5	0	25.5	0	0	20	3.3	0	21	1.4	0	9.8	1.2	0	10.5	3	0	13	1.6	0	11.4
0.8	0	25.4	0.5	0	26	0	0	20	1.4	0	19.6	0.8	0	10.6	0.3	0	10.8	1	0	14	0.8	0	12.1
0.1	0	25.5	0	0	26	0	0	20	0.4	0	20	0	0	10.6	0	0	10.8	0	0	14	0	0	12.1
2.5	0.2	27.7	3	0	29	2	0	22	2	0	22	2.2	0	12.8	3.2	0.1	13.9	5	0	19	3.4	0	15.5
3.1	0.4	30.4	1.5	0.5	30	2	0	24	2.2	4	20.2	3.2	0.8	15.2	1	0.3	14.6	4	1	22	1.4	0.3	16.6
3.1	0.1	33.4	1.5	2.5	29	1	1	24	3.8	1	23	1	0.6	15.6	1.3	0.2	15.7	2	1	23	1.8	0.1	18.3
0	0	33.4	0	0	29	0	0	24	0	0	23	0	0	15.6	0	0.1	15.6	0	0	23	0	0.1	18.1
0.8	0.8	33.4	0.5	3	26.5	0	0	24	0.8	1	22.8	0.2	0.4	15.4	0.5	0.8	15.4	0	1	22	0.4	1.9	16.6
2.3	0.1	35.6	0	0	26.5	0	0	24	1.6	0	24.4	1.2	0	16.6	0.6	0	16	0	0	22	1.3	0	17.9
3.6	1.8	37.4	5	3	28.5	1	3	22	7.6	3	29	5	1.8	19.8	3.2	1.4	17.8	0	2	20	1.4	1	18.3
5.9	0.3	43	7.5	0.5	35.5	3	0	25	5.2	0.2	34	2.6	1.4	21	4.9	0.8	21.9	6	1	25	3.3	0.9	20.6
1.8	0.1	44.7	0.5	0	36	0	0	25	1	0	35	0.2	0	21.2	0.2	0	22.1	0	0	25	0.1	0.1	20.6
6.7	0.2	51.2	1	0	37	3	0	28	8	0.4	42.6	3.6	0	24.8	4.3	0	26.4	5	0	30	1.8	0	22.4
1	0.2	52.1	0	0	37	3	0	31	0.8	0	43.4	0.8	0.2	25.4	0.5	0.2	26.6	2	2	30	0.9	0.5	22.8
0.5	0.1	52.4	0.5	0	37.5	0	0	31	1.6	0	45	1	0.2	26.2	0.3	0	26.9	2	0	32	0.4	0	23.1
0	0	52.4	0	0	37.5	0	0	31	0	0	45	0	0	26.2	0	0	26.9	0	0	32	0	0.1	23
1.4	0.9	52.9	1.5	0.5	38.5	0	3	28	1.8	1.2	45.6	0.2	0.4	26	0.7	0.2	27.5	1	1	32	1	0.6	23.4
0.3	0.1	53.1	0.5	0	39	0	0	28	0.2	0.8	45	0.4	0.2	26.2	0	0.2	27.3	0	0	32	0	0.1	23.3
1.6	0.4	54.4	4.5	0	43.5	.	.	.	2	0	46.3	1	0	25.5	0.6	0.4	28.8	.	.	.	0	0	25.4
0.7	0.4	54.6	1.5	0.5	44.5	0	0	28	1.3	0.5	47	0	0	25.5	0.3	0.1	26.8	0	0	32	0	0	22.6
0	0	54.6	0	0	44.5	0	0	28	0	0	47	0	0	27	0	0	26.8	0	0	32	0	0	23.3
0.4	0.1	54.9	0	0	44.5	0	0	28	0	1	46.2	0	0	27	0.1	0	27.6	0	0	32	0	0	23.3
0.1	0.4	54.7	0	0	44.5	0	0	28	0.2	0.8	45.6	0	0.2	26.8	0.1	0.5	27.3	0	0	32	0	0	23.3
3.9	27.3	31.2	1	23.5	22	0	14	14	2	21.2	26.4	0.2	17.6	9.4	0.4	21.2	6.5	0	25	7	0.5	14.1	9.6
0.1	0.1	31.2	0	0	22	0	0	14	0.2	0.4	26.2	.	.	.	.	.	.	.	.	.	.	.	.
0.2	0.9	30.5	0	0	22	0	1	13	0	0.4	25.8	.	.	.	.	.	.	.	.	.	.	.	.
0.6	1.1	30	0	1	21	0	0	13	0.2	0.8	25.2	.	.	.	.	.	.	.	.	.	.	.	.
0.7	0.3	30.4	0	0.5	20.5	0	0	13	0.2	0	25.4	.	.	.	.	.	.	.	.	.	.	.	.
1	0.6	30.9	1	0	21.5	0	0	13	0.2	0.2	25.4	.	.	.	.	.	.	.	.	.	.	.	.
0.3	2.3	28.8	0.5	1.5	20.5	0	1	12	0	0.6	24.8	.	.	.	.	.	.	.	.	.	.	.	.
0.3	9.8	19.4	0	6	14.5	0	4	8	0.4	10.8	14.4	.	.	.	.	.	.	.	.	.	.	.	.
0.1	8.2	11.3	0	6.5	8	0	4	4	0.4	10	4.8	.	.	.	.	.	.	.	.	.	.	.	.
0	11.1	0.2	0	8	0	0	4	0	0	4.8	0	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	0.4	0.6	9.2	0	0.2	6.3	0	2	5	0.1	1.6	8.1
.	.	.	.	.	.	.	.	.	.	.	.	0.2	6.4	3	0	4.4	1.9	1	4	2	0	2.8	5.4
.	.	.	.	.	.	.	.	.	.	.	.	0	2.8	0.2	0	1.9	0	0	1	1	0	5.4	0
		54.9			44.5			31			47			27			28.8			32			25.4
68.3	68.5		57	57.5		35	35		66.9	63.4		32.2	33.6		33	33		42	41		29	29.6	

Trip (RouteVar)(Block) [Observations]

11:15 (64.0)(B012) [6] {FA19}			11:50 (64.0)(B013) [4] {FA19}			12:30 (64.0)(B012) [3] {FA19}			13:10 (64.0)(B013) [1] {FA19}			13:50 (64.0)(B012) [4] {FA19}			14:30 (64.0)(B013) [3] {FA19}			15:15 (64.0)(B012) [4] {FA19}			16:00 (64.6)(B013) [6] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
3.8	0	3.8	2.3	0	2.3	1.7	0	1.7	4	0	4	1.3	0	1.3	1.3	0	1.3	4.8	0	6.3	5.2	0	5.3
0.7	0	4.5	0	0	2.3	0	0	1.7	0	0	4	1	0	2.3	0.3	0	1.7	0.5	0.3	6.5	0.7	0	6
0.2	0	4.7	1.3	0	3.5	1.3	0	3	0	0	4	0	0	2.3	0.7	0	2.3	0.3	0.3	6.5	0.2	0	6.2
0.3	0	5	1.5	0	5	0.7	0	3.7	2	0	6	0.8	0	3	0	0	2.3	1.8	0	8.3	2.3	0	8.5
0.2	0	5.2	0.5	0	5.5	0	0	3.7	0	0	6	0.5	0	3.5	1.3	0.3	3.7	0.3	0	7.7	0.2	0	8.7
0.2	0	5.3	0.5	0	6	0	0	3.7	0	0	6	0.5	0	4	0.7	0	4.3	1	0.3	8.3	0	0.5	8.2
1.2	0	6.5	0.3	0	6.3	2	0	5.7	1	1	6	0.3	0	4.3	0.3	0.3	4.3	0.5	0	9.5	0.8	0.2	8.8
0.3	0	6.8	0	0	6.3	0	0	5.7	1	0	7	1.3	0.5	5	0	0	4.3	0.5	0	10	0.5	0	9.3
0.7	0	7.5	0	0	6.3	0	0	5.7	0	0	7	0.3	0	5.3	0	0	4.3	0.3	0	10.3	0	0	9.3
1.3	0	8.8	0.5	0	6.8	0.7	0	6.3	8	0	15	1.5	0	6.8	1.7	1	5	0.8	0	11	2.5	0.8	11
1.2	0.5	9.5	0.5	0.3	7	0.7	0.7	6.3	1	0	16	0.8	0	7.5	1	0.3	5.7	0.3	0	11.3	1.7	0.2	12.5
0.3	0	9.8	0.8	0	7.8	0	0	6.3	2	1	17	1.5	0	9	4.7	0	10.3	1	0	12.3	0.8	0	13.3
0	0	9.8	0	0	7.8	0	0	6.3	0	0	17	0	0	9	0	0	10.3	0	0	12.3	0.2	0	13.5
1	1	9.8	0.5	0.5	7.8	0.7	0.7	6.3	0	0	17	1.3	1.3	9	2.7	0	13	0.8	0.5	12.5	1	1	13.5
0.7	0	10.5	1	0	8.8	1.3	0	7.7	0	0	17	0.8	0	9.8	1.7	0	14.7	0	0	12.5	0.7	0	14.2
0.7	0.7	10.5	0	0.3	8.5	1	0	8.7	2	0	19	1.3	0.8	10.3	2	1.3	15.3	1.3	0.3	13.5	0.5	2.2	12.5
1.8	0.2	12.2	2	0.3	10.3	1	0.7	9	1	2	18	3.8	0.3	13.8	2	0.7	16.7	0.5	0.5	13.5	2.2	0.5	14.2
0.2	0	12.3	0	0.3	10	1	0.3	9.7	0	0	18	0.5	0.3	14	0	0	16.7	0	0.5	13	0.8	0.5	14.5
0.5	0	12.8	1	0.5	10.5	1.3	0.3	10.7	1	4	15	0.3	0.8	13.5	1.3	0	18	2.5	0.5	15	2.2	1	15.7
0	0.3	12.5	0.3	0.3	10.5	0	0.3	10.3	0	0	15	1	1.8	12.8	1	0.3	18.7	0.3	0.8	14.5	1.5	0.3	16.8
0.2	0	12.7	0	0	10.5	0	0	10.3	0	0	15	0	0	12.8	0	0	18.7	0	0	14.5	0	0	16.8
0.3	0	13	0.5	0	11	0.7	0.3	10.7	0	0	15	0	0	12.8	0	0	18.7	0.3	0	14.8	0	0	16.8
0.7	0.2	13.5	0.8	0.3	11.5	1	0	11.7	0	0	15	1.3	0.3	13.8	0.3	0	19	0	0	14.8	2.3	0.8	18.3
0	0.2	13.3	0	0	11.5	0	0	11.7	0	0	15	0	0	13.8	0	0.3	18.7	0	0.3	14.5	0	0	18.3
0	0.5	15	0	0	14	0	1	16	0	0	15	0.3	0	14.7	0	0	18.7	0	0	13.5	0.3	0	18.7
0	0	14.6	0.3	0	12.3	0	0	10.5	0	0	15	0	0	14	0.3	0	19	0	0	14.5	0.2	0.2	18.7
0	0	13.2	0	0	11.8	0	0	11.3	0	0	15	0	0	14	0	0	19	0	0	14.5	0	0	18.7
0.2	0	13.3	0	0	11.8	0	0	11.3	0	1	14	0	0.5	13.5	0	0	19	0	0	14.5	0	0	18.7
0	0	13.3	0	0	11.8	0	0	11.3	0	0	14	0	0	13.5	0	0.3	18.7	0	0	14.5	0	0.7	18
0.3	9.8	3.8	0	7.3	4.5	0	8.3	3	0	12	2	0	12.3	1.3	0.3	16.7	2.3	0	8.3	6.3	0.3	12.5	5.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	5.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	5.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.7	5.2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.3	4.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.2	1.2	3.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.5	0.7	3.7
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.5	0.8	4.3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.2	4.2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	4.2	0
0.2	0.3	3.7	0	0.3	4.3	0	0.7	2.3	0	0	2	0.3	0.5	1.3	0	1	1.3	0	2.8	3.5	.	.	.
0	2	1.7	0	2.5	1.8	0	0.3	2	0	0	2	0	1	0.3	0	0.3	1	0.3	0.5	3.3	.	.	.
0	1.7	0	0	1.8	0	0	2	0	0	2	0	0	0	0.3	0	0.7	0.3	0	3.3	0	.	.	.
		15			14			16			19			14.7			19			15			18.7
17.2	17.4		14.6	14.7		15.1	15.6		23	23		20.7	20.4		23.6	23.5		18.1	19.2		29.3	29.5	

16:30 (64.6)(B014) [51] {FA19}			17:00 (64.6)(B012) [6] {FA19}			17:34 (64.6)(B008) [20] {FA19}			18:09 (64.6)(B010) [3] {FA19}			18:30 (64.6)(B014) [14] {FA19}			19:00 (64.0)() [6] {FA19}			20:00 (64.0)(B010) [1] {FA19}			21:10 (64.0)(B043) [7] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
3.1	0	3.1	4.3	0	4.7	5.1	0	5.1	2.3	0	2.3	1.9	0	2.1	0.5	0.0	0.5	6	0	6	0.7	0	0.9
0.4	0	3.5	0.2	0	4.8	0.4	0	5.7	0	0	2.3	0.1	0	2.2	0.2	0.0	0.7	0	0	6	0.1	0	1
0.5	0	4	1	0	5.8	0.2	0	5.9	0	0	2.3	0.1	0	2.3	0.2	0.0	0.8	0	0	6	0	0	1
1.8	0	5.8	0.7	0.5	6	1.8	0	7.7	0.3	0	2.7	0.8	0	3.1	0.5	0.0	1.3	0	0	6	0.4	0	1.4
0.2	0	5.9	0.2	0	6.2	0.2	0	7.5	0	0	2.7	0	0.1	2.9	0.0	0.0	1.3	0	0	6	0	0	1.4
0.6	0	6.5	0.7	0	6.8	0	0	7.5	0	0	2.7	0.1	0.1	3	0.0	0.0	1.3	0	0	6	0.1	0	1.6
1.2	0.1	7.5	0.3	0	7.2	0.7	0.6	7.7	3	0	5.7	0.1	0.2	2.9	0.3	0.0	1.7	0	0	6	0.1	0.1	1.6
0.2	0.1	7.6	0.3	0	7.5	0.1	0.2	7.6	0	0	5.7	0	0	2.9	0.0	0.0	1.7	0	0	6	0.1	0	1.7
0.2	0	7.8	0.2	0.2	7.5	0	0	7.6	0.3	0	6	0.1	0.1	3	0.0	0.0	1.7	0	0	6	0.3	0	2
3.5	0.6	10.7	2	0.2	9.3	1.1	0.2	8.5	0.3	0.3	6	0.8	0.1	3.6	0.3	0.0	2.0	1	0	7	1.1	0	3.1
1.5	0.7	11.5	2.3	0.5	11.2	1.7	0.4	9.8	0	0	6	0.4	0.1	3.9	0.3	0.0	2.3	0	2	5	0.1	0	3.3
2.1	0.2	13.3	2	0	13.2	1	0.1	10.8	0.3	0	6.3	0.5	0.1	4.4	0.0	0.0	2.3	0	0	5	0.1	0	3.4
0.1	0.1	13.3	0.3	0	13.5	0	0	10.8	0	0	6.3	0	0	4.4	0.0	0.0	2.3	0	0	5	0	0	3.4
1.7	1	14.1	2.2	0.8	14.8	3	1.3	12.4	2	0	8.3	1	0.1	5.3	1.0	0.2	3.2	0	0	5	0.4	0.1	3.7
0.8	0	14.8	1.5	0	16.3	0.6	0.1	12.9	0.3	0.3	8.3	0.1	0	5.4	0.2	0.0	3.3	0	0	5	1.4	0	5.1
1.5	2.5	13.8	0.8	1.2	16	0.7	1	12.6	1.7	2.3	7.7	0.1	0.6	5	1.2	0.0	4.5	2	0	7	0.1	0	5.3
1.9	0.7	15	3.2	0.5	18.7	2.6	0.6	14.6	3.3	0.3	10.7	1.5	0.2	6.3	1.0	0.0	5.5	0	0	7	0.7	0.4	5.6
0.3	0.3	15	0	0.3	18.3	0.2	0.2	14.6	0.7	0	11.3	0.6	0.3	6.6	0.2	0.0	5.7	1	0	8	0.1	0.3	5.4
2.2	0.4	16.8	0.5	0.3	18.5	1.8	0.2	16.2	0.7	0	12	1.1	0.1	7.6	0.5	0.2	6.0	0	0	8	0.9	0	6.3
0.2	0.4	16.6	0.3	0.5	18.3	0.1	1.8	14.5	0.3	0.3	12	0.2	0.4	7.4	0.5	0.0	6.5	0	1	7	0	0.3	6
0.1	0	16.6	0.2	0	18.5	0.1	0.1	14.5	0	0	12	0.1	0	7.5	0.0	0.3	6.2	0	0	7	0	0	6
0.3	0.1	16.8	0.3	0	18.8	0	0	14.5	0.3	0.3	12	0	0.1	7.4	0.0	0.2	6.0	0	0	7	0	0	6
2.2	0.9	18.1	2.8	1	20.7	0.9	0.9	14.5	0.3	0	12.3	0.4	0.3	7.5	0.2	0.3	5.8	0	0	7	0.3	0.4	5.9
0.1	0.1	18.1	0	0.2	20.5	0.1	0.8	13.8	0	0	12.3	0.1	0.3	7.3	0.0	0.0	5.8	0	0	7	0	0.3	5.6
0.4	0.4	18.4	0.2	0.3	20.3	0.4	0	14.3	0	0	12.3	0.1	0.1	7.3	0.0	0.0	5.8	0	0	7	0	0	5.6
0	0.4	17.8	0	1.5	18.8	0.4	0.2	14.4	0	0	12.3	0	0.1	7.2	0.0	0.0	5.8	0	0	7	0.1	0.3	5.4
0	0	17.8	0	0	18.8	0	0	14.4	0	0	12.3	0	0	7.2	0.0	0.0	5.8	0	0	7	0	0	5.4
0.1	0	17.9	0	0	18.8	0.1	0.1	14.3	0	0.3	12	0	0.1	7.1	0.0	0.0	5.8	0	0	7	0	0	5.4
0	0.5	17.4	0	0.2	18.7	0	0.1	14.3	0	0.3	11.7	0	0.1	7	0.0	0.0	5.8	0	0	7	0	0.1	5.3
0.6	10	8.1	0.8	12.8	6.7	0.5	8.1	6.6	0.7	5.7	6.7	0.3	4.2	3.1	0.0	4.5	1.3	1	6	2	0.9	4.9	1.6
0.2	0.1	8.2	0.3	0.3	6.7	0.1	0.2	6.5	0	1	5.7	0.4	0.6	2.8	.	.	.	.	.	.	.	.	.
0	1.5	6.7	0	0.3	6.3	0.1	0.2	6.4	0	0.7	5	0.1	0.1	2.7	.	.	.	.	.	.	.	.	.
0.1	0.8	6	0.3	0.7	6	0.1	1.5	5	0.3	0.7	4.7	0	0.4	2.3	.	.	.	.	.	.	.	.	.
0.1	0.3	5.8	0	1	5	0.1	0.6	4.5	0	0.7	4	0	0	2.3	.	.	.	.	.	.	.	.	.
0.1	0.3	5.6	0	0.5	4.5	0	0.2	4.3	0	0.3	3.7	0.1	0.6	1.8	.	.	.	.	.	.	.	.	.
0.9	1.5	5	0.8	0.8	4.5	0.5	0.7	4.1	0	0	3.7	0.1	0.5	1.4	.	.	.	.	.	.	.	.	.
1.1	0.8	5.3	0.8	0.5	4.8	0.6	0.8	3.8	0	2.3	1.3	0.4	0.4	1.4	.	.	.	.	.	.	.	.	.
0.3	0.6	5	0	0.5	4.3	0.2	0.3	3.8	0	0	1.3	0	0.3	1.1	.	.	.	.	.	.	.	.	.
0	4.7	0.3	0	4.3	0	0	3.8	0	0	1.3	0	0	1.1	0	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.33333	1	0	0	2	0	0.1	1.4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.6	0.4	0	1	1	0	0.3	1.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.4	0	0	1	0	0	0.3	0.9
		18.4			20.7			16.2			12.3			7.6			6.5			8			6.3
30.6	30.1		29.5	29.9		25.5	25.3		17.1	17.1		11.6	11.8		7.0	7.0		11	11		8	7.9	

22:20 (64.0)(B043) [1] {FA19}			23:30 (64.0)(B017) [2] {FA19}			24:35 (64.0)(B017) [2] {FA19}			Total		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	0	0	0.5	0	1	1.5	0	1.5	135.1	0	143.4
0	0	0	0	0	1	0	0	1.5	34.0667	0.5	177.667
1	0	1	0	0	1	0	0	1.5	28.0667	0.6	205.033
0	0	1	0	0	1	0	0	1.5	37.6	0.6	241.833
0	0	1	0	0	1	0	0	3	14.5	0.4	255.833
0	0	1	0.5	0.5	1.5	0	0	3	17.1	1.4	271.933
0	0	1	0	0	1.5	0	0	1.5	51.3333	2.5	320.167
0	0	1	0	0	1.5	0	0	1.5	15.8	0.8	332.067
0	0	1	0	0	1.5	0	0	1.5	2.9	0.3	334.767
0	0	1	0	0	1.5	0	0	1.5	103.233	4.7	432.8
0	0	1	0	0	1.5	0	0	1.5	53.3333	18.2	467.933
0	0	1	0.5	0	2	0.5	0.5	1.5	43.9	9	503.033
0	0	1	.	.	.	.	.	.	0.6	0.3	500.433
0	0	1	.	.	.	.	.	.	24.5	19.4667	505.067
0	0	1	0	0	2	0	0	1.5	26.4667	0.8	533.433
1	0	2	0	0.5	1.5	0	0	1.5	65.0667	73.7	525
0	1	1	0	0	1.5	2	0	3.5	85.9	18.9	592.1
0	0	1	0	0	1.5	0	0	3.5	13.7667	5	600.467
2	0	3	0	0	1.5	1	0	4.5	72.4	10.0667	662.8
0	0	3	0	0	1.5	0	0.5	4	20.3	13.1	669.8
0	0	3	0	0	1.5	0	0	4	11.6	0.83333	680.267
0	0	3	0	0	1.5	0	0	4	3.2	1.36667	682
1	0	4	0	0	1.5	0	0	4	29.7667	18.7333	693.433
0	0	4	0	0	1.5	0	0	4	3.2	5	691.633
0	0	4	0	0	1.5	0	0.5	3.5	18.8	4	657.733
0	0	4	0	0	1.5	0	0	3.5	6.7	4.3	706.333
0	0	4	0	0	1.5	0	0	3.5	0	0	707.433
0	0	4	0	0	1.5	0	0	3.5	1.7	3.3	706.433
0	1	3	0	0	1.5	0	0	3.5	1	7.3	700.433
0	2	1	0	0	1.5	0	0.5	3	20	436.3	284.533
.	.	.	.	.	.	.	.	.	1.6	3	210.6
.	.	.	.	.	.	.	.	.	0.7	9.2	202
.	.	.	.	.	.	.	.	.	3.5	10.3	195.5
.	.	.	.	.	.	.	.	.	1.4	7.9	188.9
.	.	.	.	.	.	.	.	.	5.1	6	188.2
.	.	.	.	.	.	.	.	.	7.7	16	179.9
.	.	.	.	.	.	.	.	.	6.9	66.4	120.2
.	.	.	.	.	.	.	.	.	1	46.4	75
.	.	.	.	.	.	.	.	.	0	74	1
0	0	1	0	1	0.5	0	1.5	1.5	1	13.6333	60
0	0	1	0	0	0.5	0	1.5	0	1.5	30.8	30.7
0	1	0	0	0	0.5	0	0	0	0	27.6	3.2
		4			2			4.5			707.433
5	5		1.5	2		5	5		972.3	972.7	

Massachusetts Bay Transportation Authority
Route 64
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

	06:05 (64.0)(B010) [2] {WI19}			06:24 (64.0)(B011) [3] {FA19}			06:36 (64.6)(B013) [9] {FA19}			07:10 (64.6)(B016) [2] {FA19}			07:31 (64.6)(B009) [1] {FA19}			07:55 (64.6)(B011) [4] {FA19}		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 730 - FRANKLIN ST @ SIDNEY ST	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.
2 - 2755 - GREEN ST @ PEARL ST	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.
3 - 1060 - MAGAZINE ST @ GREEN ST				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4 - 72 - MASSACHUSETTS AVE @ PEARL ST				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5 - 1123 - GREEN ST @ MAGAZINE ST	7	0	7	1	0	1	.	.	.	.	.	.	.	.	.	.	.	.
6 - 2231 - MAIN ST @ KENDALL STATION - R	.	.	.	.	.	.	2.2	0	2.2	3	0	3	9	0	9	4.3	0	4.3
7 - 12231 - AMES ST @ BROADWAY				.	.	.	0	0	2.2	0	0	3	0	0	9	0	0.3	4
8 - 24486 - BROADWAY @ HAMPSHIRE ST	.	.	.	.	.	.	0	0.8	1.8	0.5	0	3.5	2	2	9	0.8	0.3	4.5
9 - 24487 - BROADWAY @ WINDSOR ST	.	.	.	.	.	.	0.2	0	1.8	3	1	5.5	6	4	11	2.8	0.8	6.5
10 - 24488 - BROADWAY @ COLUMBIA ST	.	.	.	.	.	.	0.2	0	2	0.5	0	6	0	0	11	1	0	7.5
11 - 24489 - BROADWAY @ NORFOLK ST	.	.	.	.	.	.	0	0	2	0.5	0	6.5	1	0	12	0.3	0	7.8
12 - 24490 - BROADWAY @ PROSPECT ST	.	.	.	.	.	.	0.3	0	2.3	0.5	0	7	1	0	13	0.5	0.3	8
13 - 2442 - PROSPECT ST @ HARVARD ST	.	.	.	.	.	.	0.7	0.2	2.8	0	0	7	2	0	15	0.3	0.8	7.5
14 - 2443 - PROSPECT ST @ BISHOP ALLEN DR	.	.	.	.	.	.	0	0	2.8	0.5	0	7.5	0	0	15	0.3	0.3	7.5
15 - 2444 - WESTERN AVE @ GREEN ST	0	0	7	2	0	3	1.4	0.2	4	3.5	0	11	3	3	15	4.5	0.3	11.8
16 - 1061 - WESTERN AVE @ KINNAIRD ST	0	0	7	0	0	3	0.2	0	4.2	0	0	11	0	1	14	0.5	0	12.3
17 - 1062 - WESTERN AVE @ HOWARD ST	0	0	7	0	0	3	0.1	0	4.3	1	0	12	0	0	14	0.5	0.8	12
18 - 1064 - WESTERN AVE @ PUTNAM AVE	0	0.5	6.5	0	0.3	2.7	0	0.4	3.9	0.5	0.5	12	0	4	10	0.8	1.5	11.3
19 - 1189 - CAMBRIDGE ST @ MASS PIKE	0	2	4.5	0	0.3	2.3	0	0.7	3.2	0	0	12	0	1	9	0.5	0.8	11
20 - 1190 - CAMBRIDGE ST @ SEATTLE ST	0	0	4.5	0	0	2.3	0	0	3.2	0	0	12	0	0	9	0	0	11
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0	0	4.5	1	0	3.3	1.7	0	4.9	0.5	1	11.5	5	0	14	2.3	0	13.3
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0	0	4.5	0	0	3.3	0	0.3	4.6	0	1.5	10	0	1	13	0.3	0	13.5
23 - 1195 - CAMBRIDGE ST @ EMERY RD	0	0	4.5	0.7	0	4	0	0.4	4.1	0	0.5	9.5	0	0	13	0.5	0	14
24 - 1196 - N BEACON ST @ CAMBRIDGE ST	1	1	4.5	0	1.7	2.3	0.3	0.9	3.6	0.5	0.5	9.5	0	1	12	0.3	2.5	11.8
25 - 1197 - N BEACON ST OPP SAUNDERS ST	0	1.5	3	0	0.3	2	0	0.7	2.9	0	0	9.5	0	2	10	0	0	11.8
26 - 11971 - ARTHUR ST @ GUEST ST - STOP &	0	0	3	0.7	1	1.7	0.1	0	3	0	1.5	8	0	0	10	0	4	7.8
27 - 11972 - GUEST ST @ LIFE ST	0	1.5	1.5	0	0.7	1	0	0.1	2.9	0	1.5	6.5	0	1	9	0	4.5	3.3
28 - 1199 - N BEACON ST @ LIFE ST	0	0	1.5	0	0	1	0.1	0	3	0.5	0.5	6.5	0	0	9	0.8	0.3	3.8
29 - 1200 - N BEACON ST @ MARKET ST	0	0	1.5	0	0	1	0.1	0	3.1	0	0	6.5	0	1	8	0	0	3.8
30 - 1202 - N BEACON ST @ VINELAND ST	0	0	1.5	0	0	1	0	0.1	3	0.5	0.5	6.5	0	0	8	0	0	3.8
31 - 1203 - N BEACON ST @ BIRMINGHAM PKWY	0	1	0.5	0	0	1	0	0.3	2.7	0	0	6.5	0	2	6	0	1.3	2.5
32 - 1204 - BIRMINGHAM PKWY @ SOLDIERS FI	0	0	0.5	0	0	1	0	0.2	2.4	0	0	6.5	0	0	6	0	0	2.5
33 - 1206 - HOBART ST @ BROOKS ST	0	0	0.5	0	0	1	0.1	0	2.6	0	1.5	5	0	0	6	0	0.3	2.3
34 - 1208 - HOBART ST @ FALKLAND ST	0	0	1	0	0	1	0	0	3.4	0	0	5	3	0	9	0	0	2.3
35 - 12081 - FANEUIL ST @ DONNYBROOK RD	0	0	1	0	0	1	0	0	3.4	0	0	5	0	0	9	0	0	2.3
36 - 1210 - FANEUIL ST OPP GARFIELD SCHOO	0	0	1	0	0	1	0	0.2	3.2	0	3	2	0	3	6	0	1.3	1
37 - 1211 - FANEUIL ST @ BROOKS ST	0	0	1	0	0	1	0	0	3.2	0	0	2	0	0	6	0	0	1
38 - 1212 - FANEUIL ST @ BRACKETT ST	0	0.5	0	0	1	0	1.9	0.8	3.6	0.5	2	0.5	0	0	6	0	0.8	0.3
40 - 1214 - FANEUIL ST @ OAK SQUARE	0	0	0	0	0	0	0	1.7	1.9	0	0	0.5	0	6	0	0	0.3	0
Maximum			7			4			4.9			12			15			14
Total	8	8		5.4	5.3		9.6	8		16	15.5		32	32		21.3	21.5	

08:20 (64.6)(B013) [5] {FA19}			08:41 (64.6)(B015) [12] {FA19}			09:13 (64.6)(B012) [1] {FA19}			09:45 (64.0)(B013) [8] {FA19}			10:33 (64.0)(B012) [3] {FA19}			11:12 (64.0)(B013) [2] {FA19}			11:51 (64.0)(B012) [4] {FA19}			12:30 (64.0)(B013) [2] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	0.8	0	1.1	1.3	0	1.3	1.5	0	1.5	1	0	1	4	0	4
.	.	.	.	.	.	.	.	.	0.9	0	2	1.7	1	2.7	1	0.5	2	2.3	0.3	3	0.5	0.5	4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	3.3	0	5.3	2.3	0.3	4.7	1	0.5	2.5	3	0	6	5.5	0	9.5
4	0	4	2.9	0	3	5	0	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	0	4	0.2	0	3.2	0	0	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.8	0.6	4.2	0.3	1.3	2.2	0	0	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.2	0	4.4	0.4	0.1	2.5	0	0	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.6	0	7	1.2	0	3.7	1	0	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1	0	8	0.4	0.3	3.8	0	0	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.4	0	9.4	0.7	0.7	3.8	0	0	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.2	0	9.6	0.1	0	3.9	0	0	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.8	0.4	10	0.6	0.2	4.3	0	0	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5.8	0.6	15.2	5.7	0.2	9.8	4	0	10	2.5	0	7.8	1.3	0	6	2.5	0	5	1	0	7	1	0	10.5
0	0	15.2	0.2	0	10	0	0	10	0.4	0	8.1	0	0	6	0	0	5	0	0	7	0	0	10.5
0	0	15.2	0.4	0	10.4	0	3	7	0	0	8.1	0	0.3	5.7	0	0	5	0	0.5	6.5	0	0.5	10
1	2.2	14	1.7	2.1	10	0	5	2	0.3	0.9	7.5	0	0.7	5	0.5	0	5.5	0.8	1.3	6	0.5	0.5	10
0	0	14	0.2	0.7	9.5	0	0	2	0	0	7.5	0	0	5	0	0	5.5	0.5	0.3	6.3	0	0	10
0.8	0	14.8	0.2	0	9.7	0	0	2	0	0.1	7.4	0	0	5	0	0	5.5	0	0.5	5.8	0	0.5	9.5
0	0	14.8	0.2	0.1	9.8	0	0	2	0.1	0.1	7.4	0	0	5	1	0	6.5	0.3	0	6	0	0	9.5
0.8	0.8	14.8	0.4	1.2	9	0	0	2	0	1.1	6.3	0	0.7	4.3	0.5	0.5	6.5	0.3	1	5.3	0	0.5	9
0.6	0	15.4	0.2	0.4	8.8	1	0	3	0	0.3	6	0	0	4.3	0	0.5	6	0	0.5	4.8	0.5	1	8.5
0.8	0.8	15.4	0.9	0.1	9.6	0	0	3	0.3	0.3	6	3	0.7	6.7	0.5	0	6.5	0.3	0.3	4.8	0	1.5	7
0	1.2	14.2	0	0.3	9.3	0	0	3	0	0.1	5.9	0	0.7	6	0	1	5.5	0	0	4.8	0	0	7
0.4	0.8	13.8	0.2	1.8	7.8	0	0	3	0.5	0.8	5.6	0.7	0.3	6.3	1.5	1	6	1	0	5.8	1.5	2	6.5
0	4	9.8	0	2.9	4.8	0	1	2	0.1	1.1	4.6	0	0.7	5.7	0	0	6	0	0.5	5.3	0	0	6.5
0	1.6	8.2	0	0.8	4.1	0	0	2	0.1	0.6	4.1	0	0.3	5.3	0	1	5	0	0.8	4.5	0	0	6.5
0.2	0.6	7.8	0.1	0.8	3.3	0	1	1	0	0.8	3.4	0.7	0.3	5.7	0	0	5	0	0	4.5	0	0	6.5
0.2	1.2	6.8	1.5	0.5	4.3	0	0	1	0.1	0.4	3.1	0.7	3.3	3	0	1.5	3.5	0	1.5	3	0.5	3.5	3.5
0	0.8	6	0	0	4.3	0	0	1	0	0	3.1	0	0	3	0	0	3.5	0	0	3	0	0	3.5
0	0	6	0	0.1	4.3	0	0	1	0	0	3.1	0	0	3	0	0	3.5	0	0	3	0	0	3.5
0	0.2	5.8	0.1	0.3	4.1	0	0	1	0	0.4	2.8	0.3	1	2.3	1	0	4.5	0	1	2	0	0	3.5
0	0.4	5.4	0	0.2	3.9	0	0	1	0	0	2.6	0	0	2.3	0	0	4.5	0	0	2	0	0	3.5
0	0.4	5	0	0	3.9	0	0	1	0	0.4	2.2	0	0	2.3	0	0	4.5	0	0	2	0	0	3.5
0	3.6	1.4	0	3.2	0.8	0	1	0	0	0.6	1.6	0	0	2.3	0	1	3.5	0	1	1	0	0.5	3
0	0	1.4	0	0	0.8	0	0	0	0	0	1.6	0	0	2.3	0	0.5	3	0	0	1	0	0	3
1.8	1.4	1.8	0.1	0.5	0.3	0	0	0	1.1	1	2	0	1.7	0.7	0.5	3.5	0.5	0	0.5	0.5	0	1	2
0	0	1.8	0	0.3	0.1	0	0	0	0	1.3	1	0	0	0.7	0	0	0.5	0	0.5	0	0	2	0
		15.4			10.4			10			8.1			6.7			6.5			7			10.5
23.4	21.6		18.9	19.1		11	11		10.5	10.3		12	12		11.5	11.5		10.5	10.5		14	14	

Trip (RouteVar)(Block) [Observations]

13:09 (64.0)(B012) [3] {FA19}			13:48 (64.0)(B013) [3] {FA19}			14:28 (64.0)(B012) [4] {FA19}			15:08 (64.0)(B013) [7] {FA19}			15:56 (64.0)(B012) [3] {FA19}			16:35 (64.6)(B008) [18] {FA19}			17:05 (64.6)(B010) [3] {FA19}			17:35 (64.6)(B014) [13] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
5	0	5	3.7	0	4	2.8	0	2.8	5.1	0	5.1	9.7	0	9.7	.	.	.	.	.	.	.	.	.
1.3	0	6.3	0	0	4	4	0	6.8	3.4	0.1	8.4	4	1	12.7	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.3	0	8.7	5.7	0.7	9	6	0	12.8	7.6	0.1	15.9	4	0.3	16.3	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13.1	0	13.1	17	0	17	15.1	0	21.5
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.8	0	15.9	2.7	0	19.7	3.8	0.1	22.4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	14.5	0.7	29.7	11	1.3	29.3	7.2	0.7	29.2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.4	0.7	31.4	3.7	0.7	32.3	1.3	1.4	29.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.7	0.2	31.9	0.3	0.3	32.3	0.5	1	28.6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.6	0.1	32.3	0	0.3	32	0.4	0.2	28.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.7	0.6	32.4	1.7	0	33.7	0.6	0.5	29
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.7	0.3	32.8	0.7	0.3	34	0.9	0.6	29.3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2.7	0.3	35.2	4	0.3	37.7	3.2	0.7	31.8
1	0	9.7	1.3	0	10.3	2	0	14.8	2.7	0	18.6	5.7	0.3	21.7	13.7	0.9	48.1	16.7	0.7	53.7	11.6	1.2	42.2
0	0	9.7	0	0	10.3	0.5	0	15.3	0.1	0	18.7	0.3	0	22	0.6	0.1	48.6	0.3	0	54	0.2	0.1	42.4
0	1	8.7	0	0	10.3	0	0.5	14.8	0	0.3	18.4	0.3	0	22.3	0.5	0.9	48.2	0.7	0.3	54.3	0.4	0.5	42.3
1.3	0.7	9.3	1	1	10.3	1	0.5	15.3	3.6	0.6	21.4	2.7	1.3	23.7	1.8	1.4	48.5	3	2	55.3	1.4	1.9	41.8
0	0.3	9	0	0	10.3	0.3	0.3	15.3	0.1	0.1	21.4	0.3	0	24	0.7	0.2	49.1	0	0	55.3	0.1	0.3	41.5
0	0	9	0	0	10.3	0	0	15.3	0.1	0	21.6	0	0.3	23.7	0.2	1.1	48.1	0	0.3	55	0	0.4	41.2
0.3	0	9.3	0.3	0	10.7	0.3	0.3	15.3	0	0.1	21.4	0.3	0.7	23.3	0.7	1.3	47.5	0	0.3	54.7	0.6	0.8	41
1	0	10.3	0	1.3	9.3	0.3	2.5	13	1.3	2	20.7	0	1.7	21.7	0.7	6.7	41.6	0	5.7	49	0.6	7.1	34.5
0.3	0.7	10	0.7	1.7	8.3	0	0.8	12.3	1.7	0.9	21.6	1.7	3	20.3	2.6	5.2	38.9	1	3.3	46.7	1.5	3.7	32.4
0	0	10	6.7	1	14	1.5	0.5	13.3	3.1	1.4	23.3	3.7	1.3	22.7	2.1	5	35.9	3.7	6	44.3	2.5	3.1	31.8
0	0.7	9.3	0	0.7	13.3	0	1	12.3	0	0.9	22.4	0	0.7	22	0.1	0.8	35.2	0	0.7	43.7	0.5	1.3	31
0.3	1	8.7	0	0.3	13	0	0.5	11.8	1.7	0.4	23.7	0.3	1.3	21	2.9	1.5	36.6	3	0.7	46	2.3	2.2	31.1
0	0	8.7	0	0	13	0	0.5	11.3	0	0	23.7	0	0	21	0	0	36.6	0	0	46	0	0.2	30.9
0	0.3	8.3	1.3	0.3	14	0	0	11.3	0	0.4	23.3	0.3	0.7	20.7	0.1	1.8	34.8	1	1.7	45.3	0.2	1.2	30
0.3	0.3	8.3	0.3	0	14.3	0.3	0	11.5	0.6	1.9	22	1.7	1.3	21	1.3	2.3	33.8	0.3	2	43.7	0.8	2.2	28.7
0	2	6.3	0.3	7.7	7	0.3	4	7.8	0	8.7	13.3	1	5.3	16.7	0.3	5.8	28.2	0	4.7	39	0.4	4.3	24.8
0	0	6.3	0	0.7	6.3	0	0.5	7.3	0	0.6	12.7	0	0	16.7	0.1	0.5	27.8	0	0	39	0	0.4	24.4
0	0	6.3	0	0.3	6	0	0.8	6.5	0	0.6	12.1	0	0.7	16	0.1	0.7	27.2	0	0.7	38.3	0	1.2	23.2
0	0	6.3	0	0.3	5.7	0	1.5	5	0	4	8.1	0	3.3	12.7	0.3	5.4	22	0.7	10	29	1.2	5.3	19.1
0	0	5.5	0	1	4.7	0	0	5.7	0	1	7.1	0	0.7	12	0.2	1	21.2	0	2	27	0	2.1	17
0	0	5.5	0	0	4.7	0	0.3	5.3	0	0.6	6.6	0.3	0.3	12	0	0.6	20.6	0	2	25	0	1	16
0	2.5	3	0	0	4.7	0	0.7	4.7	0	0.9	5.7	0	1.3	10.7	0	2.4	18.2	0	3.7	21.3	0	2.5	13.5
0	0.7	4	0	0.7	4	0	0.5	3.8	0	0.7	5	0	0.3	10.3	0	2.4	15.7	0	2.3	19	0	2.2	11.2
0	1.3	2.7	0	4	0	1.8	3	2.5	0.3	2.9	2.4	0.7	9.7	1.3	0.1	15.2	0.6	0	18.3	0.7	0.4	11.4	0.5
0	2.7	0	0	0	0	0	1	1.5	0	2.3	0.1	0	0.7	0.7	0	0.6	0	0	0.7	0	0	0.1	0.4
		10.3			14.3			15.3			23.7			24			49.1			55.3			42.4
13.1	14.2		21.3	21.7		21.1	19.7		31.4	31.5		37	36.2		67.3	66.7		71.5	71.3		57.7	61.9	

18:05 (64.6)(B012) [5] {FA19}			18:35 (64.6)(B008) [1] {FA19}			19:10 (64.6)(B010) [1] {FA19}			20:35 (64.0)(B043) [7] {FA19}			21:45 (64.0)(B043) [13] {FA19}			22:55 (64.0)(B017) [1] {FA19}			24:00 (64.0)(B017) [2] {FA19}			25:05 (64.3)(B017) [2] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	5	0	5.1	2.6	0	2.9	1	0	1	0	0	0	.	.	.
.	.	.	.	.	.	.	.	.	2.7	0.6	7.3	1.6	0	4.5	1	0	2	0	0	0	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.5	0	0.5
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0	0.5
.	.	.	.	.	.	.	.	.	7	0.1	14.1	6.3	0	10.8	3	0	5	2.5	0	2.5	0.5	0	1
17	0	17	15	0	15	8	0	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3.4	0	20.4	6	0	21	1	0	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4.8	0.6	24.6	6	0	27	4	0	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.4	2.6	22.4	1	1	27	1	0	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.8	1.2	22	0	1	26	0	0	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	0	22	0	0	26	0	0	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.2	0.8	21.4	0	0	26	0	0	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.4	0.2	21.6	1	0	27	1	0	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3.4	0.2	24.8	3	0	30	1	0	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10.8	1	34.6	15	0	45	8	0	24	5.1	0	19.3	2.5	0	13.4	2	0	7	0	0	2.5	0	0	1
0	0	34.6	0	0	45	0	0	24	0	0	19.3	0.2	0.1	13.5	0	0	7	0	0	2.5	0	0	1
0.2	0	34.8	1	0	46	0	0	24	0.3	0.1	19.4	0.1	0	13.5	0	0	7	0	0	2.5	0	0	1
0.8	1.2	34.4	1	1	46	0	1	23	0.9	0.6	19.7	0.2	0.5	13.2	0	0	7	0	0.5	2	0	0	1
0	0.6	33.8	1	0	47	0	0	23	0	0	19.7	0	1.4	11.8	0	0	7	0	0	2	0	0	1
0	0.8	33	0	0	47	0	0	23	0.1	0.7	19.1	0	0.5	11.3	0	0	7	0	0	2	0	0	1
1	0.4	33.6	0	0	47	0	0	23	0.1	0.7	18.6	0	0.4	10.9	0	1	6	0	0	2	0	0	1
0	4.6	29	0	0	47	1	1	23	0.3	3.7	15.1	0.6	1.4	10.2	0	1	5	0	0	2	0	0	1
1	1.4	28.6	0	9	38	1	1	23	0.6	0.4	15.3	0.5	0.6	10	1	0	6	1	0	3	0	0	1
2	2.8	27.8	1	5	34	0	3	20	0.6	1.3	14.6	0.8	0.7	10.2	1	0	7	1	0	4	0.5	0	1.5
0	2.8	25	0	2	32	0	0	20	0	0.4	14.1	0.1	0.8	9.4	0	1	6	0	0	4	0	0	1.5
0.8	1.6	24.2	2	1	33	0	3	17	0.9	0.7	14.3	1.1	0.2	10.3	0	0	6	0	0	4	0	0	1.5
0.2	0.6	23.8	0	0	33	0	0	17	0	0	14.3	0	0	10.3	0	0	6	0	0	4	0	0	1.5
0.8	1.4	23.2	0	1	32	0	4	13	0.4	2.3	12.4	0.1	0.9	9.5	0	2	4	0	0	4	0	0.5	1
1.6	1	23.8	2	0	34	0	0	13	0.6	0.9	12.1	0	0.7	8.8	0	0	4	0	0	4	0	1	0
0.2	4.4	19.6	0	5	29	0	2	11	0.3	2	10.4	0.3	2.2	6.9	0	2	2	0	1	3	0	0	0
0	0	19.6	0	0	29	0	0	11	0.1	0.6	10	0	0.2	6.7	0	0	2	0	0	3	0	0	0
0	1.8	17.8	0	0	29	0	1	10	0	0.3	9.7	0.2	0.4	6.5	0	0	2	0	0	3	0	0	0
0.2	4.4	13.6	0	9	20	0	0	10	0	1.4	8.3	0.1	0.9	5.7	0	2	0	0	1	2	0	0	0
0	1.4	12.2	0	0	20	0	3	7	0	1.4	6.9	0	0.5	5.2	0	0	0	0	0	2	.	.	.
0	0	12.2	0	0	20	0	0	7	0	0.4	6.4	0	1.2	4	0	0	0	0	0	2	.	.	.
0	2.8	9.4	0	3	17	0	2	5	0	0.7	5.7	0	0.1	3.9	0	0	0	0	0	2	.	.	.
0	1.4	8	0	4	13	0	0	5	0	0.6	5.1	0	0.6	3.3	0	0	0	0	0	2	0	0	0
0	7	1	2	15	2	0	3	2	0.3	5.3	0.3	0.6	3.1	1.2	0	0	0	0.5	1.5	1	0	0	0
0	1	0	0	0	2	0	2	0	0	0	0.3	0	0.7	0.5	0	0	0	0	1	0	0	0	0
		34.8			47			24			19.7			13.5			7			4			1.5
50	50		57	57		26	26		25.3	25.2		17.9	18.1		9	9		5	5		1.5	1.5	

Total		
On	Off	Load
43.5	0	44.5
24.4	4	65.7
0.5	0	0.5
0	0	0.5
68	2	132.1
115.6	0	122.1
19.9	0.4	138.8
51.9	8.3	183
22.4	12.3	192.9
8.8	3.7	198
4.2	0.9	201.2
7.6	2.9	206
8	2.4	211.5
19.5	2.4	228.6
136.3	8.4	489
3.5	1.3	491.2
5.5	8.7	487.7
24.8	34.1	478.3
3.7	9	473
1.4	5.2	469.3
15.7	7.2	477.8
8.1	47.3	438.5
18.1	35.3	421.3
38.1	42.4	417.1
0.7	21.6	396.1
21.9	27.6	390.5
0.3	20.8	370
5.7	24.4	351.3
10.9	18.1	344.1
6.6	73.6	277
0.2	8.9	268.4
0.3	8.8	259.9
4	53.2	210.9
3.2	14.7	200.4
0.3	7.2	193.4
0	41	152.6
0	16.9	136.7
12.6	115.4	36.4
0	24.9	12
		491.2
716.2	715.3	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

	05:00 (66.6)(B339) [63] {FA19}			05:15 (66.6)(B341) [62] {FA19}			05:30 (66.6)(B319) [36] {FA19}			05:45 (66.6)(B329) [51] {FA19}			06:00 (66.6)(B334) [25] {FA19}			06:10 (66.6)(B337) [33] {FA19}			06:19 (66.4)(B120) [71] {FA19}			06:20 (66.6)(B338) [63] {FA19}			06:30 (66.2)(B082) [71] {FA19}			06:30 (66.
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
1 - 912 - TREMONT ST @ WASHINGTON ST																						3.3	0	3.4				0.6	0	0.6	
2 - 913 - WASHINGTON ST @ BRECK AVE																						15.5	0.3	18.9				2.6	0.2	3.1	
3 - 915 - WASHINGTON ST @ LANGLEY RD																						1.1	0	20.6				1.5	0	4.7	
4 - 916 - WASHINGTON ST @ LAKE ST																						4.6	0.1	25.1				0.5	0.1	5.2	
5 - 917 - WASHINGTON ST @ FOSTER ST																						3.8	0	28.8				0.3	0	5.4	
6 - 918 - WASHINGTON ST @ CHESTNUT HILL																						1.1	0.4	29.5				0.2	0.2	5.4	
7 - 919 - WASHINGTON ST OPP WALDO TERR																						2.2	0.2	31.6				0.3	0.1	5.6	
8 - 920 - CAMBRIDGE ST @ WASHINGTON ST																						2	0.2	33.4				0.4	0.1	6	
9 - 19201 - CAMBRIDGE ST OPP ELKO ST																						0.1	0.1	33.5				0	0	6	
10 - 922 - CAMBRIDGE ST OPP DUSTIN ST																						0.3	0	33.7				0.1	0.1	6	
11 - 924 - CAMBRIDGE ST @ GORDON ST																						0.9	0	34.6				0.1	0	6.1	
12 - 925 - CAMBRIDGE ST @ BARROWS ST																						0.3	0.8	34.1				1.5	0.3	7.3	
13 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	2	0	2	1.2	0	1.3	1.6	0	1.6	2.9	0	2.9	1.5	0	1.6	1.8	0	1.9							2.8	0	2.8				2.5
14 - 32549 - ELIOT ST @ BENNETT ST	0.4	0	2.5	2.1	0	3.3	3.1	0	4.7	1	0	3.9	2.8	0	4.4	2.3	0	4.2							1.5	0	4.3				2.6
15 - 2550 - JFK ST @ ELIOT ST	1.3	0	3.8	0.1	0	3.5	0.1	0	4.8	0.2	0	4.1	0.4	0	4.8	0.2	0	4.4							0.3	0	4.6				1
16 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0.1	0	3.9	0.1	0	3.6	0.1	0.5	4.4	0.1	0	4.3	0.4	0	5.2	0.2	0.1	4.5							0.2	0.1	4.7				0.6
17 - 2553 - N HARVARD ST @ WESTERN AVE	0.1	0	4	0.3	0.5	3.4	0.2	0.2	4.4	1.2	0.4	5.1	3.8	0.6	8.4	1.5	0.4	5.6							1.4	0.2	5.9				1.5
18 - 2554 - N HARVARD ST @ FRANKLIN ST	1.4	0	5.4	0.3	0.2	3.5	0.8	0.7	4.5	3.1	0.1	8.1	8.1	0.2	16.4	6.7	0.2	12							3.2	0	9.1				5.2
19 - 2555 - N HARVARD ST @ COOLIDGE RD	0.4	0	5.8	0.1	0	3.6	0	0	4.5	0.1	0	8.3	1.3	0.2	17.5	0.7	0.1	12.6							0.9	0.1	9.9				2.6
20 - 2556 - N HARVARD ST @ HOOKER ST	0.3	0.5	5.6	0	0	3.6	0.2	0	4.7	1.6	0.5	9.4	3.8	0.1	21.2	4.5	0.1	17.1							2.2	0	12.1				1.5
21 - 1191 - CAMBRIDGE ST @ LINCOLN ST	0.1	0	5.7	0.1	0	3.6	0.5	0	5.1	0.4	0	9.8	3.7	0	24.9	2.2	0	19.2							1.1	0	13.2				3
22 - 1193 - CAMBRIDGE ST @ FRANKLIN ST	0	0	5.7	0.1	0	3.8	0.3	0	5.4	0.1	0.3	9.6	0.4	0.3	25	0.6	0.3	19.5							0.5	0.3	13.4				1.1
23 - 1195 - CAMBRIDGE ST @ EMERY RD	1	0.1	6.6	0.4	0	4.1	0.1	0.3	5.3	1.1	0.1	10.6	2.6	0.4	27.2	0.8	0.3	20							0.4	0.5	13.3				2.3
24 - 926 - BRIGHTON AVE @ CAMBRIDGE ST	1.5	0.4	7.6	1.5	0.1	5.4	1.2	0.1	6.3	5.3	0.2	15.7	4.4	0.3	31.3	4.6	0.7	23.9	2	0.3	35.8	4.6	0.9	17	3.7	0.2	10.8	8.1	
25 - 927 - BRIGHTON AVE @ ALLSTON ST	0.2	0.4	7.4	0.1	0.2	5.4	0.4	0	6.7	0.6	0.1	16.3	0.7	0	32	0.7	0.2	24.5	1	0.4	36.5	0.9	0.2	17.7	1.8	0.1	12.5	1.2	
26 - 10928 - HARVARD AVE @ BRIGHTON AVE	1.4	0.1	8.7	0.9	0	6.2	1.3	0	8	3.5	0.1	19.7	1.6	0.3	33.2	2.4	0.3	26.5	1.6	0.4	37.7	0.9	0.2	18.4	2.2	0.5	14.2	1.9	
27 - 1302 - HARVARD AVE @ COMMONWEALTH AV	4.1	1.2	11.6	2.4	0	8.6	5.3	0.4	12.9	4.5	0.5	23.7	6.2	1.6	37.8	4.5	1	30	5.1	0.7	42.1	5.3	0.6	23.1	8	0.6	21.6	3.8	
28 - 11302 - HARVARD ST @ VERNDALE ST	0.7	0	12.3	0.2	0	8.8	0.2	0.1	13.1	1	0.1	24.6	1.7	0.7	38.8	1.7	0.3	31.4	1.5	0.1	43.5	1.2	0.2	24.2	1.9	0.1	23.5	1.9	
29 - 1304 - HARVARD ST @ COOLIDGE ST	0	0	12.3	0.3	0.2	8.9	0.3	0.4	12.9	0.1	0.3	24.4	0.8	0.1	39.6	1.2	0	32.6	0.4	0.1	43.8	0.2	0.1	24.3	0.6	0.2	23.9	0.6	
30 - 1306 - HARVARD ST @ SHAILER ST	0	0	12.4	0	0	8.9	0.1	0.5	12.5	0.4	0.1	24.7	0.1	0.3	39.4	0.3	0.4	32.5	0.3	0.1	44	0.1	0.5	24	0.2	0.3	23.7	0.2	
31 - 1308 - HARVARD ST @ BEACON ST	1	0.5	12.8	0.4	0.4	8.8	0.7	0.3	12.9	0.6	0.5	24.8	1.6	1.3	39.6	2.5	1.1	33.9	1.4	0.8	44.6	0.6	0.8	23.7	0.6	0.5	23.8	0.6	
32 - 1309 - HARVARD ST @ MARION ST	0.1	0	12.9	0.1	0	8.9	0.1	0	12.9	0.7	0	25.5	0.3	0	39.9	0.1	0.2	33.9	0	0	44.6	0.1	0	23.8	0	0	23.9	0.1	
33 - 1310 - HARVARD ST @ HARRIS ST	0	0.2	12.7	0	0	8.9	0	0	12.9	0	0	25.5	0	0	39.9	0.2	0.2	33.9	0.2	0.2	44.7	0.2	0.1	23.9	0.1	0.4	23.6	0.2	
34 - 1311 - HARVARD ST @ SCHOOL ST	0	0	12.7	0.1	0.4	8.6	0	0.2	12.7	0	0	25.5	0.6	0.1	40.3	0.2	0.2	33.8	0.3	0.1	45	0.1	0.3	23.6	0.1	0.1	23.6	0.1	
35 - 1313 - HARVARD ST @ WASHINGTON ST	0	3.5	9.3	0.4	0.7	8.3	0.3	0.5	12.5	0.1	1.4	24.3	0.9	2	39.2	0.6	0.8	33.7	0.6	0.6	45	0.6	0.8	23.5	0.4	1.3	22.7	0.3	
36 - 1555 - WASHINGTON ST @ WALNUT	0.1	0.5	8.9	0	0.2	8.2	0.3	0.3	12.5	0.4	0.2	24.4	0.6	1.3	38.6	0.5	0.5	33.7	0.4	0.2	45.2	0.7	0.2	23.9	0.8	0.1	23.4	0.9	
37 - 1314 - HUNTINGTON AVE @ S HUNTINGTON	1.2	2.4	7.6	0.2	0.6	7.8	0.1	3.5	9	0.5	5	19.9	0.8	1.3	38.1	0.3	2.4	31.6	0.3	0.9	44.6	0.3	2	22.3	0.5	1.7	22.2	0.4	
38 - 1315 - HUNTINGTON AVE @ PARKER HILL	0.2	0.1	7.7	0.1	0.1	7.8	0.4	0.3	9.1	1.8	0.3	21.5	3.2	1.1	40.2	2.4	0.9	33	2.4	0.2	46.8	4.1	0.3	26.1	4.3	0.4	26.2	3.1	
39 - 1317 - HUNTINGTON AVE OPP FENWOOD RD	1	2.6	6.1	0.2	2.2	5.7	0.6	3.6	6.1	1.2	6.2	16.4	1.3	8.1	33.4	1.3	6.8	27.5	1.1	2.4	45.5	1.3	6	21.4	2.4	4.6	24	2.5	
40 - 1319 - TREMONT ST OPP WIGGLESWORTH S	1.7	0.2	7.6	1	1	5.7	0.4	1.3	5.3	1	0.8	16.6	1.3	0.4	34.3	0.6	0.8	27.2	0.7	0.5	45.6	1.2	0.3	22.2	1.3	0.7	24.6	1.4	
41 - 1320 - TREMONT ST @ SAINT ALPHONSUS	0.1	0	7.6	0.1	0	5.7	0	0.1	5.1	0.7	0.2	17.1	0.2	0.4	34.1	0.1	0.2	27.2	0.3	0.3	45.6	0.2	0.3	22.1	0.6	1	24.1	0.6	
42 - 1322 - TREMONT ST @ SEWALL ST	0	0.1	7.5	0	0	5.7	0	0.1	5.1	0	0.4	16.8	0	0.4	33.7	0	0.2	26.9	0	0.2	45.5	0.1	0.6	21.7	0	0.4	23.8	0.1	
43 - 1323 - TREMONT ST @ COLUMBUS AVE	0.9	2	6.4	0.1	2.4	3.5	0.6	1.5	4.1	0.4	3.9	13.3	2.4	5.6	30.6	5.9	3.5	29.3	6.1	1.9	49.7	10.4	4.4	27.7	13	3	33.7	10.9	
44 - 11257 - MALCOLM X BLVD @ KING ST	0.1	0	6.5	0.1	0	3.5	0.1	0	4.2	0.2	0.2	13.3	1.5	1	31.1	0.8	1.5	28.7	0.6	0.8	49.5	1.6	0.7	28.6	2.3	0.7	35.4	1.6	
45 - 1259 - MALCOLM X BLVD OPP MADISON PA	0	0	6.5	0	0	3.5	0	0	4.2	0	0.1	13.2	0	0.6	30.6	0	0.1	28.6	0	0.1	49.5	0.1	0.5	28.2	0.1	0.7	34.7	0.1	
46 - 11323 - MALCOLM X BLVD OPP O'BRYANT H	0	0	6.5	0	0	3.5	0	0.8	3.4	0	2.8	10.5	0.1	8.4	22.2	0.2	16.8	12	0.8	20.9	29.4	0.1	20.1	8.3	0.1	26.3	8.5	0.2	
47 - 11259 - MALCOLM X BLVD @ SHAWMUT AVE	0	0.2	6.3	0	0	3.5	0	0.1	3.4	0	0.3	10.2	0	0.8	21.5	0	0.4	11.6	0	0.4	29.1	0	0.6	7.7	0	1.2	7.3	0	
48 - 64000 - DUDLEY STATION	0	6.3	0	0	3.4	0.1	0	3.4	0	0	10.2	0	0	21.5	0	0	11.6	0	0.3	2.6	26.8	0	7.7	0	0	7	0.2	0	
49 - 399 - WARREN ST OPP KEARSARGE AVE																			0	0	26.8								
50 - 40001 - WARREN ST @ DABNEY PL																			0	0	26.8								
51 - 401 - WARREN ST @ WALNUT AVE																			0.1	0	26.8								
52 - 404 - WARREN ST OPP WAVERLY ST																			0.2	0	27								
53 - 405 - WARREN ST OPP WOODBINE ST																			0.2	0	27.2								
54 - 406 - WARREN ST @ ML KING BLVD																			0.2	0	27.3								
55 - 407 - WARREN ST @ TOWNSEND ST																			0.4	23.5	4.3								
56 - 410 - WARREN ST @ WAUMBECK ST																			0.1	0	4.3								
57 - 411 - WARREN ST @ BRUNSWICK ST																			0.1	0	4.4								
58 - 412 - WARREN ST @ CRAWFORD ST																			0.1	2.1	2.4								
59 - 413 - BLUE HILL AVE @ WAYNE ST																			0.1	0.6	1.9								
60 - 414 - BLUE HILL AVE @ SEAVER ST																			0	0.1	1.8								
61 - 1565 - FRANKLIN PARK LOOP @ ZOO ENTR																			0	1.3	0.5								
Maximum			12.9			8.9			13.1			25.5			40.3			33.9			49.7			28.6			35.4		
Total	21.4	21.3		13	12.6		19.4	19.2		34.8	35.3		59.1	59.4		52.6	52.6		64.1	64.9		49.4	49.6		53.1	53.2		64.7	

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}			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}			08:07 (66.6)(B337) [46] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	2.5	3.4	0	3.5	2.1	0	2.1	1.9	0	2	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	4.2	0	4.2
0	5	1.9	0	5.5	2.6	0	4.8	2.9	0	4.9	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	5.1	0	9.3
0	6	0.9	0	6.5	0.9	0	5.6	0.7	0	5.6	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	1.3	0	10.6
0.3	6.2	0.2	0.1	6.6	0	0.2	5.4	0.2	0.3	5.5	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	0.1	0.5	10.3
0.3	7.4	0.8	0.3	7.1	1	0.5	5.9	1	0.5	6	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	1.1	1.3	10.1
0.1	12.5	4.1	0.2	10.9	7.4	2.9	13.2	4.2	0.3	9.9	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	3.2	0.5	12.8
0	15.1	0.8	0.1	11.7	1.9	0.1	15	4.3	0	14.1	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	2.1	0.2	14.7
0.6	16.1	0.9	0.2	12.4	2.2	0.3	16.9	3.9	0.1	17.9	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	1.7	0	16.4
0	19	2.2	0.1	14.6	3.3	0	20.2	2.9	0	20.8	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	1	0.1	17.3
0.6	19.6	2.3	0.3	16.6	2.4	0.9	21.7	1.7	0.4	22	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	0.7	1	17
1.5	20.5	1.1	1.6	16.1	3.7	1.9	23.5	1.9	1.2	22.8	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	1.6	1	18
1.8	26.8	5	1.7	19.5	6.3	3.7	26.1	4.2	8.6	18.4	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	4	1.7	20.4
0.4	27.6	1.2	0.1	20.6	1.3	0	27.4	1.9	0.4	19.8	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	2.4	0.2	22.6
0.1	29	4	0.1	24.5	4.1	0.2	31.3	4	0.1	23.7	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	3.6	0.6	25.1
0.8	32	8.9	1.2	32.1	9.8	1.5	39.8	12	1.1	34.5	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	8.4	1.5	31.9
0.2	33.8	3.1	0	35.1	3.4	0	42.8	4	0	38.5	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	3.2	0.2	35.3
0.2	34.2	1.1	0.1	36.1	1.1	0.2	43.6	1.4	0.3	39.6	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	1.5	0.4	36.4
0.2	34.2	0.6	0.5	36.2	0.6	0.9	43.4	0.7	0.3	40	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	0.6	0.3	36.7
1.6	33.2	1.8	1.2	36.8	2.9	2.1	44.1	3	2.1	40.9	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	3.3	3.5	36.6
0	33.3	0.5	0.1	37.3	0.9	0.4	44.7	0.7	0.3	41.3	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	0.8	0.3	37
0.4	33.1	0.5	0.4	37.3	0.3	0.2	44.8	0.3	0.1	41.5	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	0.7	0.5	37.2
0.1	33.1	0.4	0.2	37.5	0.5	0.6	44.7	0.7	1.2	40.9	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	0.9	1	37.2
2.2	31.2	0.6	3.3	34.8	0.8	2.9	42.6	0.7	3.7	37.9	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	1.4	2.5	36.1
1.6	30.5	0.5	0.5	34.8	0.7	0.4	43	0.8	0.5	38.2	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	0.8	0.7	36.3
1.4	29.6	1.4	4	32.2	1	6	38	1	4.1	35.1	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	1	3.6	33.7
0.2	32.5	4.2	1	35.3	5.2	1.2	41.9	5.1	1.7	38.6	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	2	1.3	34.4
10	24.9	3.3	12.6	26	2.9	13.5	31.3	3	15.8	25.8	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	1.6	14	22.1
0.7	25.7	3.4	0.8	28.6	2.1	1.2	32.2	1.9	1.4	26.2	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	1.2	1.6	21.7
1.3	25.1	0.9	1.4	28.1	0.4	1.4	31.3	0.3	0.9	25.7	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	0.4	1.8	20.3
0.1	25	0.4	0.5	28	0.4	0.7	31	0.3	1.2	24.8	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	0.2	1.3	19.2
3.5	32.4	8.1	6.1	30	5.2	8.1	28.1	3.6	7	21.4	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	1.7	7.6	13.3
0.6	33.3	2	1.6	30.4	1.2	1.9	27.4	0.9	1.5	20.8	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	0.3	0.8	12.9
1.3	32.1	0.2	3.5	27	0.1	5.1	22.3	0	3.8	17.1	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	0	0.8	12.1
24.9	7.4	0	12.9	14.1	0	5.4	16.9	0	3.7	13.4	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	0	0.5	11.6
0.8	6.6	0	1.4	12.8	0.1	1.1	15.9	0	1.7	11.7	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	0	1.8	9.8
6.6	0	0	12.7	0.1	0	13.1	2.8	0	11.7	0	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	0	9.7	0.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	34.2			37.5			44.8			41.5			35.2			43.1			37.3			43.1			44.8			46.3			51.7			37.2
64.4		70.7	70.8		78.8	78.6		76.1	76		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		62.1	62.8	

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}			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) [2	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
0	10.4	0.2	0	9.6	0.1	0	5.9	1	0	7	0	0	7.9	0	0	7	0	0	7.5	0	0	10.7	0	0	7.1	0.1	0	9.1	0.1	0	8.5	0	0	14
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		41.3			35.4			31.1			24.6			26.3			26.7			28.6			31.1			24.3			23.5			21.2		
69.2	69.2		61.8	61.2		55.5	55.8		44.6	44.8		49.2	49.5		50.4	50.1		53.2	53		59.5	59.3		47.4	47.4		47.6	47.6		43.3	42.9		59.6	59.7

9] {FA19}	10:08 (66.6)(B335) [31] {FA19}			10:21 (66.6)(B337) [39] {FA19}			10:34 (66.6)(B339) [38] {FA19}			10:47 (66.6)(B326) [38] {FA19}			11:00 (66.6)(B319) [34] {FA19}			11:13 (66.6)(B321) [42] {FA19}			11:26 (66.6)(B328) [34] {FA19}			11:39 (66.6)(B333) [32] {FA19}			11:52 (66.6)(B334) [37] {FA19}			12:05 (66.6)(B335) [34] {FA19}			12:18 (66.6)(B337) [32] {FA19}			12:31 (66.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
4.1	4.9	0	5	3.6	0	3.8	4.7	0	4.7	3.6	0	3.6	4.3	0	4.4	4.9	0	4.9	5	0	5	5	0	5	4.6	0	4.6	6.1	0	6.1	8.5	0	8.6	6.3		
9.2	6.1	0	11.1	3.7	0	7.3	3.5	0.1	8.2	3.9	0	7.5	4.2	0	8.6	4	0	8.8	4.4	0	9.4	4.7	0.1	9.7	4.3	0.1	8.7	4.3	0	10.2	5.9	0.1	14.5	5.2		
10.1	2.1	0.1	13.1	1.3	0.1	8.6	1.2	0	9.4	1.1	0.1	8.3	1.2	0.1	9.8	1.9	0	10.6	1.8	0	11.2	2.1	0	11.8	2.2	0	11.3	2	0	12.2	1.5	0.1	15.7	2.7		
9.9	0.4	0.9	12.5	0.4	0.5	8.5	0.4	0.6	9.2	0.7	0.2	8.8	0.6	0.2	10.2	0.7	0.3	11	0.3	0.2	11.3	0.6	0.6	11.8	0.7	0.4	11.6	0.5	0.3	12.4	1.1	0.3	16.5	0.5		
10.5	1	1.6	12	1.4	0.7	9.2	1.5	0.7	10	1.2	0.8	9.2	1.4	0.9	10.7	1.3	1.1	11.2	1.5	0.8	12	1.4	1.3	12	1.4	1.8	11.2	1.3	0.9	12.8	1.5	1.4	16.5	1.2		
12.2	2.1	0.3	13.8	1.3	0.2	10.3	1.3	0.4	10.8	1.6	0.3	10.6	1	0.4	11.4	1.7	0.2	12.7	2	0.5	13.5	1.8	0.6	13.2	1.2	0.4	12	1.4	0.3	13.9	2	0.3	18.2	1.1		
12.9	0.9	0.5	14.2	0.9	0.3	10.9	0.5	0.2	11.1	0.5	0.3	10.8	0.7	0.2	11.9	0.8	0.2	13.3	0.6	0	14.1	0.6	0.5	13.3	0.5	0.4	12.1	0.8	0.3	14.4	0.6	0.2	18.5	0.5		
13.3	0.6	0.5	14.3	0.6	0.3	11.3	0.6	0.2	11.5	0.6	0.2	11.2	0.7	0.3	12.3	0.8	0.4	13.7	0.7	0.5	14.2	0.4	0.7	13.1	0.5	0.6	12	0.7	0.5	14.6	0.8	0.8	18.6	0.4		
14.5	1.4	0.1	15.5	1	0	12.3	0.5	0.1	12	0.3	0	11.4	0.4	0.1	12.5	0.5	0.1	14.1	0.6	0.2	14.6	0.6	0.1	13.6	0.4	0.1	12.2	0.4	0.1	14.9	0.5	0.1	19.1	0.5		
13	0.5	1.4	14.6	0.8	0.9	12.2	0.7	1	11.7	0.4	1.5	10.3	0.1	1.7	10.9	0.7	1.2	13.6	0.4	1.1	13.9	0.6	1	13.2	0.1	0.8	11.6	0.4	1.4	13.9	0.3	0.8	18.5	0.5		
12.8	1.2	1	14.8	0.9	1	12.1	0.6	0.6	11.7	0.3	0.5	10.1	0.6	0.7	10.9	0.8	0.9	13.5	1.2	1	14.1	0.4	1.3	12.4	0.6	0.5	11.7	0.6	1	13.5	0.6	1	18.1	0.9		
16.5	4	1.3	17.5	3.4	1.2	14.4	2.8	1.2	13.4	2.7	1	11.8	2.9	1.2	12.6	2.4	1.5	14.4	2.9	1.3	15.7	2.8	1.4	13.8	3.4	1.1	14.1	4.6	1.1	17.1	3.8	2.4	19.5	3.4		
17.7	2.3	0.6	19.2	2.1	0.6	15.9	1.9	0.8	14.6	2	0.5	13.3	1.9	0.6	13.8	2	0.6	15.8	1.6	0.9	16.3	1.5	0.7	14.7	1.1	0.5	14.6	3	0.8	19.3	2.9	0.9	21.5	2.1		
20.1	3.6	1	21.9	3.9	0.7	19.2	3.1	0.8	16.8	1.8	0.7	14.3	3.1	0.6	16.3	2.5	0.8	17.4	2.9	1.1	18.1	2.9	1.3	16.3	2.4	1.2	15.7	3.6	1.1	21.8	2.5	1.1	22.9	2.9		
26.3	7.8	2.1	27.5	6.3	2.2	23.3	5.5	2.1	19.9	6	1.3	19.1	5.1	2.1	19.2	6.6	2.5	21.5	6.5	2.2	22.4	5.3	1.8	19.8	4.4	2.4	17.7	6.2	2	26	6.1	2.8	26.2	6.1		
27.8	1.9	0.6	28.8	1.9	0.5	24.7	2.3	0.6	21.6	1.7	0.4	20.3	1.9	0.5	20.6	2.1	0.3	23.4	2.5	0.6	24.4	2.1	0.5	21.4	1.5	0.5	18.7	2.7	0.5	28.2	2.3	0.5	27.9	2.3		
27.4	0.8	0.8	28.8	0.6	0.5	24.8	1.1	0.6	22.1	0.7	0.3	20.7	0.6	0.4	20.9	0.4	0.5	23.3	0.6	0.6	24.4	1.2	0.6	22	0.6	0.4	18.9	0.4	0.4	28.3	0.6	0.8	27.7	0.6		
27.9	1.1	0.9	29	0.6	0.5	24.8	1	0.4	22.7	0.8	0.4	21.2	0.9	0.5	21.3	0.9	0.6	23.5	0.6	0.4	24.5	0.7	0.6	22.1	0.7	0.4	19.3	0.5	0.7	28.1	0.6	0.8	27.5	0.7		
26.7	2.1	3.5	27.6	2.9	4.4	23.4	3.1	4	21.8	2.9	3.5	20.6	2.7	3.9	20.1	3.6	4	23.1	2.9	3.8	23.7	3.5	3.8	21.8	3.4	3.2	19.5	3.6	3.7	28.1	4.7	3.9	28.2	3.3		
27.4	0.7	0.2	28.2	0.8	0.4	23.8	0.4	0.4	21.8	0.4	0.3	20.6	1.1	0.4	20.8	0.9	0.3	23.7	0.6	0.4	23.9	0.8	0.4	22.3	0.7	0.5	19.7	1.3	0.5	28.9	0.9	0.4	28.7	1.1		
27.5	0.5	0.5	28.1	0.3	0.5	23.5	0.4	0.6	21.7	0.4	0.5	20.5	0.5	0.5	20.9	0.6	0.5	23.9	0.7	0.6	24	0.9	0.6	22.6	0.8	0.4	20.1	0.8	0.5	29.1	1.1	0.8	29	0.9		
28.1	0.6	0.7	28.1	0.7	0.8	23.5	0.8	0.9	21.6	0.8	0.7	20.6	0.7	0.6	20.9	0.6	0.9	23.6	0.5	0.8	23.7	0.6	0.8	22.4	0.9	0.6	20.4	0.4	0.5	29.1	0.8	0.8	29	0.5		
26.1	1.2	3.2	26.1	1.4	2.8	22.1	1.5	2.3	20.8	1.5	2.1	19.9	1.4	2	20.3	1.3	2.8	22.1	1.1	2.3	22.5	1.3	1.8	21.9	0.9	1.5	19.9	1.1	2.4	27.9	1.4	2.3	28	1		
26.7	0.8	0.9	25.9	1.1	1.7	21.4	1	0.8	20.9	0.8	0.7	20	0.9	0.9	20.4	1	1	22.1	0.7	1.4	21.8	1.3	0.9	22.4	1.2	1	20.1	0.9	1.4	27.3	1.1	1.1	28	1.1		
26	0.4	2.1	24.2	0.6	1.9	20.2	0.8	1.2	20.5	0.7	0.8	19.9	0.8	1.6	19.6	0.9	1.9	21.1	0.8	1.7	20.9	0.7	2	21	0.9	1.6	19.3	0.4	2	25.7	0.8	3	25.8	0.9		
26.4	2	1.3	25	2	1.1	21.1	2	1.5	21	1.4	1.9	19.5	2	1.1	20.5	2.2	0.9	22.4	1.6	1	21.5	2	1.3	21.8	1.1	1.1	19.4	1.6	1.6	25.7	1.6	1.4	26	1.6		
20.8	0.6	6.9	18.7	1.3	5.9	16.5	1	5.4	16.6	1.2	5.9	14.8	1.6	4.5	17.6	1.9	4.9	19.5	1.2	4.4	18.3	1.7	5.3	18.2	1.5	4.6	16.3	1.4	5.6	21.6	1.3	5.4	22	1		
24	3.7	1.6	20.8	3.6	0.9	19.1	4.3	1.3	19.6	3.6	1	17.4	4.6	1.4	20.7	4.4	1.1	22.8	4	1.1	21.1	6.2	0.9	23.5	3.8	1.1	19	4.2	1.5	24.3	4	1.3	24.7	5		
23.9	0.5	1.1	20.2	0.6	1	18.8	0.7	0.6	19.8	0.3	0.7	17	1	0.9	20.9	0.7	0.7	22.8	0.9	0.8	21.2	0.9	0.7	23.7	0.5	0.5	18.9	0.7	1.1	23.9	0.8	0.4	25.1	0.8		
23.4	0	0.7	19.5	0.2	1	18	0.1	0.5	19.4	0.1	0.6	16.6	0.3	0.7	20.5	0.3	0.7	22.4	0.3	0.5	21	0.2	0.8	23.2	0.2	0.6	18.5	0.3	0.7	23.4	0.3	0.5	24.9	0.2		
17.1	1.4	5.1	15.8	1.2	5.9	13.3	0.8	5.6	14.6	0.9	5.9	11.6	1.9	6.4	16.1	1.5	7.6	16.3	1.3	6	16.4	1.3	7.7	16.8	0.9	6.5	12.9	1.4	6.9	17.9	1.1	7.4	18.5	1.1		
16.9	0.5	1.1	15.3	0.6	1.3	12.7	0.7	1.4	13.9	0.9	1.4	11.1	0.6	1.3	15.4	1.2	1.7	15.8	0.8	1.6	15.6	1.3	1.8	16.3	1	2	11.9	1	2.7	16.1	0.8	2.1	17.3	1.1		
16.8	0	0.3	15.1	0.1	0.2	12.6	0.1	0.1	13.9	0	0.3	10.8	0	0.3	15.2	0	0.3	15.6	0	0.2	15.4	0	0.1	16.1	0.1	0.1	11.9	0	0.4	15.8	0.1	0.2	17.2	0		
16.5	0	0	15.1	0	0.3	12.3	0	0.1	13.8	0	0	10.7	0.1	0.4	14.8	0.2	0.4	15.3	0.1	0.2	15.3	0.1	0.1	16.1	0.1	0.1	11.9	0.1	0.4	15.5	0.3	0.2	17.3	0.2		
14	0	2	13.1	0	1.5	10.7	0.1	1.8	12.1	0	1.6	9.1	0	2.4	12.5	0	2.9	12.5	0.1	2.5	12.9	0.1	2.5	13.7	0	2	9.9	0.1	2.2	13.4	0	2.2	15.2	0.2		
0	0	13.1	0	0	10.6	0.2	0	12	0.1	0	9	0.1	0	12.4	0	0	12.5	0	0	12.9	0	0	13.7	0	0	9.9	0	0	13.4	0.1	0	15.2	0	0		
28.1			29			24.8			22.7			21.2			21.3			23.9			24.5			23.7			20.4			29.1			29			
	57.7	58		52.1	52.4		51	50.9		45.8	45.4		51.8	52.2		56.3	56.3		53.7	53.6		57.6	58.3		48.6	48.9		58.8	58.9		63.2	63		57.9		

Trip (RouteVar)(Blc

6)(B339) [33] {FA19}		12:44 (66.6)(B326) [38] {FA19}			12:57 (66.6)(B319) [26] {FA19}			13:09 (66.6)(B321) [32] {FA19}			13:21 (66.6)(B327) [58] {FA19}			13:33 (66.6)(B328) [36] {FA19}			13:45 (66.6)(B333) [29] {FA19}			13:57 (66.6)(B332) [37] {FA19}			14:08 (66.6)(B334) [43] {FA19}			14:18 (66.6)(B335) [41] {FA19}			14:28 (66.6)(B337) [38] {FA19}			14:32 (66.7)(B306) [62] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	23.4	0	23.4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.1	0.1	23.4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.2	23.1
0	6.4	5.8	0	5.8	5.5	0	5.5	5.3	0	5.4	6.3	0	6.5	6.5	0	6.5	7.6	0	7.6	7.1	0	7.1	6.5	0	6.6	8.8	0	8.8	6.9	0	6.9	.	.	.
0.1	11.5	6	0.1	11.8	3.6	0	9.1	6.8	0	12	5.8	0.1	12.2	4.3	0.1	10.7	5.4	0.1	13.3	6.4	0.2	13.3	6.2	0	12.6	6.7	0	15.5	5.5	0	12.4	.	.	.
0.1	14.1	2.8	0	14.6	1.7	0	10.8	2.7	0.1	15	2.9	0.1	15.7	2.2	0.2	12.6	2	0	15.2	2.6	0	15.9	3.4	0.1	16.1	3.1	0	18.6	2.6	0.1	14.9	.	.	.
0.1	14.4	0.5	0.4	14.6	0.3	0.2	10.9	0.9	0.2	15.8	0.6	0.2	16.1	0.5	0.3	12.9	0.8	0.2	15.4	0.7	0.2	16.4	0.6	0.2	16.5	1.5	0.4	19.7	0.8	0.2	15.6	.	.	.
1.6	14	1.7	1.4	14.9	1.4	0.5	11.8	1.6	1.7	15.5	1.8	1	16.9	1.1	1.1	12.9	2.6	1.5	16.6	1.8	1.7	16.5	2	1.6	16.9	2	1.7	20	1.4	1.3	15.8	.	.	.
0.6	14.5	1.5	0.5	15.9	1.2	0.2	12.9	1.5	0.6	16.5	1.8	0.6	18.1	1.1	0.4	13.5	1.9	0.7	17.8	1.4	0.8	17.1	1	0.8	17.2	1.7	0.7	21	2	0.7	17.1	.	.	.
0.5	14.5	0.8	0.4	16.3	1.3	0.2	14	1.6	0.3	17.9	1	0.4	18.7	0.5	0.4	13.5	0.4	0.7	17.4	0.2	0.6	16.6	0.3	0.5	16.9	0.4	0.4	21	0.7	0.5	17.3	.	.	.
0.4	14.5	0.8	0.6	16.5	0.9	0.5	14.4	0.4	0.7	17.7	0.8	0.8	18.8	0.7	0.4	13.8	0.6	0.9	17.1	0.7	0.7	16.6	0.6	0.9	16.6	0.7	0.6	21.1	1	0.9	17.3	.	.	.
0.1	14.8	0.3	0.2	16.6	0.6	0	15	0.4	0.1	18	1	0.1	19.7	0.9	0.2	14.6	0.8	0.2	17.7	0.7	0.2	17.1	1	0.3	17.3	0.6	0.2	21.5	0.6	0.1	17.9	.	.	.
0.8	14.5	0.5	1.8	15.3	0.8	1.3	14.5	0.6	1.6	17.1	0.6	1.6	18.7	0.4	1	13.9	0.8	1.5	17	1.1	1.4	16.8	0.6	1.6	16.2	0.8	1.5	20.8	0.5	1.2	17.2	.	.	.
0.9	14.5	0.7	0.9	15.1	0.8	0.9	14.3	1.1	1.5	16.8	0.9	1.6	18	0.3	1.3	12.9	1.1	1.4	16.6	1.3	1.1	17	1.3	1	16.5	1.6	2	20.3	1.2	1.7	16.7	.	.	.
1.2	16.6	3.4	1.4	17	3.1	1.4	16	2.8	1.8	17.7	4.2	2.8	19.4	4.8	1.8	15.9	12	2.2	26.4	9.5	1.7	24.8	6.3	1.4	21.3	3.1	1.3	22.1	2.7	1.4	18	2.1	1.8	23.5
1.2	17.5	2	0.9	18.1	1.6	1.2	16.4	1.2	1.3	17.8	1.7	1.7	19.5	0.9	0.9	16	2.8	1.3	27.9	2.9	1.2	26.5	2.8	1.3	22.9	1.1	1.1	22.1	1.7	1.3	18.4	1.4	2.3	22.6
0.6	19.9	2.7	1.6	19.3	2.3	0.9	17.8	2.1	0.9	19	3.2	0.9	21.8	2.2	0.5	17.6	3.3	1.2	30	3.4	1.3	28.7	3.8	1.5	25.2	1.5	1.2	22.4	1.2	1.3	18.3	1.5	0.5	23.6
3	23	4.7	2.5	21.5	5.1	1.9	21	5.2	2.7	21.5	6.6	2.2	26.2	4	1.7	19.9	4.9	4.1	30.7	6.2	3.6	31.3	5.3	2.7	27.9	2.7	4	21.1	1.8	2.8	17.2	2.7	0.8	25.5
0.5	24.8	2.9	0.8	23.6	2.2	0.5	22.7	1.4	0.8	22.1	2.6	0.8	28	1.6	0.5	21.1	2.6	1	32.3	1.9	0.6	32.6	1.8	0.7	29	0.7	0.7	21.1	0.8	0.6	17.4	1	0.3	26.2
0.5	24.9	1	0.7	23.9	0.4	0.5	22.6	0.6	0.6	22.2	0.6	0.5	28.1	0.6	0.8	20.9	1.4	0.8	32.9	0.9	0.5	33	0.8	0.5	29.4	0.1	0.4	20.8	0.8	0.3	17.9	0.5	0.2	26.5
0.5	25.1	0.5	0.6	23.8	0.3	0.8	22.1	0.6	0.8	21.9	0.8	1.1	27.7	0.5	0.6	20.8	0.9	0.7	33.1	0.9	1.1	32.8	1.2	0.8	29.8	1.3	0.7	21.4	0.8	0.8	17.9	1.3	0.2	27.6
3.3	25.2	4.2	4.9	23.1	3.2	3.7	21.5	4.2	4.3	21.8	4	4.5	27.2	2.9	3.9	19.7	4.7	3.4	34.4	3.8	4.7	31.9	3.6	4.7	28.7	1.6	3.2	19.8	1.7	3.6	16	1.8	1.7	27.7
0.5	25.8	1	0.5	23.6	0.3	0.2	21.7	1.1	0.8	22.1	0.9	0.6	27.6	1.1	0.3	20.5	1.9	0.6	35.7	1.2	0.5	32.6	0.7	0.6	28.7	0.5	0.5	19.7	0.3	0.4	15.9	0.4	0.1	28
0.5	26.2	1.2	0.4	24.3	1.6	0.3	22.9	0.9	0.6	22.4	1.1	0.8	27.8	1	0.5	20.9	1.3	0.3	36.7	0.8	0.5	33	0.6	0.4	29	0.3	0.3	19.7	0.4	0.5	15.8	0.5	0.5	28
0.7	26	0.8	0.8	24.3	0.6	0.5	23	0.3	1.1	21.6	0.5	1.2	27.2	0.8	1	20.7	1.4	1.2	36.8	1.1	1.4	32.8	1.7	0.9	29.7	0.5	0.8	19.4	0.8	0.6	16	0.5	0.6	27.9
2.4	24.6	1.5	2.8	23	1.4	2.7	21.8	1.6	1.8	21.4	1.7	2.6	26.3	2.1	1.8	21.1	2.4	3.3	35.9	2.1	2	32.8	2.1	1.9	29.8	1.1	2.6	17.9	1	1.9	15.1	1	0.8	28.2
1.3	24.4	1.3	1.5	22.8	1	1.2	21.6	1.4	1	21.8	1.3	1.2	26.4	1.8	1.4	21.4	1.4	1.7	35.6	2.2	1.1	34	1.9	1.2	30.6	0.7	0.9	17.7	1	0.8	15.3	0.5	0.5	28.1
1.8	23.5	0.5	1.4	21.9	1	3.3	19.3	0.6	2	20.4	0.8	2.2	25	0.8	2.1	20.1	1	2.3	34.3	0.8	2	32.8	1	2.7	28.9	0.5	2.2	16	0.5	1.5	14.3	0.4	1.8	26.7
1.7	23.4	1.6	1.1	22.4	1.4	0.8	19.9	1.3	1.1	20.6	1.7	1.7	24.9	1.1	1.1	20.1	1.7	2	34	0.8	3.5	30.1	1.1	2.5	27.5	0.6	1.1	15.5	0.3	0.8	13.8	1	1.3	26.4
5.3	19.1	1.3	4.3	19.5	2.2	3.9	18.2	2.8	4.2	19.3	1.9	4.1	22.8	1.6	2.8	18.9	2.4	3.4	33	2.2	3.5	28.8	1.8	2.7	26.6	3.1	1.3	17.3	3.1	1.4	15.5	4.8	0.9	30.3
1.7	22.5	5.1	1.1	23.4	5.7	0.7	23.2	7.4	0.7	26	7.3	1.3	28.8	5.4	1.2	23.1	5.1	1.4	36.6	6	1.1	33.7	6.4	1.1	31.9	3.9	0.7	20.5	5.5	0.7	20.3	3.5	0.8	32.9
0.6	22.7	0.6	0.8	23.2	0.3	0.6	22.9	0.8	0.5	26.3	0.9	0.6	29.1	0.4	0.3	23.2	0.7	0.8	36.5	0.4	0.6	33.5	0.4	0.4	31.9	0.9	0.2	21.1	0.6	0.3	20.6	0.9	0.5	33.3
1.1	21.7	0.1	0.8	22.5	0.2	1	22.1	0.6	1.1	25.8	0.3	0.9	28.5	0.3	0.8	22.6	0.2	1.4	35.2	0.8	0.9	33.4	0.3	0.8	31.3	0.2	1	20.4	0.3	0.5	20.4	0.4	0.9	32.8
6.9	16	1.3	6.5	17.4	0.7	6	16.7	1.5	8.4	18.8	2.1	8.7	21.9	1.8	7	17.4	2.2	11	26.4	3	9.6	26.8	2	11.1	22.3	0.9	8.3	13	1.1	8.4	13.1	1.4	13.1	21.1
1.6	15.5	0.9	2.7	15.6	1.9	3.3	15.4	1.4	2.8	17.4	0.9	2.8	20.1	0.9	2	16.4	1.1	3.4	24.1	0.8	3.8	23.9	0.8	3.1	19.9	0.4	2.1	11.2	0.4	2.3	11.2	0.8	5.9	16
0.2	15.2	0	0.1	15.5	0.1	0	15.5	0	0.2	17.3	0	0.5	19.6	0.1	0.3	16.2	0.3	1.3	23	0.4	1.1	23.2	0.2	0.5	19.6	0.1	0.5	10.8	0.1	0.5	10.8	0.1	0.4	15.6
0.3	15.1	0	0.5	15	0.1	0.3	15.2	0	0.3	17	0.1	0.7	19	0.1	1.3	15	0.4	1.5	21.9	0.2	1.5	21.9	0	1.1	18.5	0.1	0.6	10.4	0.1	0.9	10.1	0.1	0.8	14.9
2.7	12.7	0.1	2.5	12.6	0.2	3.4	12	0.1	3.3	13.8	0.2	3.5	15.7	0.1	2.8	12.3	0.1	3	18.9	0.1	3.5	18.5	0.1	3.7	15	0	1.7	8.7	0.1	2.7	7.5	0	2.7	12.5
12.5	0.1	0	12.6	0	0	12	0	0	13.3	0.6	0	15.7	0	0	12.2	0.2	0	18.8	0.1	0	18.5	0	0	15	0	0	8.7	0	0	7.4	0.1	0	12.2	0
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	26.2			24.3			23.2			26.3			29.1			23.2			36.8			34			31.9			22.4			20.6			33.3
57.8		60.1	60.1		55	54.9		62.8	63.2		68.9	70.1		55.4	55		80.2	79.3		76.4	76.7		70.2	70.3		53.8	53.6		50.3	50.4		52.1	51.9	

ock) [Observations]

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}			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}			15:48 (66.6)(B328) [2	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32.3	0	32.4	.	.	.	16.3	0	16.3	5.4	0	5.4	.	.	.	.	.	.	21.5	0	21.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.1	0.1	32.4	.	.	.	0.1	0	16.4	0.1	0	5.7	.	.	.	.	.	.	0.1	0	21.6	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.1	0.6	32.4	.	.	.	0	0.1	16.3	0.1	0	5.9	.	.	.	.	.	.	0.2	0.1	22	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	7	0	7.1	.	.	.	.	.	.	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	10.8	0
.	.	.	7.2	0	14.1	.	.	.	.	.	.	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	6.2	0
.	.	.	4	0.1	18	.	.	.	.	.	.	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	3.1	0.1
.	.	.	1	0.2	18.8	.	.	.	.	.	.	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	1	0.2
.	.	.	2.9	1.5	20.3	.	.	.	.	.	.	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	1.8	1
.	.	.	4.1	1.2	23.2	.	.	.	.	.	.	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	2	0.7
.	.	.	0.4	0.6	22.9	.	.	.	.	.	.	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	0.2	0.4
.	.	.	0.5	1.3	22.2	.	.	.	.	.	.	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	1	1.3
.	.	.	0.6	0	22.7	.	.	.	.	.	.	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	0.5	0.4
.	.	.	0.5	2	21.2	.	.	.	.	.	.	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	1.4	2
.	.	.	1.4	2.3	20.4	.	.	.	.	.	.	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	1.3	1.7
1.8	2	32.2	3.2	1.8	21.7	2.5	0.7	18	2.4	0.3	8.1	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	3.8	1.7
1	3.7	29.5	2.6	2.1	22.2	1.5	1.6	18	2	0.8	9.3	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	4.9	1.1
1.3	0.8	30	1.7	1	22.9	0.9	0.3	18.6	1.2	0.2	10.2	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	4.3	1
2.7	0.6	32.1	4.5	3.2	24.3	1.9	0.6	19.9	2.8	0.6	12.4	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	4.7	4.4
0.6	0.2	32.6	0.7	0.6	24.4	0.5	0.1	20.2	0.9	0.2	13.2	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	1	0.4
0.2	0	32.7	0.6	0.5	24.5	0.2	0	20.4	0.3	0	13.5	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	0.8	0.6
1.1	0.2	33.7	0.9	0.9	24.6	0.8	0.1	21.1	0.7	0.2	14	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	0.4	0.8
1.5	1.1	34.1	2.7	4	23.3	1.1	0.9	21.3	1.8	1.1	14.6	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	3.3	4.5
0.6	0.1	34.6	1.1	1	23.4	0.3	0.2	21.5	0.6	0.1	15.1	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	1.4	0.8
0.3	0.3	34.6	0.7	0.4	23.6	0.2	0.2	21.5	0.5	0.2	15.3	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	1.1	0.3
0.3	0.6	34.2	1.2	0.9	23.9	0.4	0.3	21.6	0.4	0.2	15.5	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	0.4	0.6
1.4	0.9	34.7	1.4	1.9	23.5	1.1	0.5	22.2	1.2	0.6	16.2	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	1.5	1.8
0.8	0.6	35	1.4	0.8	24.1	0.5	0.3	22.4	0.9	0.4	16.7	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	1.7	1
0.7	2.1	33.5	0.8	1.9	23.1	0.3	1.2	21.6	0.9	1.2	16.4	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	2.1	3.5
0.7	1.6	32.6	0.7	1.9	21.9	0.6	0.6	21.5	0.8	0.6	16.6	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	1.6	2
4.1	0.8	35.9	4.1	1.7	24.3	4	0.8	24.7	4.3	1	20	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	1.5	1.1
5.2	1	40.1	9.4	1.4	32.3	4.9	0.8	28.8	6.7	0.8	25.9	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	9.8	0.9
0.6	0.2	40.5	0.9	0.4	32.7	0.8	0.2	29.4	1.1	0.4	26.5	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	0.7	1
0.3	1	39.9	0.4	1.1	32.1	0.3	1.5	28.2	0.5	1.1	25.9	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	0.7	1.7
2.2	16.2	25.9	2.1	11.4	22.8	1.7	14.3	15.5	2	11.2	16.7	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	1.3	13.9
0.8	7	19.7	0.6	3.6	19.7	0.6	3.3	12.9	0.7	3.2	14.2	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	0.6	5.6
0.1	0.4	19.4	0.1	0.9	18.9	0	0.2	12.7	0.1	0.4	14	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	0	0.2
0.1	0.9	18.7	0.1	2.3	16.7	0.2	0.7	12.2	0.1	0.9	13.2	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	0	0.7
0.1	3.1	15.6	0.1	3.6	13.2	0	2.2	10	0.2	3.2	10.2	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	0	3.6
0	15.6	0	0	13.1	0.1	0	10	0	0	10.1	0.1	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	0	16.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		40.5			32.7			29.4			26.5			32.1			31.2			37.6			42.3			38.2			37.6			45.8		
61	61.7		71.6	71.6		41.7	41.7		38.7	39		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		76.9	77.1

9] {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}			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.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
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	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			
0	0	19.3	0	0	17.6	0	0	17.7	0.1	0	24	0.4	0	13.6	0	0	15	0.1	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			
39.6			44.3			38.5			39.4			49			33.9			35.1			47.2			46.5			45.3			41.8			43.9				
	93.5	93.2		80.4	80.7		89.1	88.7		103.8	104		87.4	87.3		83	82.8		108.7	108.7		98.5	98		90.8	90.9		85.7	84.8		91.5	91.8		76.8			

6)(B321) [36] {FA19}		17:58 (66.6)(B324) [38] {FA19}			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}			19:29 (66.6)(B326) [35] {FA19}			19:41 (66.6)(B325) [46] {FA19}			19:53 (66.6)(B322) [45] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	18.4	19.8	0	19.8	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	15	0	15.4	14	0	14.1	12.8	0	12.8
0.3	29.2	11.6	0.1	31.4	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	8.4	0.1	23.7	10.3	0	24.4	10.2	0	23
0.5	34.3	5.9	0.2	37.1	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	3.9	0.2	27.7	4	0	28.4	4.7	0.1	27.4
0.3	35.5	1.4	0.1	38.4	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	1.1	0.1	28.6	0.8	0.1	29.1	0.8	0.1	28.2
2.4	36.1	3.7	1.7	40.3	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	2.8	2.1	29.3	2.7	2.1	29.7	2.3	2	28.5
1.4	36.4	1.8	1.1	41.1	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	1.5	1.1	29.2	1	1.2	29.5	1.1	1.8	27.8
1.7	35.5	0.5	1.3	40.2	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	0.4	1.3	28.3	0.1	1.8	27.9	0.6	1.5	26.9
1.9	34.2	0.4	1.7	38.9	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	0.4	1.5	27.6	0.2	1.2	26.9	0.2	1.1	26
0.1	34.4	0.5	0.3	39.1	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	0.4	0.7	27.2	0.3	0.4	26.8	0.2	0.2	26
3.4	31.9	0.8	3	36.8	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	0.5	2.8	24.9	0.4	2.6	24.6	0.4	2.7	23.6
2.7	30.6	1.1	2.6	35.3	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	0.4	2.3	22.5	0.5	2.3	22.9	0.4	2.8	21.3
3.1	30.4	2.2	2.7	34.8	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	2.9	2.3	23.1	2.6	1.9	23.6	2.6	2.3	21.6
3.3	28.9	2	3.2	33.7	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	1.2	1.9	22.5	0.7	2.2	22.1	0.7	2	20.4
1.7	29.9	1.8	1.7	33.7	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	1.4	1.5	22.4	1.2	1	22.3	1.9	1.1	21.2
6.7	27.8	2.7	6.1	30.3	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	4.1	4.7	22.4	4.5	5.3	21.6	4.1	4.6	20.7
0.7	28.3	1.7	0.8	31.2	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	1.3	0.8	22.9	1.6	0.7	22.5	2.2	0.7	22.2
1	28.1	0.9	0.8	31.3	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	0.7	0.5	23.1	0.7	0.7	22.5	0.9	0.6	22.4
1.8	27.5	0.5	1.2	30.7	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	0.5	0.5	23.1	0.5	0.6	22.4	0.4	0.5	22.2
5.4	26.1	3.7	6.1	28.2	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	3.1	4.5	21.7	3.1	4.5	21.1	4	4.6	21.6
0.9	26	1.1	0.9	28.4	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	1.1	0.7	22.1	1	1.2	21	0.4	0.9	21.2
0.7	26.7	1	1.1	28.4	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	0.7	0.6	22.2	0.8	0.8	21	0.5	1.1	20.6
1.1	26.6	0.8	0.9	28.3	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	0.7	1.3	21.5	0.6	1	20.6	0.3	0.5	20.4
2.6	25	0.9	2.3	27	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	2.2	1.8	21.9	1.2	2	19.8	1.2	1.6	20.1
2.1	24.9	1.4	1.7	26.7	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	1.5	0.9	22.6	2	1.3	20.5	2.4	1.5	21
2.9	22.9	1.4	3.1	25	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	0.8	4.1	19.3	0.7	3.3	18	0.7	3.6	18.1
1.5	22.4	0.8	1.7	24.1	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	1.1	1.2	19.3	0.9	1	17.8	0.7	1	17.9
2	20.8	1	1.9	23.2	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	0.5	1.2	18.5	0.8	1.4	17.2	0.5	0.9	17.4
1	23.4	3.8	1.2	25.7	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	2.7	0.9	20.4	2.7	0.7	19.2	2.6	1.1	18.9
1.1	22.4	0.3	0.6	25.4	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	0.7	0.9	20.3	0.4	0.7	18.9	0.3	0.7	18.5
1.3	21.5	0.1	0.9	24.6	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	0.2	0.8	19.7	0	0.6	18.3	0.2	0.8	17.9
7.8	14.4	0.9	7	18.5	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	0.5	6.5	13.6	0.3	7.2	11.5	0.4	6.8	11.5
3.9	10.7	0.4	3.8	15.1	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	0.3	2.8	11.1	0.5	2.3	9.7	0.5	2.4	9.6
0	10.6	0	0.3	14.8	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	0	0.1	11	0	0.1	9.6	0	0	9.5
0.2	10.4	0.1	0.5	14.3	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	0	0.2	10.8	0	0.2	9.4	0	0.1	9.4
1.8	8.6	0	2.3	12.1	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	0	1	9.9	0	1.3	8.1	0	1	8.4
8.1	0.5	0	11.9	0.2	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	0	9	0.9	0	7.9	0.2	0	8.4	0
	36.4			41.1			39			36.8			37			36			35.8			32.2			31			29.3			29.7			28.5
77.4		77	76.8		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		63	62.9		61.1	61.6		61.2	61.1	

20:07 (66.6)(B324) [50] {FA19}			20:21 (66.6)(B327) [44] {FA19}			20:35 (66.6)(B330) [33] {FA19}			20:49 (66.6)(B334) [44] {FA19}			21:03 (66.6)(B343) [55] {FA19}			21:17 (66.6)(B326) [50] {FA19}			21:31 (66.6)(B325) [54] {FA19}			21:45 (66.6)(B344) [46] {FA19}			22:00 (66.6)(B324) [50] {FA19}			22:15 (66.6)(B345) [54] {FA19}			22:30 (66.6)(B346) [46] {FA19}			22:45 (66.6)(B347) [3	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16.3	0	16.3	13.6	0	13.6	13.1	0	13.2	11.7	0	11.7	15	0	15.1	12.9	0	12.9	13.4	0	13.4	11.3	0	11.7	13.4	0	13.4	14.9	0	15.1	10.4	0	10.9	12.8	0
11.1	0.1	27.3	9.3	0.1	22.8	8.9	0.1	22.1	9.3	0	21.3	10.1	0.1	25.1	11.8	0.1	24.6	9.9	0.1	23.2	13.4	0.2	24.7	13.3	0.1	26.7	14.3	0.2	29.2	12.5	0.1	23.3	13.3	0.1
4.6	0	31.9	5.3	0	28	2.8	0	24.9	4.5	0.1	25.2	4.9	0.1	29.9	4.7	0.1	29.2	3.9	0.1	27	4.8	0.1	29.3	4.4	0.1	30.9	4.7	0.1	33.9	3.1	0.1	26.3	3.7	0.1
0.9	0.1	32.6	0.6	0.2	28.5	0.5	0.1	25.3	0.7	0.1	26.4	1.5	0.1	31.3	0.8	0.1	30	1.1	0.1	28	0.7	0.1	30	0.7	0.3	31.4	0.6	0.2	34.3	0.4	0.2	26.6	0.4	0.2
2.3	1.7	33.3	2.3	2	28.7	1.5	1.4	25.4	1.8	1.7	26.5	2.1	1.8	31.6	1.8	1.9	30	1.4	1.4	27.9	2.3	1.2	31	1.2	1.4	31.2	1.8	0.9	35.3	1.5	0.9	27.2	0.8	0.7
1.4	1.6	33.1	1.3	1.2	28.8	1.1	1.1	25.4	1	1.1	26.4	0.7	1.3	31	0.9	1.4	29.5	0.9	1.5	27.3	0.8	1.6	30.3	0.9	1.2	30.9	0.9	1.3	34.9	0.6	0.8	27	0.5	1.4
0.1	1.1	32.2	0.2	1.3	27.7	0.1	0.9	24.5	0	1.4	25	0.3	1.3	29.9	0.2	0.6	29.1	0.1	1	26.4	0.2	0.8	29.7	0.1	0.7	30.3	0.1	0.9	34.1	0.1	1	26.1	0.2	1.3
0.3	1.6	31	0.3	1.8	26.2	0.2	0.9	23.8	0.2	1	24.2	0.3	1.8	28.4	0.4	1.9	27.6	0.1	1.7	24.8	0.3	3	26.9	0.3	2.9	27.7	0.4	2.8	31.7	0.1	1.8	24.4	0.3	1.4
0.1	0.4	30.7	0.1	0.4	26	0.2	0.2	23.8	0.3	0.2	24.3	0.2	0.3	28.3	0.1	0.2	27.4	0.1	0.3	24.6	0	0.2	26.8	0.1	0.3	27.5	0.2	0.2	31.6	0	0.3	24.2	0.2	0.3
0.6	2.9	28.4	0.4	2.3	24.1	0.4	2.2	21.9	0.1	2.6	21.8	0.8	3	26.1	0.3	2.6	25	0.2	2.3	22.5	0.7	2.7	24.8	0.9	2.1	26.3	0.6	3	29.3	0.4	2.5	22.1	0.8	3.6
0.6	2.4	26.6	0.3	1.7	22.8	0.5	1.7	20.6	0.3	1.4	20.6	0.7	2.6	24.6	0.4	3.3	22.5	0.4	2.8	20	0.7	2.9	22.5	0.5	3.6	23.2	0.3	4.1	25.5	0.2	3.6	18.8	0.8	3.3
2	2.1	26.4	1.4	2	22.2	1.5	1.6	20.6	2.1	1.9	20.8	2.2	2.1	24.9	1.6	2.4	21.6	1.4	1.7	19.7	1.7	2.1	22.1	2.4	2.2	23.4	2.5	1.8	26.2	1.1	1.2	18.7	1.6	2.1
1.1	2.4	25.1	1	2	21.2	0.5	2.2	18.9	0.6	1.7	19.8	1.7	2.3	24.3	0.8	2	20.4	0.7	1.7	18.8	0.7	1.9	20.8	0.9	1.6	22.7	0.8	2.6	24.4	0.3	2.5	16.5	0.4	2.6
1.3	1.7	24.7	1.3	1.5	21	1.7	1.7	18.9	1.3	1.3	19.7	1.6	1.1	24.6	1.4	1.3	20.2	1.7	1.6	18.9	3.1	1.5	22.5	3	1.6	24.2	1.5	2.1	23.8	1.3	1.2	16.7	1.4	1.5
3.5	5.5	22.7	3	5.2	18.8	2.5	4.1	17.2	2.9	4.8	17.7	4.7	5.1	24	3	3.8	19.5	3	4.1	17.8	4.1	5.8	20.8	3.1	5.3	22	2.6	5.7	20.7	1.7	4.2	14.3	2.4	4.6
1.7	0.9	23.6	1.4	0.8	19.5	0.7	0.7	17.3	0.9	0.8	17.8	1.2	0.6	24.7	0.9	0.6	19.8	0.6	0.6	17.8	1.2	0.4	21.7	0.7	0.4	22.3	0.7	0.7	20.7	0.5	0.4	14.3	0.3	0.3
0.5	0.9	23.3	0.3	0.6	19.2	0.3	0.6	17	0.7	0.6	17.9	0.6	0.6	24.7	0.5	0.7	19.6	0.6	0.5	17.9	1.7	0.6	22.8	0.2	0.4	22.1	0.1	0.6	20.3	0.2	0.3	14.2	0.1	0.4
0.2	0.8	22.8	0.2	0.6	18.7	0.4	0.4	17	0.1	0.7	17.4	0.2	0.5	24.4	0.2	0.4	19.3	0.2	0.8	17.3	0.3	0.9	22.3	0.2	0.6	21.6	0.2	0.5	20	0	0.3	13.9	0.1	0.5
3.7	4.1	22.4	3.2	4.1	17.8	2.5	3.3	16.2	4.8	3.5	18.7	4.1	3.5	25	2.8	2.7	19.5	3.1	2.5	17.9	2.4	3.9	20.8	2.2	3.1	20.8	2.2	2.4	19.8	1.1	1.4	13.7	2.7	1.3
0.8	1.2	22	0.5	1	17.4	0.4	0.6	16	0.5	0.9	18.2	0.8	0.8	25	0.6	1.1	18.9	0.4	0.6	17.8	0.3	0.4	20.7	0.3	0.5	20.5	0.1	0.9	19	0.4	0.4	13.6	0.5	0.6
0.6	1.2	21.4	0.7	0.4	17.6	0.2	0.4	15.8	0.8	0.6	18.5	0.7	0.5	25.1	0.3	0.4	18.8	0.3	0.5	17.5	0.6	0.4	20.9	0.4	0.3	20.7	0.4	0.5	18.9	0.3	0.1	13.8	0.9	0.3
0.3	0.8	20.9	0.4	0.8	17.2	0.5	1.2	15	0.6	1.1	18	0.3	0.9	24.5	0.3	0.8	18.3	0.2	0.5	17.2	0.5	0.7	20.6	0.1	1	19.8	0.3	1.1	18.1	0.1	0.3	13.7	0.2	0.4
0.6	1.8	19.7	1.1	1.1	17.2	0.8	1.4	14.4	1.1	1.3	17.8	1.1	1.4	24.2	0.9	1	18.2	0.9	0.9	17.1	0.9	0.7	20.8	1.1	0.7	20.1	1.4	0.6	18.9	1.1	0.8	14	0.4	0.3
2.1	1.3	20.5	1.6	1.1	17.6	1.4	1.2	14.6	0.9	1	17.7	2.5	1.2	25.5	0.8	0.9	18.1	0.4	0.6	16.9	0.7	0.8	20.7	2	1	21.1	2.2	0.8	20.3	0.2	0.8	13.3	1.1	1.1
0.5	2.9	18.1	1	2.9	15.7	0.4	2.3	12.7	0.9	2.9	15.8	1.2	3.6	23.1	1.5	2.6	17	0.9	3.1	14.8	1.3	2.6	19.4	0.7	2.4	19.4	1.7	3.5	18.5	1.2	2.5	11.9	3	1.9
0.5	1.3	17.3	0.6	1.1	15.2	0.5	1.5	11.7	0.5	1.8	14.4	0.3	2.1	21.3	0.3	1.3	16	0.3	1.7	13.4	0.4	2.3	17.5	0.4	2.5	17.3	0.4	1.1	17.7	0.2	0.9	11.2	0.2	0.9
0.5	1.2	16.6	0.4	1.2	14.4	0.4	1.2	10.9	0.7	1.2	13.9	0.5	1.3	20.6	0.4	0.9	15.4	0.3	1	12.7	0.4	1.7	16.2	0.9	1.1	17.1	0.5	1	17.2	0.3	0.3	11.1	0.7	1
2.3	1	18	3.9	1	17.3	2.8	0.8	12.9	3.5	0.8	16.5	2.4	1	22	2.5	0.7	17.3	2.4	0.9	14.2	3	0.7	18.5	2.2	0.8	18.6	2.3	1	18.6	3.9	0.4	14.6	4.2	0.5
0.5	0.7	17.8	0.5	0.5	17.3	0.3	0.7	12.5	0.2	1	15.8	0.2	1	21.2	0.4	0.7	17	0.2	0.5	14	0.1	0.7	17.8	0	0.4	18.2	0.1	0.6	18	0.3	0.5	14.4	0.2	0.8
0	0.8	16.9	0	0.6	16.8	0	0.8	11.7	0.1	0.5	15.4	0	0.8	20.4	0.1	0.9	16.1	0.1	1.2	12.9	0	1.1	16.7	0	0.7	17.4	0.1	0.7	17.4	0.1	0.5	14	0.1	0.3
0.4	5.8	11.5	0.3	6.1	11	0.5	4.5	7.6	0.3	6.7	9	0.2	9.6	11	0.3	5.9	10.5	0.2	5.5	7.6	0.3	6.5	10.5	0.2	6.5	11.1	0.2	6.8	10.9	0.4	4.4	9.9	0.3	4.8
0.5	2.4	9.5	0.3	2.7	8.6	0.3	1.6	6.4	0.1	2	7	0.2	2.8	8.4	0.4	1.7	9.2	0.3	1.1	6.8	0.2	1.7	9	0.1	1.5	9.8	0.1	1.9	9.1	0.3	2.3	7.9	0.3	3.1
0	0.1	9.4	0	0	8.6	0	0	6.4	0	0.2	6.8	0	0.1	8.3	0	0	9.2	0	0.1	6.8	0	0.2	8.8	0	0	9.8	0	0	9.1	0	0	7.9	0	0.2
0	0.3	9.1	0	0.5	8.1	0	0.3	6.1	0.1	0	6.9	0	0.2	8.2	0	0.5	8.8	0	0.4	6.4	0	0.3	8.6	0	0	9.7	0	0.1	9.1	0	0.1	7.8	0	0.1
0	1	8.1	0	0.8	7.3	0	0.5	5.5	0	1	5.9	0	0.9	7.3	0	0.6	8.2	0	0.7	5.7	0	0.8	8	0	1	8.8	0	1.3	7.8	0	0.9	7	0	1.3
0	8.1	0	0	7.3	0	0	5.5	0	0	5.8	0.1	0	7.3	0	0	8.2	0	0	5.7	0	0	7.8	0	0	8.8	0	0	7.8	0	0	7	0	0	11.8
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		33.3			28.8			25.4			26.5			31.6			30			28			31			31.4			35.3			27.2		
61.9	62.2		56.8	56.9		47.9	47.7		53.6	53.7		63.3	63.7		54.3	54.3		49.7	49.8		59.1	59.3		56.9	57.1		59.2	59.8		44.3	45		54.9	55.1

2] {FA19}	23:00 (66.6)(B348) [47] {FA19}			23:15 (66.6)(B326) [54] {FA19}			23:30 (66.6)(B349) [50] {FA19}			23:45 (66.6)(B351) [43] {FA19}			24:00 (66.6)(B345) [52] {FA19}			24:20 (66.6)(B347) [32] {FA19}			24:40 (66.6)(B348) [51] {FA19}			25:00 (66.6)(B349) [18] {FA19}			Total		
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
																											3.9	0	4
																											18.1	0.5	22
																											2.6	0	25.3
																											5.1	0.2	30.3
																											4.1	0	34.2
																											1.3	0.6	34.9
																											2.5	0.3	37.2
																											2.4	0.3	39.4
																											0.1	0.1	39.5
																											99.3	0.1	138.7
																											1.5	0.2	140.2
																											2.2	2.1	141.1
12.8	9.5	0	9.6	7.3	0	7.7	8.2	0	8.5	5.7	0	5.8	4.9	0	5.3	5.4	0	6	5.2	0	5.2	2.8	0	2.8	919.4	0	928.7
26	8.7	0	18.2	8.4	0	16.1	8.3	0	16.8	6.4	0	12.2	4.7	0	10	4.7	0	10.5	3.7	0	8.9	0.6	0	3.4	722.5	6.4	1648
29.6	3.1	0.1	21.2	2.3	0.1	18.4	3.6	0	20.6	2.4	0	14.6	4.1	0	14.1	3.8	0	14.4	1.9	0.1	10.7	0.3	0	3.7	286.6	7.7	1924.4
29.8	0.1	0.1	21.3	0.2	0.1	18.5	0.5	0.1	21	0.1	0	14.6	0	0	14	0.2	0	14.6	0.1	0	10.8	0	0	3.7	75.3	28.6	1969.2
29.9	1	0.8	21.5	0.9	0.6	18.7	0.7	0.3	21.3	1.6	0.1	16.1	0.6	0.5	14.2	0.3	0.3	14.5	0.6	0.5	10.9	0.1	0	3.8	185.8	140	2015.3
29	0.8	1.1	21.2	0.4	0.9	18.2	0.2	1.1	20.4	0.2	0.7	15.6	0.1	0.7	13.5	0.2	0.3	14.3	0.2	0.3	10.8	0	0	3.8	208.7	79.5	2147
27.9	0.1	1.3	19.9	0	1.3	17	0	1.1	19.3	0	0.4	15.2	0	0.7	12.9	0	1.1	13.3	0	0.7	10.2	0	0	3.8	74.2	64.3	2156.5
26.8	0.2	1.6	18.5	0.3	1.9	15.4	0.2	2	17.5	0	1.8	13.5	0	1.4	11.5	0	2.9	10.4	0	2.6	7.6	0	0.5	3.3	89	100.1	2146.1
26.6	0	0.1	18.4	0.1	0.2	15.3	0.1	0.2	17.3	0.3	0.2	13.6	0.1	0.3	11.4	0.2	0.2	10.5	0.1	0.4	7.3	0.1	0.1	3.2	81.9	17.1	2208.5
23.8	0.7	2	17.1	0.5	1.6	14.2	0.4	1.7	16	0.3	1.6	12.3	0.3	1.1	10.7	0.2	1	9.6	0	0.4	6.9	0	0.4	2.8	70.5	188.3	2091.2
21.3	0.9	1.7	16.2	0.5	1.6	13.1	0.1	1.6	14.6	0.2	1.1	11.5	0.2	1.6	9.3	0.2	1.8	8	0.1	1.5	5.6	0	0.2	2.6	107.5	178.9	2021.8
20.8	1.2	1.3	16.1	2.7	1.5	14.2	2.2	1.7	15.1	0.6	1.2	10.9	0.7	1.2	8.9	0.4	0.8	7.6	0.3	1	4.9	0.1	0.2	2.6	388.1	194.2	2357.5
18.7	0.4	2	14.5	0.3	1.5	13	0.4	2.2	13.3	0.3	1.7	9.5	0.3	1.8	7.4	0.4	1.3	6.7	0.1	0.5	4.5	0	0.2	2.5	193.9	149.8	2403.8
18.6	1	0.9	14.7	0.9	0.5	13.4	0.8	0.7	13.4	0.4	0.3	9.7	0.5	0.3	7.6	0.3	0.2	6.8	0.1	0.1	4.6	0.1	0	2.5	272	108.5	2565.6
16.4	2.4	3.3	13.9	1.8	3.4	11.9	1.9	3	12.4	1.4	3	8.1	2	1.8	7.6	1.8	2	6.6	0.7	0.8	4.5	0.7	0.1	3	562.1	345.4	2782.5
16.4	0.3	0.3	13.9	0.2	0.6	11.5	0.2	0.3	12.3	0.2	0.3	8	0.1	0.2	7.5	0.3	0.3	6.6	0.2	0.2	4.5	0	0	3	186.5	55.7	2914.1
16.1	0	0.4	13.6	0	0.2	11.3	0.1	0.4	12	0	0.2	7.8	0.1	0.2	7.5	0	0.2	6.4	0	0.2	4.3	0	0	3	81.7	58.9	2937.3
15.8	0.1	0.3	13.4	0.1	0.3	11.1	0.1	0.4	11.7	0	0.4	7.4	0	0.3	7.2	0	0.3	6.2	0.1	0.4	4	0	0	3	62.4	72	2927.9
17.1	2.4	1.5	14.3	1.2	1.2	11.1	1.1	1.3	11.5	1	0.5	7.9	0.7	0.5	7.3	0.5	0.2	6.5	0.3	0.5	3.8	0.1	0	3.1	324.3	385.6	2866.5
17	0.9	0.4	14.8	0.2	0.3	11	0.3	0.2	11.6	0.2	0.2	7.9	0.1	0.2	7.2	0.2	0.1	6.6	0.1	0.2	3.7	0	0	3.1	87.8	53.2	2901.8
17.6	0.1	0.4	14.5	0.1	0.3	10.8	0.1	0.3	11.5	0.1	0.1	7.9	0	0.1	7.1	0	0.1	6.5	0.1	0	3.7	0	0	3.1	69.9	50.9	2920.7
17.3	0	0.3	14.2	0.1	0.3	10.6	0	0.3	11.2	0	0.3	7.6	0	0.2	7	0	0.3	6.3	0	0.2	3.6	0.1	0	3.1	75	91.8	2903.7
17.4	0.3	0.5	14	0.1	0.4	10.4	0.1	0.1	11.2	0	0.3	7.3	0.1	0.1	6.9	0.2	0.4	6.1	0	0.6	3	0	0.1	3.1	128.4	225.9	2806.9
17.4	1.6	0.2	15.3	1.1	0.4	11.1	0.4	0.3	11.3	0.1	0.3	7.1	0.5	0.2	7.2	0	0.1	6.1	0	0.1	3	0	0.1	3	145.1	107.1	2844.6
18.6	2.3	1.4	16.2	1.6	1.5	11.2	1.7	1.9	11.2	0.7	1.2	6.7	1	1.2	7	0.4	1.1	5.3	0.1	0.5	2.5	0	0	3	107.6	278.5	2673.6
17.8	0.2	0.9	15.5	0.2	0.7	10.8	0.1	0.5	10.8	0.2	0.5	6.3	0.1	0.4	6.6	0.2	0.3	5.2	0.1	0.2	2.4	0.1	0.3	2.8	157.5	134.1	2697.1
17.6	0.7	1.2	14.9	0.5	0.7	10.6	0.1	0.3	10.5	0.1	0.3	6.2	0	0.3	6.3	0.1	0.3	4.9	0.1	0.3	2.3	0	0.2	2.6	165.5	520.4	2342.4
21.3	4.8	0.6	19.1	3.3	0.3	13.6	1.4	0.5	11.5	0.8	0.3	6.7	0.7	0.3	6.8	1.6	0.1	6.4	0.3	0.3	2.3	0	0.1	2.5	430.2	114.8	2657.5
20.7	0.1	0.7	18.5	0.1	0.4	13.3	0.1	0.4	11.2	0.1	0.2	6.5	0	0.2	6.6	0	0.2	6.3	0	0.1	2.2	0.1	0	2.6	51.7	88.1	2621.5
20.5	0.1	0.5	18.1	0.1	0.3	13.1	0	0.3	10.9	0	0.1	6.4	0	0.3	6.3	0	0.4	5.9	0	0.1	2.2	0	0.2	2.3	23.6	102.2	2543.2
16	0.1	4.7	13.6	0.1	4.4	8.9	0.3	3.8	7.4	0.1	1.7	4.8	0	1.7	4.6	0.1	1.8	4.3	0.1	0.7	1.5	0.1	1.8	0.7	187.7	810	1921.6
13.2	0.1	3.2	10.4	0.1	2.2	6.8	0.2	2	5.6	0.2	0.5	4.6	0.1	0.5	4.2	0.1	0.2	4.1	0.1	0.2	1.4	0.1	0	0.7	70.6	264.1	1727.7
13.1	0	0.1	10.4	0	0	6.7	0	0	5.6	0	0.2	4.4	0	0.1	4.1	0	0	4.1	0	0.1	1.3	0	0	0.7	3.7	48	1684.8
13	0	0.4	10	0	0.6	6.2	0	0.1	5.6	0	0	4.4	0	0	4.1	0	0	4.1	0	0	1.4	0.1	0	0.8	8.4	207.8	1485.2
11.8	0	0.9	9.1	0	0.6	5.6	0	0.5	5.1	0	0.5	3.9	0	0.7	3.4	0	0.3	3.8	0	0	1.4	0	0	0.9	4.7	232.2	1259.4
0	0	9.1	0	0	5.6	0	0	4.9	0.2	0	3.8	0.1	0	3.3	0	0	3.8	0.1	0	1.2	0.1	0	0.6	0.2	0.3	1219.9	40.6
																									0	0	26.8
																									0	0	26.8
																									0.1	0	26.8
																									0.2	0	27
																									0.2	0	27.2
																									0.2	0	27.3
																									0.4	23.5	4.3
																									0.1	0	4.3
																									0.1	0	4.4
																									0.1	2.1	2.4
																									0.1	0.6	1.9
																									0	0.1	1.8
																									0	1.3	0.5
29.9			21.5			18.7			21.3			16.1			14.2			14.6			10.9			3.8			2937.3
	44.2	44.3		35.7	36.5		33.9	34.5		23.7	24		22	22.4		21.8	22.4		14.7	15		5.5	5.1		6754.7	6762	

Massachusetts Bay Transportation Authority
Route 66
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

	04:45 (66.6)(B319) [36] {FA19}			05:00 (66.6)(B329) [51] {FA19}			05:15 (66.6)(B334) [23] {FA19}			05:30 (66.6)(B337) [33] {FA19}			05:45 (66.6)(B339) [38] {FA19}			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}		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 390 - WARREN ST @ QUINCY ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2 - 392 - WARREN ST @ MAYWOOD ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3 - 393 - WARREN ST @ WOODBINE ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4 - 394 - WARREN ST @ WAVERLY ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5 - 395 - WARREN ST @ WHITING ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6 - 396 - WARREN ST @ MORELAND ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7 - 21151 - WARREN ST @ KEARSARGE AVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8 - 64000 - DUDLEY STATION	4	0	4	7.6	0	7.6	15.8	0	15.8	22.9	0	22.9	16.3	0	16.3	25.3	0	25.3	15.5	0	15.5	19.6	0	19.6	11	0	11	14.7	0	14.7
9 - 1148 - MALCOLM X BLVD @ SHAWMUT AVE	1	0	5	0.3	0	7.9	0.4	0	16.2	0.2	0	23.1	0.5	0	16.8	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
10 - 11149 - MALCOLM X BLVD @ O'BRYANT HS	0	0	5	0	0	7.9	0	0	16.2	0.2	0	23.3	0.3	0	17.2	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
11 - 11148 - MALCOLM X BLVD @ MADISON PARK	0	0	5	0	0	7.9	0.5	0	16.7	1.5	0	24.8	1.7	0	18.9	3.5	0	33.2	1.5	0	20.3	0.5	0.1	22.5	0.2	0	13	0	0	16.6
12 - 21148 - MALCOLM X BLVD @ TREMONT ST	0.2	0	5.2	0.7	0	8.5	2	0	18.6	1.9	0	26.7	0.7	0	19.5	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
13 - 1357 - TREMONT ST OPP ROXBURY CROSSI	1.2	0.1	6.3	0.8	0.5	8.9	3.7	0.4	21.9	5.6	0.4	32	3.6	0.2	22.9	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
14 - 13590 - TREMONT ST @ TOBIN COMMUNITY	0	0	6.3	0	0	8.9	0.4	0.1	22.2	0.1	0	32.1	0.2	0.4	22.8	0.9	0.2	42.1	0.5	0	27.7	0	0	28	1	0	17.5	0	0	23
15 - 1360 - TREMONT ST @ SAINT ALPHONSUS	0	0	6.3	0	0	8.9	0	0	22.2	0.2	0	32.3	0.6	0.1	23.4	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
16 - 1362 - TREMONT ST @ HUNTINGTON AVE	0.2	1.1	5.4	0.1	1.3	7.8	0.4	5.6	17	2.4	8.5	26.2	0.7	9.8	14.3	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
17 - 1363 - HUNTINGTON AVE @ FENWOOD RD	0.3	0.2	5.5	0	0.5	7.3	0.2	0.3	16.9	0.5	0.1	26.5	0.4	0.1	14.6	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
18 - 1365 - 835 HUNTINGTON AVE OPP PARKER	0	0	5.4	0.1	0	7.4	0.6	0.1	17.4	0.6	1	26.1	0.9	0.2	15.4	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
19 - 1366 - HUNTINGTON AVE @ RIVERWAY	3.4	0	8.8	0.1	0	7.5	0.8	0.6	17.7	1	0.4	26.7	2.7	1.1	17	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
20 - 1526 - WASHINGTON ST @ PEARL ST	0.1	0.1	8.7	0.7	1.1	7	1.4	4.2	14.8	2.2	5.3	23.6	0.5	2.7	14.8	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
21 - 1367 - HARVARD ST @ KENT ST	0.2	0.1	8.8	0.2	0.2	7.1	0.3	0.2	14.9	0.2	0.5	23.2	0.2	1.8	13.2	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
22 - 1369 - HARVARD ST @ ASPINWALL AVE	0.1	0.1	8.8	0.1	0	7.1	0	0.2	14.7	0.2	0	23.4	0.5	0	13.7	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
23 - 1371 - HARVARD ST OPP VERNON ST	0.1	0.3	8.6	0.1	0.8	6.5	0.1	1.2	13.7	0.2	0.6	22.9	0.1	0.6	13.2	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
24 - 1372 - HARVARD ST @ BEACON ST	0.6	0.3	9	0.2	0.8	5.9	1.3	1	14	1	0.5	23.4	1.6	0.5	14.3	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
25 - 1373 - HARVARD ST @ STEDMAN ST	0	0	8.9	0	0	5.9	0	0.2	13.9	0.1	0.6	23	0.1	0.8	13.6	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
26 - 1375 - HARVARD ST @ COOLIDGE ST	0	0	8.9	0	0	5.9	0.1	0.1	13.8	0.2	0.6	22.5	0.2	0.2	13.5	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
27 - 1376 - HARVARD ST OPP VERNDALE ST	0.1	0.4	8.6	0	0.3	5.6	0	0.6	13.3	0.1	0.3	22.3	0.1	0.2	13.3	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
28 - 1378 - HARVARD AVE @ COMMONWEALTH AV	3.9	0.8	11.6	1.6	0.5	6.7	1.4	2.3	12.4	1.5	4.2	19.6	2.8	0.8	15.3	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
29 - 1379 - HARVARD AVE @ BRIGHTON AVE	0	0	11.7	0.1	0	6.7	0.1	0	12.5	0.3	1.2	18.7	1.2	0.2	16.3	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
30 - 964 - BRIGHTON AVE OPP QUINT AVE	3.1	0.8	13.9	1.3	0.9	7.1	1.1	2.4	11.2	1.3	3.7	16.3	1.2	1.8	15.7	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
31 - 966 - CAMBRIDGE ST @ N BEACON ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.1	2.7	10	.	.	.	0.3	3.4	5.6
32 - 967 - CAMBRIDGE ST @ SAUNDERS ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.2	0.8	9.4	.	.	.	0.1	0	5.7
33 - 969 - CAMBRIDGE ST @ DUSTIN ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	6.4	3	.	.	.	0.1	4.3	1.6
34 - 970 - CAMBRIDGE ST @ SPARHAWK ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	1.4	1.6	.	.	.	0.1	1	1.1
35 - 971 - CAMBRIDGE ST @ ELKO ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.3	1.3	.	.	.	0	0	1.1
36 - 972 - WASHINGTON ST @ WALDO TERR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37 - 973 - WASHINGTON ST @ MARKET ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38 - 974 - WASHINGTON ST @ FOSTER ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39 - 975 - WASHINGTON ST @ BROCK ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40 - 977 - WASHINGTON ST @ OAK SQUARE AV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41 - 9780 - WASHINGTON ST @ OAK SQ	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42 - 979 - TREMONT ST @ WASHINGTON ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43 - 981 - TREMONT ST OPP TREMONT PL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44 - 982 - TREMONT ST OPP CUFFLIN ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45 - 983 - TREMONT ST @ PLAYSTEAD RD	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
46 - 985 - TREMONT ST @ WAVERLEY AVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47 - 986 - TREMONT ST @ HIBBARD RD	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
48 - 987 - PARK ST @ TREMONT ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49 - 988 - CENTRE ST @ JEFFERSON ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50 - 989 - GALEN ST @ MAPLE ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
51 - 900 - WATERTOWN YARD	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
52 - 1111 - CAMBRIDGE ST OPP HANO ST	2.8	1.2	15.5	1.2	0.3	8.1	2.5	1.3	12.5	1	5.3	12	1.6	2.2	15.1	1.7	3.4	26.2	1.8	3.8	16				1.5	3	14.5			
53 - 1112 - CAMBRIDGE ST @ HARVARD AVE	0	0	15.5	0	0	8.1	0	0	12.5	0	0	12.1	0.1	0	15.1	0	0	26.2	0	0.1	16				0	0.2	14.4			
54 - 1113 - CAMBRIDGE ST @ LINDEN ST	1.1	0.1	16.5	0.2	0	8.3	0.2	0	12.7	2.2	0.1	14.2	1.6	0	16.7	2.6	0.2	28.6	1.5	0	17.5				1.9	0.4	15.9			
55 - 2558 - N HARVARD ST @ EMPIRE ST	1.1	0.2	17.4	0.3	0	8.6	0.8	0.5	12.9	2.4	0.6	15.9	1.4	0.4	17.7	3.8	0.9	31.5	1.2	0.4	18.3				1.8	0	17.7			
56 - 2559 - N HARVARD ST @ OXFORD ST	1.4	0.1	18.8	0.6	0	9.1	1.3	0	14.2	1.3	0	17.2	2.4	0	20.1	2	0.2	33.4	2.8	0	21				1	0	18.7			
57 - 2560 - N HARVARD ST @ KINGSLEY ST	1.2	0.1	19.9	1	0.2	9.9	0.5	0.3	14.3	0.2	0.2	17.2	0.3	1	19.4	0.7	0.7	33.4	0.9	0.4	21.6				2.7	0.4	21.1			
58 - 2561 - N HARVARD ST @ WESTERN AVE	2	2.3	19.6	0.7	1.8	8.8	0.3	1.9	12.8	0.3	3.5	14	0.6	4	15.9	1.5	11.3	23.6	1.3	3.8	19.1				0.4	0.8	20.6			
59 - 2564 - N HARVARD ST OPP HARVARD STAD	0.1	0.9	18.8	0	0.3	8.6	0	1	11.8	0	0.4	13.6	0.1	0.6	15.4	0.1	1.2	22.4	0	0.7	18.4				0.2	0.5	20.3			
60 - 25641 - JFK ST @ ELIOT ST	0.2	18.5	0.6	0.4	7.5	1.8	0.2	11.4	0.7	0.2	13.5	0.4	0.1	15.4	0.1	0.2	22.4	0.4	0.2	18.2	0.4				0.5	20.5	0.5			
62 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0	0.5	0.1	0	1.5	0.3	0	0.5	0.2	0	0.2	0.2	0	0	0.1	0	0.2	0.2	0	0.3	0.1				0	0.2	0.4			
63 - 1301 - 7 WINSHIP ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.4	0.9	.	.	.	0	0.6	0.6
65 - 994 - WINSHIP ST @ UNION ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.9	0	.	.	.	0	0.6	0
Maximum			19.9			9.9			22.2			32.3			23.4			42.6			28.1			28.3			21.1			23.1
Total	28.4	28.2		18.4	18.5		36.4	36.4		52	51.7		45.3	45.1		75.4	75.8		54.2	54		35	34.9		41.2	41.2		29	29.7	

06:26 (66.6)(B329) [35] {FA19}			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}			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}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14.8	0	14.8	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	5.6	0	5.6	9.2	0	9.2	11.3	0	11.3	11.1	0	11.1	9	0	9.3
1.8	0	16.6	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	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
1.3	0.1	17.9	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	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
0.1	0	18	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	0.1	0	6.7	0	0	9.2	0	0	13.9	0	0	12.9	0	0.2	9
0.7	0	18.7	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	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
6.2	0.7	24.2	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	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
0.1	0	24.3	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	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
0.2	0.1	24.5	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	0	0	15.6	0	0.2	18	0.4	0	30.2	0.3	0.2	21.3	1	0.2	22.7
0.3	8	16.7	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	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
0.6	0.7	16.7	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	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
2	0.3	18.3	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	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
2.1	0.3	20.1	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	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
0.9	3	18.1	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	0	1.7	12.6	0	1	18.6	0.1	1.9	27.8	0.6	3	16.7	0.8	3	18
0.2	1.1	17.3	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	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
0.3	0.1	17.5	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	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
0.5	0.5	17.4	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	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
1.8	1.3	17.9	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	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
0.2	0.2	18	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	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	0.4	18	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	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
0.7	0.1	18.6	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	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
3.2	1.2	20.7	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	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
0.8	1.5	19.9	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	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
1.9	2.6	19.2	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	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
.	.	.	1.2	3.7	5.8	1	1.8	10.1	.	.	.	1	6.8	14.4	0.8	4	14.6	.	.	.	2.3	3.4	10.4	5.6	3.4	19	2.1	4.1	21.9	.	.	.	.	.	.
.	.	.	0	0.5	5.3	0	0.9	9.3	.	.	.	0.3	1.1	13.5	0	0.5	14.2	.	.	.	0	0	10.4	0.4	0.8	18.6	0.2	1.9	20.2	.	.	.	.	.	.
.	.	.	0	4.1	1.9	0.1	7.9	1.5	.	.	.	0	11.8	1.8	0	11.2	3	.	.	.	0.1	10	0.7	0.2	17.2	2.2	0	18.1	2.1	.	.	.	.	.	.
.	.	.	0	0	1.9	0	1.1	0.4	.	.	.	0	1.1	0.6	0.2	2.2	1.1	.	.	.	0	0.4	0.3	0	1.2	1.4	0	0.6	1.6	.	.	.	.	.	.
.	.	.	0	0.1	1.7	0	0.3	0.1	.	.	.	0	0.5	0.1	0	0.1	1	.	.	.	0	0.1	0.1	0	0.2	1.4	0	0.1	1.4	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.2	3.5	17.9	.	.	.	.	.	.	3.9	2	18.6	.	.	.	.	.	.	3.7	2.5	20.2	.	.	.	.	.	.	.	.	.	4.4	2.2	25.5	5.5	2	27.7
0.1	0.1	17.8	.	.	.	.	.	.	0.2	0.1	18.6	.	.	.	.	.	.	0	0.1	20.2	.	.	.	.	.	.	.	.	.	0	0.1	25.5	0.4	0.3	27.8
2.4	1.4	18.8	.	.	.	.	.	.	2.1	0.3	20.4	.	.	.	.	.	.	2.2	0.2	22.2	.	.	.	.	.	.	.	.	.	3.2	0.3	28.4	3.6	0.3	30.5
2.4	0.4	20.9	.	.	.	.	.	.	2.3	0.2	22.5	.	.	.	.	.	.	3.2	0.4	24.9	.	.	.	.	.	.	.	.	.	3.6	0.6	31.4	3.7	0.8	33.4
2.6	0.4	23.1	.	.	.	.	.	.	3.1	0.9	24.7	.	.	.	.	.	.	3.2	0.2	27.8	.	.	.	.	.	.	.	.	.	1.6	0.4	32.6	2	0.4	35
1.5	0.4	24.2	.	.	.	.	.	.	1.9	0.4	26.2	.	.	.	.	.	.	1.8	0.3	29.4	.	.	.	.	.	.	.	.	.	1.9	1.1	33.4	4	1.5	37.4
1	1.2	24.1	.	.	.	.	.	.	1.1	1.3	26.1	.	.	.	.	.	.	1.7	1.6	29.5	.	.	.	.	.	.	.	.	.	1.6	1.3	33.7	1.7	1.3	37.8
0.5	0.6	24	.	.	.	.	.	.	0.3	1	25.3	.	.	.	.	.	.	0.1	1	28.6	.	.	.	.	.	.	.	.	.	0.1	0.8	33.1	0.2	1.7	36.2
0.4	23.4	1.3	.	.	.	.	.	.	0.3	25.5	0.4	.	.	.	.	.	.	1.7	29.7	2	.	.	.	.	.	.	.	.	.	0.9	33.4	1.4	1.5	36	2.7
0	1	0.3	.	.	.	.	.	.	0	0.2	0.2	.	.	.	.	.	.	0	0.3	1.7	.	.	.	.	.	.	.	.	.	0	0.6	0.8	0	0	2.7
.	.	.	0	0.3	1.4	0	0	0.1	.	.	.	0	0.1	0	0	0	1	.	.	.	0	0	0.1	0	0.6	0.8	0.2	0.7	1	.	.	.	.	.	.
.	.	.	0	1.4	0	0	0.1	0	.	.	.	0	0	0	0	0.9	0.1	.	.	.	0	0	0.1	0	1.6	0	0	0.8	0.2	.	.	.	.	.	.
.	.	24.5	.	.	16.4	.	.	24.8	.	.	26.2	.	.	31.5	.	.	20.2	.	.	29.5	.	.	15.6	.	.	19.6	.	.	30.2	.	.	33.7	.	.	37.8
54.2	54.6		21.8	22.4		30.2	30.4		48.8	48.5		38.7	38.7		28.1	28.4		56.2	55.9		24.3	24.3		32.4	34.4		42.9	42.7		61.5	61.7		78.9	78.9	

07:00 (66.5)(B034) [11] {FA19}			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) [39] {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}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24.5	0	24.5	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	18	19.3	0	19.3	16.8	0	16.8	20.8	0	20.8	18.8	0	18.8
4.3	0.2	28.6	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	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
1.8	0.1	30.4	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	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	0	30.4	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	21.1	0.2	0	22.8	0.1	0	19.4	0.1	0	24	0.1	0	21.2
0.9	0.1	31.2	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	22	1.3	0.1	24	0.9	0.2	20.1	0.8	0.3	24.5	0.9	0.3	21.8
16	1	46.2	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	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
0.5	0.1	46.5	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	36.1	0.8	0.1	36	1.3	1.2	30.5	1	1	33.6	1.1	0.8	30.4
0.1	0.3	46.4	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	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
1.9	8.9	39.4	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	26.4	1.5	10.8	27.7	1.2	9.7	22.7	1.1	10	24.9	1	8.9	22.7
1.5	1.4	39.5	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	22.1	1.1	2.9	25.9	1.1	2.3	21.5	1.1	1.9	24.1	1.3	2	22
1.5	0.5	40.5	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	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
3.3	0.9	42.8	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	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
1.5	3.8	40.5	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	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
1	1.5	40	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	25.2	1.2	2	26	1.4	1.5	24.1	1.9	2.1	28.3	1.8	1.5	25.5
0.7	0.5	40.3	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	27.5	1.9	0.9	27	2.2	0.9	25.4	1.8	1	29	1.9	0.9	26.5
0.5	0.7	40	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	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
1	2.6	38.4	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	29.3	5.9	4	30.8	6.1	3.6	28.4	4.7	4.4	30	4.2	4.3	27
0.4	1.5	37.3	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	30.3	1.4	1	31.2	1.7	0.8	29.3	1.3	1	30.3	1.2	0.7	27.5
0.3	0.5	37.1	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	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
0.1	0.5	36.6	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	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
0.5	1.5	35.7	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	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
0.2	0.8	35.1	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	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
3.6	3	35.7	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	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
2.1	3.5	34.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	0.8	33.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	28	5.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	3	2.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.1	0.7	1.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	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	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
.	.	.	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	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
.	.	.	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	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
.	.	.	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	45.7	2.5	0.1	38	2.1	0.2	40.3	2	0.5	41.9	2.3	0.6	35.8
.	.	.	2.2	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	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
.	.	.	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	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
.	.	.	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	48.4	2.1	2	40.9	1.6	2.5	42	1.2	1.6	43.4	1.6	1.2	38.7
.	.	.	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	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
.	.	.	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	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	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	0.8	0	0.4	0.7	0	0.4	0.6	0	0.2	0.8	0	0.6	0.8
0	0.3	1.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0	1.5	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		46.5			40.1			39.9			53.6			51.2			47.7			37.2			48.5			40.9			42.9			43.8			38.7
68.3	68.2		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		90.5	90.5		90.4	90.1		91.7	91.6		81.8	81.9	

08:36 (66.6)(B331) [3] {FA19}			08:46 (66.6)(B333) [34] {FA19}			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}			10:10 (66.6)(B321) [41] {FA19}			10:23 (66.6)(B328) [33] {FA19}			10:36 (66.6)(B333) [31] {FA19}			10:49 (66.6)(B334) [30] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
12.3	0	12.3	18.2	0	18.3	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	17.6	0	17.6	11.5	0	11.5	12.5	0	12.5	8.8	0	8.8
2	0.3	14	2.9	0.3	20.8	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	1.3	0.1	18.8	1.4	0.1	12.8	1.2	0.1	13.6	1	0	9.8
0.3	0	14.3	0.1	0.1	20.9	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	0.2	0	19	0.3	0	13.1	0.1	0	13.7	0	0	9.8
0	0	14.3	0	0.1	20.8	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	0.3	0	19.2	0.1	0	13.2	0	0	13.7	0.1	0	9.8
0.7	0	15	0.6	0.1	21.3	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	0.7	0.3	19.6	0.3	0.2	13.3	0.4	0.1	14	0.9	0.2	10.5
14.3	0.7	28.7	10	1.9	29.4	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	9.5	1.4	27.7	7.5	1.3	19.5	5.9	1.2	18.7	4.4	0.9	14
0.3	1	28	1.1	2	28.5	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	0.9	0.9	27.7	0.5	0.4	19.7	0.6	0.5	18.8	0.9	0.5	14.4
0.7	0.3	28.3	0.9	0.8	28.7	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	0.6	1	27.3	0.2	0.8	19.1	0.2	0.7	18.3	0.6	0.6	14.4
1.7	8.7	21.3	0.9	8.3	21.3	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	1.5	6	22.7	1.3	5.3	15.1	0.9	3.7	15.4	0.6	4	11.1
1	2.3	20	1	1.3	20.9	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	2	1.2	23.6	2	1.2	15.9	1.6	0.9	16.1	2.2	0.6	12.7
1.7	0.7	21	1.8	0.9	21.8	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	2.9	1.8	24.7	1.8	1.1	16.6	2.7	1	17.8	1.5	0.8	13.5
4.3	0.3	25	5.6	0.4	27	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	3.2	0.8	27.1	2.2	0.7	18.2	2.5	0.5	19.7	2	0.3	15.2
0.3	1.7	23.7	1.2	3.5	24.7	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	2	2.7	26.4	1	1.8	17.3	1.2	1.6	19.3	0.9	1.3	14.8
1	0.7	24	2	2.1	24.6	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	3.4	1.2	28.6	2	1.8	17.5	2.1	1.4	20	2.3	0.9	16.3
1	0.7	24.3	1.7	0.6	25.8	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	1.8	0.3	30.1	1.6	0.4	18.7	1	0.3	20.7	1.9	0.3	17.8
0	1.3	23	1.6	1	26.4	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	1.5	1.3	30.3	0.7	0.6	18.8	1	1.2	20.5	1.5	0.5	18.8
0.3	4.3	19	4	4.4	26.1	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	5	5	30.3	3.5	3.5	18.8	4.5	4	21	2.8	2.6	19
0	0.3	18.7	1.1	0.8	26.4	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	1.8	0.9	31.3	0.9	0.8	18.9	1.2	2	20.2	1.1	0.9	19.1
0.7	0.3	19	2.3	0.5	28.2	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	1	1.1	31.1	0.6	1.1	18.4	0.5	0.6	20	0.3	0.4	19.1
2.3	0.7	20.7	1.1	0.9	28.3	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	0.8	1.6	30.4	0.6	0.9	18.1	0.6	1.7	19	0.6	1.2	18.6
6.7	2	25.3	5.2	2.6	30.9	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	4.2	3.9	30.7	2.6	3	17.6	2.4	3.1	18.3	2.9	2.5	19
0.7	1.3	24.7	1.8	1.7	31	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	1.4	3.7	28.5	0.7	1.9	16.4	1.2	1.9	17.6	0.9	1.7	18.2
4.7	3.3	26	3.1	2.4	31.7	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	2.5	2.7	28.3	1.5	2.2	15.7	1.8	1.8	17.5	1.4	1.9	17.7
2	1.7	26.3	2.6	2.2	32.1	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	3	2.5	28.8	1.9	1.9	15.9	3.4	1.7	19.2	1.9	1.6	18
1	0.7	26.7	0.1	0.2	32.1	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	0	0.1	28.7	0.1	0.1	15.9	0.5	0.2	19.5	0	0.1	17.9
2	0.7	28	2.2	0.6	33.7	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	1.9	0.4	30.2	1.7	0.1	17.4	1.4	0.2	20.6	0.9	0.3	18.5
2.7	0.3	30.3	1.6	0.3	35	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	1.2	0.6	30.9	0.6	0.3	17.7	0.8	0.5	20.9	0.8	0.3	18.9
1.7	0.3	31.7	1.2	0.1	36.1	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	0.9	0.4	31.3	0.8	0.3	18.1	0.7	0.2	21.4	0.6	0.4	19.1
0	0.3	31.3	0.8	0.8	36.1	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	1	1	31.3	0.7	0.6	18.2	0.6	0.4	21.6	0.4	0.4	19.1
1.3	2.7	30	1.7	1.5	36.3	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	1.6	2	31	0.9	1.5	17.7	0.8	1.8	20.6	1	1.7	18.4
0	0.7	29.3	0.2	1.3	35.1	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	0.2	0.6	30.6	0.2	0.4	17.5	0.2	0.8	20	0.1	0.4	18.2
0.3	29	1	0.8	35.7	1	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	0.5	30.6	0.8	0.2	17.2	0.7	1	20.5	1.3	0.5	17.9	1.2
0	0.7	0.3	0	0.2	0.8	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	0	0.4	0.3	0	0.5	0.1	0	0.5	0.8	0	0.8	0.3
		31.7			36.3			38.1			44.9			34.6			26.9			27.1			26.4			31.3			19.7			21.6			19.1
68	68		79.4	79.6		77.1	76.8		94.6	94.5		79.3	78.9		66.4	66.3		67.1	66.9		60.4	60.7		76.4	76.5		51.9	52		55.5	55.1		45.8	46	

11:02 (66.6)(B335) [20] {FA19}			11:15 (66.6)(B337) [22] {FA19}			11:28 (66.6)(B339) [31] {FA19}			11:41 (66.6)(B326) [32] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
12.5	0	12.6	14.3	0	14.3	12.5	0	12.5	12.3	0	12.3
1.3	0	13.9	2.9	0.1	17.1	1.2	0	13.7	1.3	0	13.6
0.1	0	14	0.1	0	17.2	0.5	0	14.2	0.2	0	13.8
0.1	0.1	14.1	0.2	0	17.4	0.4	0	14.5	0	0	13.8
0.8	0.2	14.7	0.5	0	17.9	1.1	0.3	15.3	0.7	0.4	14.1
6	1.2	19.5	6.4	1.4	22.9	5.2	1.8	18.7	7.2	1.5	19.9
0.5	0.2	19.8	0.6	0.6	22.8	0.7	0.5	18.9	0.9	0.8	20.1
1.3	1.1	20	0.7	0.8	22.8	0.5	0.5	19	0.8	0.5	20.3
1.7	5	16.8	1	4.3	19.5	0.9	4.2	15.8	1.5	4.5	17.3
2.6	1.4	18	2.5	1	21	2.3	0.6	17.4	2.6	1.2	18.8
1.7	1	18.7	1.4	1.7	20.6	1.7	0.9	18.2	1.9	2.2	18.5
2.3	0.4	20.6	2	0.8	21.9	2.6	0.9	19.9	2.9	0.6	20.8
2.3	2.5	20.3	1.3	2.4	20.8	1.5	2.1	19.4	1.1	2	19.9
2.2	1.4	21.2	2.7	1.3	22.3	2.6	0.9	21.1	2.7	1.3	21.3
1.9	0.8	22.3	1.2	0.9	22.6	1.9	0.8	22.2	1.4	0.3	22.4
1.4	0.6	23.1	1.4	0.8	23.1	1.3	0.7	22.8	1.3	1	22.8
3.2	4.2	22.1	3.9	3.6	23.5	4.4	3.7	23.5	4.4	4.5	22.7
1.2	0.4	22.9	1.5	0.6	24.3	1.8	0.8	24.4	1.1	0.6	23.2
0.4	0.4	22.9	0.3	0.2	24.5	0.4	0.8	24	0.4	0.8	22.8
1.4	1.5	22.8	1.2	0.8	24.9	0.5	1.7	22.8	0.4	1.8	21.3
4.2	5.1	21.8	3.8	4.5	24.2	3.2	5	21	3.6	5.2	19.7
1.4	2.8	20.4	1.6	2.1	23.7	1.4	2.5	19.9	1.1	2.5	18.3
1.7	2.2	19.9	2	2.4	23.3	2	2.4	19.5	2.3	2.5	18.1
2.5	2.1	20.3	2.3	1.8	23.8	3.5	1.7	21.3	2.8	2.1	18.8
0.1	0.1	20.4	0	0.1	23.6	0.3	0.1	21.5	0.1	0.2	18.7
1.8	0.4	21.8	1	0.4	24.2	1.8	0.3	22.9	1.3	0.3	19.7
0.3	0.4	21.7	0.7	0.7	24.3	1.1	0.6	23.4	1	0.6	20.1
0.8	0.6	21.9	0.5	0.5	24.2	0.6	1.1	22.9	1	0.6	20.5
0.6	2.2	20.3	0.5	1.2	23.5	0.6	1.1	22.5	0.5	1	19.9
1.7	2.2	19.9	1.6	2.3	22.8	1.8	1.3	23	1.6	1.8	19.7
0.5	0.6	19.8	0.3	0.6	22.4	0.5	1	22.5	0.3	1.1	18.8
0.6	20	0.9	0.5	21.7	1.7	0.3	22.5	0.5	0.3	18.8	0.6
0	0.4	0.6	0	1.2	0.5	0	0.2	0.3	0	0.2	0.4
		23.1			24.9			24.4			23.2
61.1	61.5		60.9	60.8		61.1	61		61	60.9	

11:54 (66.6)(B319) [20] {FA19}			12:07 (66.6)(B321) [26] {FA19}			12:20 (66.6)(B328) [24] {FA19}			12:33 (66.6)(B333) [27] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
8.5	0	8.5	14.3	0	14.3	12.4	0	12.4	15.3	0	15.3
1	0	9.5	1.1	0	15.4	1.7	0.1	14	1.1	0	16.5
0.2	0	9.6	0.2	0.1	15.5	0.5	0.1	14.3	0.4	0	16.9
0.2	0.1	9.8	0.1	0	15.5	0.1	0	14.4	0.2	0	17.1
0.3	0.3	9.7	0.6	0.1	16.8	0.4	0.2	14.6	0.7	0.4	17.4
5.4	1.1	14	6	1	21.8	5.5	1.3	18.8	6.2	1.7	21.9
0.3	0.2	14.1	0.8	0.7	22	0.7	0.4	19.2	0.6	0.9	21.7
0.5	0.3	14.3	0.8	0.7	22.1	0.8	0.7	19.3	0.3	0.9	21
1.3	3	12.6	2.5	4.8	19.8	1.3	4.9	15.7	1.2	3.8	18.4
2.5	0.8	14.2	2.8	1	21.6	3.1	1.6	17.2	3.5	1.5	20.4
1.2	1.4	14.1	1.6	1.4	21.8	1.3	1.2	17.3	1.5	1	20.9
2	0.9	15.2	2.9	0.5	24.2	2.7	0.6	19.5	1.8	0.6	22
0.7	1.9	13.9	1.7	2.1	23.8	1.5	1.5	19.5	1.6	2.5	21.1
1.8	0.9	14.9	3.1	1.5	25.5	2.6	1	21	2.7	0.8	23
1.1	0.3	15.7	1.9	0.5	26.8	1	0.8	21.3	0.9	0.6	23.4
1.2	0.5	16.3	0.8	1	26.7	0.7	0.6	21.4	0.6	0.9	23.1
4.4	3.8	16.9	4.3	4	26.9	3.5	4	20.9	4.5	4.6	22.9
1.1	1.3	16.7	2.4	1.2	28.1	1.1	1.2	20.8	1.4	0.7	23.7
0.4	0.4	16.7	0.5	1.2	27.4	0.4	1.4	19.8	0.5	0.9	23.4
0.6	1.4	15.8	0.6	1.8	26.2	0.4	1.5	18.7	0.5	1.5	22.4
2.1	2.8	15.1	3.2	5	24.4	2.7	4.5	16.9	3.3	4.4	21.3
1.3	1.7	14.7	1.5	2.5	23.4	1.5	1.8	16.7	2	2.7	20.6
2.1	1.8	15	1.9	2.2	23.2	2.1	1.8	17	2.7	3.3	20
2.1	1.4	15.6	2.1	2.3	23	1.9	1.6	17.3	2.6	1.9	20.7
0.3	0.3	15.6	0.1	0.1	22.9	0.1	0.4	17	0	0.1	20.6
0.6	0.4	15.8	1.7	0.7	24	1.6	0.4	18.2	1.9	0.6	21.9
0.6	0.8	15.6	1.1	0.5	24.5	1	0.8	18.4	1.3	1.1	22
1.1	1.1	15.6	1	1	24.5	1	0.8	18.6	1	0.6	22.4
0.6	0.8	15.4	0.4	1.8	23.2	0.8	0.5	18.9	0.9	0.7	22.6
0.8	1.5	14.7	1.5	1.6	23.1	1.5	2.3	18.1	1.6	2	22.3
0.1	0.6	14.2	0.3	0.7	22.7	0.6	0.7	18	0.4	1	21.7
1.1	14.8	1.4	0.6	22.8	1.1	0.8	17.5	1.9	0.9	21.9	1.5
0	0.5	1	0	0.5	0.6	0	1.4	0.5	0	0.7	0.8
		16.9			28.1			21.4			23.7
47.5	47.1		64.4	65.3		57.3	57.6		64.1	64.3	

12:46 (66.6)(B332) [28] {FA19}			12:59 (66.6)(B334) [43] {FA19}			13:10 (66.6)(B335) [39] {FA19}			13:20 (66.6)(B337) [37] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
11.8	0	11.8	13.3	0	13.3	15.3	0	15.3	14.6	0	14.6
0.9	0	12.7	1	0	14.3	1.2	0.1	16.4	1.2	0	15.8
0.2	0	12.8	0.5	0	14.7	0.5	0.1	16.9	0.2	0	16.1
0.4	0	13.2	0.6	0	15.3	0.2	0	17.1	0.1	0	16.2
0.5	0.2	13.5	0.7	0.3	15.8	0.4	0.2	17.2	0.3	0.1	16.3
6.4	1.5	18.4	7.5	1.3	22	10.4	1.6	25.9	7.3	1.3	22.4
0.4	0.6	18.2	0.7	0.5	22.2	1.1	0.5	26.5	0.5	0.3	22.6
0.7	0.6	18.3	0.7	0.7	22.3	0.8	1.2	26.2	0.8	0.6	22.7
1.6	4.2	15.7	1.9	5.1	19.1	1.9	5.2	22.9	1.3	4.8	19.2
3.7	0.9	18.5	4.8	1	22.9	4.4	1.5	25.8	3.8	1.6	21.4
1.2	1	18.8	1.6	1.3	23.2	1.6	1.7	25.7	1.6	1.4	21.6
2.4	0.4	20.8	2.3	0.8	24.7	2.8	0.4	28.1	2.4	0.9	23.1
1.9	1.9	20.8	1.6	2.2	24.2	2.2	3.2	27.1	1.8	2.8	22.1
2.2	0.7	22.2	3	1.1	26	2.6	1.2	28.5	2.2	1	23.2
1.6	0.8	23.1	1.3	0.5	26.8	0.9	0.5	28.8	1.1	0.5	23.9
1.1	0.4	23.9	1.2	0.8	27.2	0.9	1.1	28.7	1.1	1.2	23.9
3.5	4.9	22.5	4.8	4.3	27.7	4.8	4.1	29.4	3.5	3.8	23.6
2	0.6	23.8	1.2	0.9	28	1.1	0.9	29.6	0.7	0.8	23.5
0.5	0.7	23.6	0.7	1.4	27.3	0.6	0.9	29.2	0.5	0.8	23.2
0.3	1	22.9	0.5	1.9	26	0.7	2.3	27.7	0.8	1.8	22.2
2.7	4.8	20.8	3.1	5.1	24	3.1	5.5	25.3	3.1	4	21.3
1.1	3	18.9	1.2	2.5	22.7	1.1	2.7	23.6	1.2	2.1	20.4
1.4	3.2	17.1	2	3.1	21.5	1.4	4.1	20.9	1.6	2.9	19.2
2.3	3.1	16.9	2.3	3.3	20.6	2.8	3.2	20.5	4.4	2.6	20.9
0.1	0.1	16.4	0.1	0.2	20.6	0.1	0.4	20.2	0.2	0.4	20.8
1.2	0.7	16.9	1.5	0.4	21.6	0.9	0.5	20.6	1.3	0.1	22
1.1	0.7	17.4	0.9	1.1	21.4	0.6	1.3	19.9	1.1	2.2	20.9
1.1	0.3	18.2	1	0.3	22	0.6	1.2	19.4	0.6	0.7	20.8
0.5	1	17.8	0.3	1.4	21	0.4	1.2	18.7	0.5	1.2	20
0.8	2.1	16.4	1	2.7	19.4	1	2.1	17.5	0.8	2.1	18.8
0.4	0.4	16.4	0.3	0.7	18.9	0.3	0.5	17.4	0.4	0.3	18.9
0.6	16	1.4	1.2	19.2	1.9	0.9	17.1	2	0.7	18.7	1.4
0	0.9	0.5	0	0.8	1.1	0	1.2	0.8	0	0.9	0.5
		23.9			28			29.6			23.9
56.6	56.7		64.8	64.9		67.6	67.7		61.7	61.9	

Trip (RouteVar)(Block) [Observations]

13:30 (66.6)(B339) [28] {FA19}			13:40 (66.6)(B326) [38] {FA19}			13:40 (66.8)(B032) [13] {FA19}			13:50 (66.6)(B350) [46] {FA19}			13:53 (66.6)(B319) [8] {FA19}			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}			15:00 (66.6)(B333) [30] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	38.8	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.2	0.2	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	38.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14.9	0	14.9	14.8	0	14.8	2.2	5.2	35.8	9.1	0	9.1	13.5	0	13.5	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	15.6	0	15.6
1.1	0	16	2	0.1	16.7	1.2	0	37	6.3	0.1	14.9	6.4	0.1	19.8	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	1.4	0.2	16.8
0.2	0	16.2	4.7	0.1	21.3	1.1	0	38.1	15.8	0.3	31.2	9.3	0	29	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	3.2	0.1	19.9
0.1	0	16.3	0.1	0	21.4	0	0	38.1	0.6	0.1	31.7	0	0	29	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	0.4	0	20.2
0.4	0.1	16.6	0.4	0.9	20.8	0.1	0.7	37.5	0.7	0.8	31.6	1.4	1	29.4	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	0.4	0.5	20.1
9.4	1.6	24.5	7.9	2.9	25.9	2.6	3.1	37	5.2	5.9	31.1	5.3	3.3	31.4	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	11.9	2.5	29.5
0.5	0.5	24.5	0.8	0.3	26.3	0.2	0	37.2	0.6	0.7	31	0.1	0.3	31.3	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	0.7	0.9	29.4
0.5	0.8	24.2	0.6	1	25.9	0.3	0.8	36.7	0.3	0.7	30.7	0.1	1.6	29.8	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	1	1.2	29.2
1.8	4.8	21.2	1.8	4.9	22.8	0.4	3.9	33.2	1.5	5.4	26.8	0.6	4.4	26	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	3.8	5.3	27.7
3.9	1.4	23.7	3.4	1.3	25	0.3	0.2	33.2	2.7	1.2	28.3	2.1	1.1	27	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	7.2	1.9	32.9
2.1	1.6	24.2	1.9	2.1	24.8	0.2	2.1	31.3	1.1	2.2	27.2	0.9	2.1	25.8	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	1.8	2.8	31.9
3.5	0.7	27	2.4	0.8	26.4	0.6	0.3	31.6	1.1	0.6	27.8	1.3	0.5	26.5	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	2.7	1.2	33.4
1.5	2.4	26	1.2	2.8	24.7	0.1	0.6	31.1	0.8	2.5	26.1	0.8	1.4	25.9	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	1.9	2.3	32.9
2.6	1.2	27.5	1.6	1.7	24.6	0.1	0.1	31.1	1.5	0.7	26.9	1.4	0.6	26.6	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	2.2	1.2	34
1	0.6	27.8	1.8	0.7	25.7	0	0	31.1	1.4	0.6	27.7	1.6	0.4	27.9	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	2	0.9	35.1
1.2	1	28	0.7	1.1	25.3	0	0.1	31	0.5	0.6	27.6	0.9	0.9	27.9	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	0.8	1.1	34.8
4.9	5.2	27.7	4.1	4.3	25.1	0.9	0.5	31.5	2.5	3.3	26.7	2	3.1	26.8	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	3.7	5.2	33.3
0.9	1	27.6	1.2	1.1	25.3	0.4	0.2	31.6	1	0.7	27	0.8	0.6	26.9	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	1.7	1	34
0.6	0.8	27.4	0.5	0.6	25.2	0.3	0.4	31.5	0.3	0.4	26.9	0.5	0.5	26.9	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	0.5	0.6	33.9
0.8	2.4	25.8	0.7	1.6	24.3	0.1	0.7	30.9	0.4	1.2	26.1	0	0.9	26	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	0.9	2.4	32.4
2.8	5.4	23.1	2.4	4.7	21.9	0.4	1.8	29.5	1.8	3.9	24	0.6	3.6	23	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	3.4	5.8	30
1.3	2.3	22.2	1.2	2.6	20.6	0.2	2.9	26.8	0.7	1.9	22.8	0.3	1.1	22.1	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	1.4	3.5	27.9
2.4	2.8	21.7	2	4.6	18	3.4	2.6	27.6	1.9	5.9	18.8	0.8	6.8	16.1	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	2.3	3.4	26.8
.	.	.	.	.	.	1.2	3.1	25.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.6	0.5	25.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.1	25.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	2.1	1	26.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.2	0.5	26.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.1	1.6	24.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.6	4	21.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.1	3	18.6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.2	3.5	15.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.1	1	14.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0.1	8.5	5.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.8	5.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.3	4.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.2	4.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	4.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.2	4.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0	4.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.1	4.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.2	4.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	0.2	3.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	0	3.9	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4.4	2.9	23.3	4	3	19	.	.	.	3	4.1	17.8	2.1	3.9	14.4	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	4.3	4.5	27.2
0.2	0.3	23.1	0.2	0.3	18.9	.	.	.	0.1	1	16.8	0.4	0.5	14.3	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	0.3	1.2	26.4
1.6	0.2	24.5	1.6	0.4	20.1	.	.	.	1	1	16.9	1	2.8	12.5	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	1.3	0.4	26.7
1.3	2.2	23.6	0.9	1	20.1	.	.	.	0.7	2	15.5	0.4	1	11.9	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	0.9	1.5	26.2
0.8	0.3	24.1	0.4	0.5	20	.	.	.	0.6	0.9	15.3	0.8	0.4	12.3	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	0.5	1.3	25.3
0.4	0.9	23.6	0.1	1.1	18.9	.	.	.	0.3	2.2	13.5	0.4	2.3	10.4	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	0.4	2.2	23.5
2	3	22.5	0.8	2.4	17.3	.	.	.	0.7	2	12.2	0.9	0.5	10.8	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	1.5	4	21.1
0.4	0.6	22.4	0.3	0.4	17.3	.	.	.	0.3	0.5	11.9	0.3	0.3	10.8	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	0.8	0.5	21.4
1	22.7	1.5	0.7	17.7	0.9	.	.	.	0.6	11.9	1	0.4	10.4	1.1	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	0.3	21.2	0.7
0	0.6	1	0	0.3	0.6	.	.	.	0	0.3	0.7	0	0.8	0.4	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	0	0.4	0.2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	28	.	.	26.4	.	.	38.8	.	.	31.7	.	.	31.4	.	.	25.4	.	.	22.4	.	.	31.6	.	.	40	.	.	34.2	.	.	29.7	.	.	35.1			
70.5	70.3		67.2	67.3		59.4	59.1		65.1	65.6		57.4	57.2		57.1	58		53.3	53.4		73.2	72.8		86.6	86.9		74.9	75.3		67.2	67.1		81.2	81.2			

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}			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}			17:00 (66.6)(B328) [31] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12.4	0	12.4	14.2	0	14.2	10	0	10	13.5	0	13.6	16.1	0	16.1	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	14.3	0	14.3
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	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	0.6	0	14.9
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	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	0.6	0	15.5
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	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	0.5	0	16
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	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	1	0.4	16.6
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	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	8.6	1.4	23.8
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	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	1.2	1.2	23.8
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	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	2.1	0.4	25.5
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	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	8.7	3.5	30.8
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	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	12.5	1	42.2
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	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	1.8	2.1	41.9
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	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	3.9	0.9	44.9
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	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	3	2.2	45.8
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	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	3.8	1.4	48.2
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	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	1.6	0.3	49.5
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	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	1.6	1.2	49.9
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	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	5.7	5.7	49.9
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	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	1.7	1.2	50.4
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	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	0.7	1.8	49.3
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	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	1.1	3.1	47.3
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	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	3.8	11.3	39.7
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	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	1.9	4.2	37.4
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	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	2.8	4.5	35.7
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	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	3.5	4.6	34.6
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	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	0.4	0.4	34.5
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	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	1.3	0.5	35.4
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	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	0.5	2.6	33.2
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	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	0.4	1.2	32.5
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	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	0.8	2.5	30.7
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	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	2	4	28.7
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	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	0.2	0.6	28.2
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	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	0.6	28.1	1.4
0	0.2	1.3	0	0.4	0.5	0	0.2	2	0	0.5	0.3	0	0.7	0.4	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	0	0.8	0.6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		31.9			35.1			31.1			30.8			47.9			46.7			42.7			40.5			38.3			39.9			54.5			50.4
76.1	75.9		78.4	78.1		74.1	74.4		66.7	66.7		95.9	95.7		91.1	90.8		81.4	82.2		78.4	78.3		77.4	77.8		82.3	82		106.8	105.9		93.2	93.1	

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}			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}			19:07 (66.6)(B324) [45] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11.7	0	11.7	5	0	5	11.9	0	11.9	10.8	0	10.8	8	0	8	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	7.9	0	7.9
0.7	0	12.5	0	0	5	0.8	0	12.7	0.9	0	11.7	5	0	13	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	0.4	0	8.4
0.1	0	12.6	3	0	8	0.8	0.1	13.8	0.4	0.1	12	0	0	13	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	0.6	0	9
0.4	0	12.9	0	0	8	0.3	0	14.1	0.3	0	12.3	2	0	15	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	0.2	0	9.1
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	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	0.4	0.1	9.4
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	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	4.4	0.8	12.9
1.1	0.4	20.9	0.5	0	10	1.2	0.8	20.3	1.4	0.7	18	2	2	17	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	0.8	0.2	13.6
1.9	0.6	22.2	1	0	11	2	0.7	21.7	1.1	0.3	18.8	0	0	17	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	1.2	0.3	14.4
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	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	3.3	1.3	16.4
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	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	7.9	0.7	23.7
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	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	1.4	1.2	23.9
2.3	0.5	34	3.5	0	17	3.4	0.7	34.3	2.8	0.9	27.7	4	0	23	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	2.5	0.4	26
2.3	1	35.3	2.5	1.5	18	3.3	1.2	36.3	3.4	2	29.1	4	1	26	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	1.4	1.2	26.2
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	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	2.1	0.5	27.8
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	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	0.9	0.6	28.1
1	1.1	38.4	0.5	1	20	1.2	1	39.7	1.4	0.8	33.8	3	0	34	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	1.1	0.9	28.3
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	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	5.3	3.7	29.8
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	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	1.9	0.9	30.9
1	1.4	37.2	0	0	16	0.6	1.4	40.4	0.8	1.5	33.8	0	0	34	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	0.2	1	30.1
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	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	0.6	2.8	28
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	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	1.9	7.6	22.3
1.4	3.7	25	2	3	10.5	1.4	3.7	31.4	1.2	3.2	23.2	0	3	22	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	1.4	2.8	20.9
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	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	1.2	3.4	18.6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	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	1.5	3.6	16.5
0	0.1	20.5	0.5	0	11.5	0.3	0.3	29	0.3	0.3	20.5	0	0	13	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	0.1	0.2	16.4
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	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	0.9	0.4	16.9
1.4	2.6	19	1	2.5	10	0.7	3	26.8	0.6	2.5	19	1	0	13	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	0.2	1.6	15.5
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	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	0.3	0.7	15.1
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	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	0.3	2	13.4
0.7	3	15.6	1	1	9	1.6	2.5	23.3	0.7	2.3	14.6	0	2	8	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	0.6	1.6	12.4
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	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	0.2	0.1	12.4
0.7	15.1	1.6	0	9.5	0	0.3	23.1	0.8	2.5	16	2.8	0	9	0	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	0.3	11.5	1.4
0	1.2	0.5	0	0	0	0	0.2	0.6	0	0.3	2.5	0	0	0	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	0	1.2	0.2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	38.4	.	.	20.5	.	.	41.2	.	.	34.5	.	.	38	.	.	39.8	.	.	32.3	.	.	39.6	.	.	25.6	.	.	31.1	.	.	29.2	.	.	30.9
69.1	69.1		42.5	42.5		78	78.3		68.4	67.5		64	64		75.6	75.3		58.1	58.9		72.5	72.4		49.4	49.3		66.8	66.8		54	54.3		53.4	53.3	

19:21 (66.6)(B327) [42] {FA19}			19:35 (66.6)(B330) [31] {FA19}			19:50 (66.6)(B334) [41] {FA19}			20:05 (66.6)(B343) [42] {FA19}			20:20 (66.6)(B326) [50] {FA19}			20:35 (66.6)(B325) [54] {FA19}			20:50 (66.6)(B344) [31] {FA19}			21:05 (66.6)(B324) [50] {FA19}			21:20 (66.6)(B345) [41] {FA19}			21:35 (66.6)(B346) [41] {FA19}			21:50 (66.6)(B347) [26] {FA19}			22:05 (66.6)(B348) [34] {FA19}		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8.5	0	8.6	7.3	0	7.3	6.7	0	6.7	4.2	0	4.2	5.8	0	5.9	4.4	0	4.4	3	0	3	5.3	0	5.3	3.8	0	3.8	2.5	0	2.5	4.8	0	4.8	4.1	0	4.2
0.4	0	9	0.5	0	7.7	0.4	0.1	7.1	0.6	0	5	0.5	0	6.4	0.5	0	4.9	0.2	0	3.3	0.5	0	5.8	0.8	0	4.6	0.6	0	3.3	0.6	0	5.5	0.3	0	4.6
0.5	0.1	9.4	0.4	0	8.1	0.2	0	7.2	0.3	0	5.3	0.2	0	6.5	0.3	0	5.1	0.2	0	3.6	0.2	0	6	0.5	0.1	5	0.2	0	3.6	0	0	5.5	0.1	0	4.8
0	0	9.4	0.2	0	8.2	0	0	7.2	0.1	0	5.4	0	0	6.6	0.1	0	5.2	0.2	0	3.7	0	0	6	0.1	0	5.1	0	0	3.3	0	0	5.3	0	0	4.8
0.3	0.2	9.5	0.7	0.1	8.8	0.6	0.1	7.7	0.3	0	5.5	0.7	0.1	7.2	0.4	0	5.5	0.4	0.1	4	0.4	0	6.4	0.4	0	5.5	0.3	0	3.6	0.2	0	5.5	0.2	0	4.9
4.9	0.7	13.7	3.6	0.7	11.7	4.8	0.5	12	4.6	0.6	9.6	4.6	0.6	11.2	3.6	0.6	8.6	4.5	0.5	8	3.1	0.3	9.2	3.9	0.3	9	2.8	0.4	6	3.1	0.5	8.2	3.3	0.6	7.6
1.9	0.5	15.2	1	0.2	12.5	1.2	0.1	13.1	0.7	0.2	10.2	0.8	0.2	11.8	0.5	0.3	8.8	0.6	0.3	8.3	0.5	0.1	9.6	0.3	0	9.3	0.6	0	6.6	0.3	0.1	8.4	0.4	0	8
1.2	0.6	15.9	0.8	0.4	12.9	1	0.4	13.7	1.1	0.4	10.8	0.9	0.3	12.5	0.7	0.1	9.4	0.7	0.1	8.9	0.9	0.1	10.3	0.5	0.1	9.7	0.6	0.1	7	1	0.2	9.2	0.4	0.5	7.8
3.8	2.3	17.3	2	1.6	13.3	3.1	1.5	15.2	2.6	1.5	12	2.4	1.2	13.7	1.4	0.9	9.9	2.1	1.4	9.6	1.5	1.2	10.6	1.5	1.3	9.8	0.9	1.2	6.7	1	1	9.2	0.9	1.5	7.2
9.2	0.9	25.6	6.1	0.8	18.5	7.4	0.8	21.9	6.2	0.7	17.5	5.8	0.7	18.8	3.8	0.4	13.3	5.5	0.5	14.6	4.7	0.3	15.1	4.4	0.3	13.9	3.8	0.2	10.3	3.7	0.5	12.5	3.9	0.2	10.9
1.8	1	26.3	1.2	1.5	18.3	1.3	0.9	22.2	1.2	1.1	17.7	1	1.1	18.7	0.6	0.7	13.1	1	0.5	15.2	0.7	0.6	15.1	0.7	0.7	14	0.6	0.5	10.4	0.8	0.7	12.5	0.9	0.7	11.2
2.3	0.6	28.1	1.5	0.3	19.5	2.6	0.6	24.2	2.3	0.5	19.5	2.4	0.6	20.3	1.6	0.7	13.9	1.2	0.5	15.9	0.8	0.5	15.5	1.4	0.3	15.1	1.5	0.6	11.3	3.6	0.2	16	5.6	0.2	16.6
1.9	1.1	28.9	0.7	0.8	19.4	1.4	1	24.6	1.2	0.9	19.9	1	0.8	20.5	0.6	0.6	14	1.4	0.5	16.7	1.2	0.6	16.1	1.2	0.3	15.9	0.9	0.4	11.8	0.8	0.2	16.7	0.7	0.5	16.9
2.7	0.5	31.1	1.7	0.2	20.9	2.4	0.5	26.5	2.4	0.3	22	2.7	0.5	22.7	1.7	0.3	15.4	3.6	0.5	19.9	1.6	0.3	17.4	2.4	0.3	18	2.1	0.3	13.6	3.6	0.3	20	1.4	0.3	18
1.4	0.4	32.1	1.2	0.5	21.5	1.4	0.8	27.1	1	0.5	22.5	0.9	0.5	23.1	0.9	0.3	16	1.8	0.6	21.1	1.1	0.5	18	0.9	0.5	18.4	0.7	0.2	14.2	1.1	0.5	20.5	0.9	0.4	18.5
1.4	0.6	32.9	0.4	0.4	21.5	1.3	0.8	27.6	0.9	0.7	22.7	0.6	0.6	23	0.6	0.4	16.2	0.6	0.7	20.9	0.3	0.5	17.8	0.6	1	18	0.3	0.3	14.2	0.3	0.2	20.6	0.2	0.6	18.1
6.1	3.6	35.3	3.4	2.4	22.6	6.2	4.1	29.7	4.6	3	24.3	4.6	2.5	25.2	3.2	1.9	17.6	4.9	2.5	23.3	4.3	1.9	20.3	6	1.8	22.2	3.5	1.2	16.5	2.4	1.8	21.3	2.5	0.9	19.7
2.3	0.5	37.1	1.2	0.8	23.1	1.7	0.4	31	1	0.4	25	1.1	0.4	25.8	1.4	0.4	18.6	1.5	0.6	24.2	1	0.4	20.9	1.8	0.7	23.4	1.4	0.5	17.3	1.9	0.4	22.8	1.4	0.4	20.7
0.3	0.9	36.5	0.4	0.7	22.7	0.5	0.8	30.7	0.4	0.7	24.6	0.3	0.5	25.6	0.3	0.4	18.5	0.5	0.5	24.2	0.2	0.3	20.9	0.3	0.6	23	0.3	0.4	17.2	1	0.4	23.3	0.7	0.3	21.1
0.5	3	34	0.4	2.1	21.1	0.6	2.7	28.7	0.5	1.4	23.7	0.6	2	24.2	0.2	1.3	17.4	0.6	1.4	23.3	0.3	1.2	19.9	0.2	1.2	22	0.2	0.8	16.6	0.4	1.3	22.3	0.1	1.1	20.1
2.5	7.5	29.1	2.1	5.7	17.5	2.5	8.3	22.9	1.7	6.5	18.9	1.6	6.9	18.9	0.8	4.6	13.7	1.6	5.3	19.7	1	4.6	16.3	1.2	5.1	18.2	2	4	14.6	2.1	3.7	20.8	1.4	2.7	18.8
1.7	4.8	26.1	1.4	2.4	16.5	1.7	3.2	21.4	1	2.7	17.2	1.5	3.4	17.1	0.7	1.6	12.7	1	2.1	18.5	0.8	2	15.1	0.9	2.9	16.2	1.4	2.3	13.7	1.5	2.9	19.3	1.4	3.1	17
2	4.5	23.6	1.3	3	14.8	1.4	3.6	19.1	1.3	2.8	15.8	1.5	3.4	15.1	1.2	2.1	11.8	1.8	2.7	17.6	1.1	2.7	13.5	1.5	3.9	13.8	0.7	2.8	11.6	1.5	4.5	16.4	1	3.7	14.3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.2	4.5	21.3	1.3	2.4	13.7	1.4	3.4	17.1	1.4	3.2	14	1.7	2.6	14.5	1	1.9	10.9	0.7	2.6	15.7	0.9	1.8	12.6	1.4	2.7	12.6	1	1.3	11.3	1.2	2	15.5	1.7	2.2	13.9
0.1	0.2	21.1	0	0	13.7	0.1	0.3	16.9	0.1	0.1	14	0.2	0.3	14.4	0.3	0.4	10.8	0.1	0.4	15.5	0	0.2	12.4	0.4	0.3	12.6	0.2	0.8	10.7	0.2	0.5	15.3	0.2	0.1	14
1.5	0.6	22	0.9	0.4	14.3	0.9	0.7	17.1	0.5	0.4	14.2	0.7	0.6	14.4	0.7	0.4	11.1	1	0.8	15.6	1.4	0.7	13.2	1	0.3	13.2	0.8	0.2	11.3	1	0.3	16	0.8	0.5	14.2
0.5	1.7	20.7	0.3	0.8	13.8	0.3	1.3	16.1	0.2	1.2	13.2	0.2	1	13.6	0.2	0.9	10.4	0.4	1.3	14.6	0.5	1.1	12.6	0.1	1.4	12	0.1	1.4	10	0.2	2.9	13.3	0.1	3.3	11
0.5	1.2	20	0.2	0.8	13.2	0.1	0.8	15.4	0.1	0.6	12.8	0.2	0.8	13	0.1	0.6	9.9	0.3	1.1	13.9	0.1	0.6	12.1	0.1	0.7	11.4	0.1	0.6	9.5	0.2	1.4	12.1	0.1	0.8	10.3
0.4	2.2	18.2	0.2	1.9	11.5	0.2	1.7	13.9	0.1	1.2	11.7	0.2	1.6	11.6	0.1	0.6	9.5	0.3	0.9	13.3	0.1	0.7	11.5	0.1	1.7	9.8	0	1.1	8.4	0.1	0.8	11.3	0.1	0.6	9.8
1.1	1.7	17.6	0.7	1.8	10.4	0.6	2.1	12.4	0.5	1.7	10.5	1.1	1.9	10.8	0.8	1.6	8.8	0.8	1.7	12.4	0.4	0.9	11	0.4	1	9.1	0.6	0.6	8.3	0.5	1.2	10.7	0.6	1.2	9.2
0	0.2	17.4	0	0.1	10.4	0.2	0.2	12.3	0.2	0.1	10.6	0.2	0.2	10.8	0.3	0.2	8.8	0.7	0.4	12.7	0.3	0.1	11.2	0.2	0.1	9.3	0.2	0.2	8.4	0	0.3	10.5	0.1	0.1	9.2
1.4	18.4	1.7	0.3	10.4	0.5	1.2	13.3	1.5	0.3	9.3	1.8	1	11.3	1.4	0.3	8.4	1	0.9	12.6	1.4	0.2	10.3	1.3	1.1	9.8	1.4	2.2	9.9	2.4	0.9	10.5	1.7	0.2	8.5	1.1
0	0.2	1.5	0	0.2	0.3	0	0.3	1.2	0	1.5	0.4	0	0.3	1	0	0.7	0.3	0	0.5	1	0	1.1	0.1	0	0.4	1	0	0.1	2.3	0	0.8	0.8	0	0.9	0.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		37.1			23.1			31			25			25.8			18.6			24.2			20.9			23.4			17.3			23.3			21.1
65.3	65.2		43.4	43.4		55.4	55.3		43.6	44.2		47	46.9		33.3	33.3		44.1	43.6		35.4	35.6		40.1	39.8		33.1	32.4		40	40.1		35.7	35.9	

22:20 (66.6)(B326) [54] {FA19}			22:35 (66.6)(B349) [47] {FA19}			22:50 (66.6)(B351) [41] {FA19}			23:05 (66.6)(B345) [53] {FA19}			23:20 (66.6)(B346) [1] {FA19}			23:35 (66.6)(B347) [32] {FA19}			23:50 (66.6)(B348) [52] {FA19}			24:08 (66.6)(B349) [36] {FA19}			24:26 (66.6)(B351) [24] {FA19}			24:44 (66.6)(B345) [2] {FA19}			25:02 (66.6)(B347) [5] {FA19}			Total		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
																																				38.8	0	38.8
																																				0	0	38.8
																																				0.2	0.2	38.8
																																				0	0	38.8
																																				0	0	38.8
																																				0	0	38.8
																																				0	0	38.8
5.8	0	5.8	4.9	0	4.9	3	0	3	2.7	0	2.7	8	0	8	3.7	0	3.7	3.2	0	3.3	1.7	0	1.8	2	0	2.1	1	0	1	0	0	0	1374.5	5.2	1410.4
0.2	0	6	0.2	0	5.3	0.3	0	3.3	0.1	0	2.8	0	0	8	0.2	0	3.9	0.1	0	3.3	0.1	0	1.9	0	0	2.2	0	0	1	0	0	0	152.9	6.1	1559.8
0.1	0	6	0	0	5.3	0.1	0	3.4	0	0	2.9	0	0	8	0.1	0	4	0.1	0	3.4	0	0	1.9	0	0	2.2	0	0	1	0	0	0	122.3	10.8	1674.1
0	0	6	0	0	5.3	0	0	3.3	0	0	2.9	0	0	8	0	0	4	0	0	3.4	0	0	1.9	0	0	2.3	0	0	1	0	0	0	32.9	2.1	1701.4
0.1	0	6.1	0.3	0.1	5.5	0.5	0	3.7	0.2	0	3.1	0	0	8	0.1	0	4	0.1	0	3.5	0.1	0.1	1.9	0	0	2.3	0	0	1	0	0	0	71.9	19.6	1753.4
2.5	0.5	8.1	2.1	0.4	7.1	2.3	0.1	5.9	2	0.5	4.5	0	0	8	0.8	0.3	4.6	0.6	0.1	4.1	0.9	0.1	2.8	0.7	0.1	2.8	2	0	3	0.8	0	0.8	808.9	139.1	2424.3
0.4	0	8.5	0.2	0	7.3	0.7	0	6.6	0.3	0	4.8	0	0	8	0.2	0	4.8	0.1	0	4.1	0	0	2.8	0.2	0	3	0	0	3	0	0	0.8	82.9	54.5	2453
0.4	0.1	8.8	0.3	0.2	7.5	0.2	0.3	6.5	0.3	0.1	5	1	0	9	0.5	0	5.3	0.1	0.1	4.2	0.1	0.1	2.9	0	0.1	2.9	0.5	0	3.5	0	0	0.8	86.5	53.1	2486.8
1.1	1.6	8.3	0.8	3	5.3	1.2	1.5	6.2	1.2	1	5.2	0	4	5	0.8	0.9	5.1	0.3	0.2	4.3	0.8	0.3	3.4	0.3	0.1	3.1	0.5	0.5	3.5	0.2	0.4	0.6	224.7	562.2	2151.6
3.9	0.2	12	1.7	0.2	6.7	2.3	0.3	8.2	3.2	0.2	8.2	1	0	6	1.3	0.1	6.3	0.9	0.2	5	1.8	0.1	5.1	0.8	0.3	3.7	0	0.5	3	0	0	0.6	408	132.7	2427.3
0.7	0.6	12.2	0.6	0.4	6.9	0.5	0.7	8	0.4	0.3	8.3	1	0	7	0.4	0.3	6.4	0.4	0.1	5.2	0.2	0.2	5.1	0.5	0.1	4	0	0	3	0	0	0.6	153	123.3	2457.4
4	0.3	15.9	1.8	0.3	8.3	1.3	0.3	9	0.9	0.1	9.1	0	0	7	0.6	0.3	6.7	0.5	0.2	5.4	1.2	0	6.3	0.4	0.1	4.3	0	0	3	0.2	0	0.8	288.6	59.2	2685.9
1.3	0.4	16.8	0.4	0.3	8.4	0.6	0.3	9.3	0.3	0.2	9.2	1	0	8	0.3	0.3	6.8	0.2	0	5.6	0.2	0	6.4	0	0.1	4.3	0	0	3	0	0	0.8	165.4	229.4	2622.4
1.7	0.1	18.4	1.1	0.1	9.4	1.3	0.1	10.5	1.1	0.1	10.1	3	0	11	0.5	0.2	7.1	0.2	0	5.8	0.2	0.1	6.5	0.1	0	4.3	0	0	3	0	0	0.8	210.1	107.4	2725.3
0.6	0.5	18.5	0.1	0.3	9.2	0.3	0.2	10.6	0.1	0.2	10	0	0	11	0.1	0.1	7.1	0.1	0.1	5.8	0.2	0.1	6.6	0	0	4.3	0	0	3	0	0	0.8	146	50.2	2820.8
0.4	0.5	18.4	0.3	0.3	9.2	0.5	0.2	10.8	0	0.1	10	0	0	11	0	0.2	7	0	0.1	5.7	0	0.1	6.5	0	0.1	4.1	0	0	3	0	0	0.8	101.4	82.2	2839.8
3	1.6	19.9	1.6	1	9.8	1.6	1.4	11	1.7	0.7	11	6	0	17	1.5	0.6	7.9	2	0.2	7.5	1.3	0.3	7.6	0.5	0.1	4.5	1.5	2	2.5	0.2	0	1	425.2	370.5	2894.9
0.7	0.5	20.1	0.7	0.2	10.3	0.4	0.2	11.1	0.6	0.1	11.4	0	0	17	0.5	0.2	8.3	0.7	0.2	8	0.3	0.1	7.8	0.2	0	4.7	0	0	2.5	0	0	1	125.4	86.9	2933.8
0.4	0.2	20.2	0.2	0.2	10.2	0.1	0.2	11	0.1	0.1	11.4	0	0	17	0.6	0	8.8	0.2	0.1	8.2	0.1	0	7.8	0	0.1	4.6	0	0	2.5	0	0	1	64.4	67	2930.2
0.1	1.3	19	0	0.3	10	0.1	0.6	10.6	0	0.6	10.8	0	1	16	0.1	0.4	8.5	0	0.3	7.9	0	0.1	7.7	0	0.2	4.4	0	0	2.5	0	0	1	74.3	155.8	2849.1
1.4	3.4	17.1	0.8	2.2	8.6	1.5	2.2	9.9	0.7	1.9	9.7	0	5	11	0.8	1.6	7.8	0.8	0.8	7.8	0.8	1.1	7.4	0.3	0.7	4	1	0.5	3	0	0.2	0.8	318.7	480.2	2687.7
1.1	2.6	15.6	0.6	1.1	8.1	0.6	1.4	9	0.5	0.8	9.3	0	3	8	0.2	0.8	7.1	0.1	0.8	7.1	0.4	0.8	7.1	0.1	0.3	3.8	0	1	2	0	0.2	0.6	124.3	238.8	2572.9
1.1	3.6	13.2	0.9	1.5	7.4	2.2	1.2	10.1	1.2	1.5	9	1	2	7	0.5	0.9	6.7	0.4	1.5	6	0.6	1.1	6.5	0.3	1	3	0	0	2	0	0	0.6	224.8	374.2	2423.4
																																				18.7	39.9	171.9
																																				1.8	7.8	165.9
																																				0.5	119.1	49.1
																																				2.4	13	39.3
																																				0.3	2.9	36.5
																																				0.1	1.6	24.9
																																				0.6	4	21.5
																																				0.1	3	18.6
																																				0.2	3.5	15.3
																																				0.1	1	14.4
																																				0.1	8.5	5.9
																																				0	0.8	5.1
																																				0	0.3	4.8
																																				0	0.2	4.5
																																				0	0	4.5
																																				0	0.2	4.4
																																				0	0	4.4
																																				0	0.1	4.3
																																				0	0.2	4.1
																																				0	0.2	3.9
																																				0	3.9	0
1.4	2.7	11.9	0.7	1.1	7.1	1.3	1	10.4	1.2	0.6	9.6	1	0	8	0.6	0.9	6.4	0.4	0.7	5.7	0.3	1.3	5.5	0	0.5	2.5	0	0	2	0	0.4	0.2	264.5	283.4	2216.8
0.2	0.2	11.9	0.1	0.2	7	0.2	0.1	10.5	0.1	0	9.6	0	0	8	0	0.1	6.3	0	0	5.7	0	0	5.5	0	0.1	2.5	0	0	2	0	0	0.2	15.7	23.5	2209.1
0.6	0.4	12	0.3	0.2	7.1	0.4	0.2	10.7	0.5	0.2	9.9	0	0	8	0.4	0.3	6.4	0.3	0.5	5.5	0.2	0.3	5.5	0.1	0.1	2.5	1	0	3	0	0	0.2	166	46.3	2324
0.2	2.8	9.4	0.1	1.2	6.1	0.3	1.8	9.1	0.2	1.5	8.6	0	3	5	0.1	1.3	5.3	0	0.9	4.6	0	1.1	4.3	0	0.5	2	0	0	3	0	0	0.2	123.6	125.7	2319.4
0	0.5	8.9	0	0.5	5.6	0.1	0.7	8.6	0.1	0.4	8.3	0	0	5	0	0.5	4.8	0	0.4	4.2	0	0.3	4.1	0	0	2	0	0	3	0	0	0.2	90.3	65.9	2345.2
0.1	1.1	7.9	0	0.6	5.1	0.1	0.6	8	0.1	1.8	6.6	0	0	5	0.2	0.4	4.5	0.1	0.2	4.1	0	0.5	3.6	0	0.2	1.8	0	0.5	2.5	0	0	0.2	74.4	135.9	2284.1
0.3	0.9	7.3	0.4	0.3	5.1	0.3	2	6.4	0.1	1	5.6	0	0	5	0.1	0.7	3.9	0.1	0.3	4	0	0.5	3.1	0.1	0.3	1.6	0	0	2.5	0.2	0	0.4	120.7	221.9	2184.6
0	0.1	7.2	0	0.1	5.1	0	0.1	6.3	0	0	5.6	0	0	5	0	0.1	3.8	0	0	4	0	0	3.1	0	0	1.6	0	0	2.5	0	0	0.4	38.1	65	2157.6
1.1	7.6	1.4	0.6	4.5	1.6	0.5	5.5	1.6	0.8	5.7	1.2	0	3	2	0.6	3.4	1	0.1	2	2.2	0.2	1.7	1.7	0	1.5	0.1	0	2	0.5	0	0.4	0	76.7	2164.5	131.7
0	0.3	1.1	0	1	0.5	0	1.3	0.3	0	0.3	0.8	0	2	0	0	0.4	0.6	0	2.1	0.1	0	1.4	0.3	0	0.1	0	0	0.5	0	0	0	0	0	58.3	73
																																				0.2	3	7.4
																																				0	7.8	0.4
		20.2			10.3			11.1			11.4			17			8.8			8.2			7.8			4.7			3.5			1					2933.8
34.9	34.6		21.8	21.8		24.8	24.5		20.7	20		23	23		15.8	15.3		12.1	12.1		11.7	11.8		6.6	6.7		7.5	7.5		1.6	1.6		6821.2	6822.1	

Massachusetts Bay Transportation Authority
Route 70
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

	05:11 (70.5)(B031) [9] {FA19}			05:30 (70.5)(B032) [1] {FA19}			05:50 (70.5)(B034) [5] {FA19}			06:10 (70.5)(B037) [52] {FA19}			06:30 (70.5)(B035) [57] {FA19}			06:45 (70.6)(B031) [9] {FA19}			07:00 (70.5)(B191) [7] {FA19}			07:18 (70.5)(B032) [2] {FA19}			07:27 (70.6)(B192) [4] {FA19}			07:44 (70.
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
53 - 9522 - WESTON ST @ CEDARWOOD AVE	1.1	0	1.2	1	0	1	1.2	0	1.2	0.4	0	0.4	2.1	0	2.1	.	.	.	0.3	0	0.3	0	0	0	.	.	.	.	.	.	.
54 - 86929 - STOW ST @ TAVERN RD	0.7	0	1.9	0	0	1	0	0	1.2	0.1	0	0.5	0.3	0	2.4	.	.	.	2	0	2.3	0	0	0	.	.	.	.	.	.	.
55 - 86930 - MAIN ST @ STOW ST	0.4	0.1	2.2	0	0	1	0	0	1.2	0.9	0	1.4	1.1	0	3.5	.	.	.	0.1	0	2.4	1	0	1	.	.	.	.	.	.	.
56 - 9526 - MAIN SHOPPING CENTER @ MARKET	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.2	0	1.2	.	.	.	.	.	.	3.3	0	3.3	.	.	.	.
57 - 86932 - MAIN ST @ SHERIDAN RD	0	0	2.2	0	0	1	0.2	0	1.4	0.4	0	1.8	0.4	0	3.8	0.6	0.1	1.7	0.4	0	2.9	0.5	0	1.5	0.8	0.5	3.5	.	.	.	.
58 - 86933 - 1164 MAIN ST OPP EDGEHILL RD	0	0	2.2	0	0	1	0	0	1.4	1.2	0	3	0.1	0	3.9	0.3	0	2	0	0	2.9	0	0	1.5	0	0	3.5	.	.	.	.
59 - 86934 - 1114 MAIN ST OPP MALONE ST	0	0	2.2	0	0	1	0	0	1.4	0.1	0	3.1	0.2	0	4.2	0	0	2	0	0	2.9	1.5	0	3	0.5	0	4	.	.	.	.
60 - 86935 - MAIN ST @ EVERETT ST	0	0	2.2	2	0	3	0.2	0	1.6	0.2	0	3.3	0.4	0	4.6	0.2	0	2.2	0.9	0	3.7	1.5	0	4.5	0	0	4	.	.	.	.
61 - 86936 - MAIN ST OPP PROSPECT HILL RD	0	0	2.2	0	0	3	0	0	1.6	0.3	0	3.7	0.6	0	5.2	0.4	0	2.7	1.6	0	5.3	2	0	6.5	1	0	5	.	.	.	.
62 - 86937 - MAIN ST @ WESTON ST	0.2	0	2.4	2	0	5	2.2	0	3.8	1.1	0	4.7	2.4	0	7.6	1.2	0	3.9	0.4	0	5.7	0	0	6.5	1	0	6	.	.	.	.
63 - 86938 - MAIN ST @ WELLINGTON ST	0.3	0	2.8	1	0	6	0.2	0	4	1	0	5.7	2.1	0	9.7	2.1	0	6	2	0	7.7	2	0	8.5	0	0	6	.	.	.	.
64 - 86939 - MAIN ST @ PROSPECT ST	2.4	0	5.2	4	0	10	1.8	0	5.8	1	0	6.8	2.8	0	12.5	1.6	0	7.6	1.6	0	9.3	0	0	8.5	2.5	0	8.5	.	.	.	.
65 - 86940 - MAIN ST @ HARVARD ST	1.3	0	6.6	1	0	11	0.8	0	6.6	1.4	0	8.1	2.4	0	14.9	0.7	0	8.2	1.9	0	11.1	2	0	10.5	0.5	0.3	8.8	.	.	.	.
66 - 86941 - MAIN ST @ DANIELS CT	0.2	0	6.8	1	0	12	1.2	0	7.8	1	0	9.2	0.8	0	15.7	1.3	0	9.6	0.7	0	11.9	2	0	12.5	0.8	0	9.5	.	.	.	.
67 - 86942 - 702 MAIN ST	1.3	0	8.1	0	0	12	0.4	0	8.2	0.7	0	9.8	0.2	0	15.9	0.3	0.2	9.7	0.3	0	12.1	0.5	0	13	1	0	10.5	.	.	.	.
68 - 86943 - MOODY ST @ MAIN ST	3.2	0	11.3	1	0	13	0.6	0	8.8	1.7	0.2	11.3	0.3	0	16.1	0.9	0	10.6	0.7	0.1	12.7	0	0	13	0	0	10.5	.	.	.	.
69 - 86944 - CARTER ST @ WALTHAM COMM RAIL	6.2	0	17.6	7	1	19	8.6	4	13.4	7.3	0.6	17.9	3	0.3	18.9	7.1	0.7	17	7.7	0.7	19.7	2.5	0.5	15	6	0.5	16	5.6	.	.	.
70 - 86945 - MAIN ST @ APPLETON ST	0.6	0	18.1	1	0	20	2.2	0	15.6	1.4	0	19.3	0.8	0	19.7	1.2	0	18.2	0.7	0	20.4	0.5	1	14.5	1.3	0	17.3	0.6	.	.	.
71 - 86946 - MAIN ST @ HEARD ST	0.6	0	18.7	2	0	22	0.8	0	16.4	1.2	0	20.5	0.8	0	20.5	0.8	0.1	18.9	0.1	0	20.6	0	0	14.5	0	0	17.3	1.4	.	.	.
72 - 8670 - MAIN ST @ TOWNSEND ST	3.4	0	22.1	3	0	25	3.4	0	19.8	2.2	0	22.7	1.8	0	22.2	2.9	0.1	21.7	1.6	0	22.1	1.5	0	16	1.5	0	18.8	1.2	.	.	.
73 - 8671 - MAIN ST @ CHAMBERLAIN TERR	0.2	0	22.3	0	0	25	0.2	0	20	1.2	0.2	23.7	0.4	0.1	22.6	0.6	0	22.2	0.4	0	22.6	2	0	18	0.8	0	19.5	0.4	.	.	.
74 - 8672 - MAIN ST OPP ROSE HILL WAY	0	0	22.3	1	0	26	0.6	0	20.6	1.4	0	25.1	0.7	0	23.2	0.2	0	22.4	0.6	0	23.1	1	0	19	0.8	0	20.3	0.4	.	.	.
75 - 8674 - MAIN ST @ WILLOW ST	1.1	0	23.4	3	0	29	0.8	0	21.4	0.2	0	25.3	0.2	0	23.5	1.3	0	23.8	1	0	24.1	1	0	20	0	0	20.3	0.2	.	.	.
76 - 8675 - MAIN ST @ LAFAYETTE ST	0.6	0	24	0	0	29	0	0	21.4	0.1	0	25.5	0.1	0	23.6	0	0	23.8	0.1	0	24.3	0	0	20	0	0	20.3	0	.	.	.
77 - 8676 - MAIN ST @ RANGELEY RD	0.1	0	24.1	0	0	29	0.8	0	22.2	1.1	0	26.5	0.1	0	23.7	0.6	0.1	24.2	1.3	0	25.6	1	0	21	0	0	20.3	0.2	.	.	.
78 - 8678 - MAIN ST OPP WARREN ST - WATER	0.2	0	24.3	0	0	29	0.2	0.2	22.2	1.3	0.3	27.5	1.1	0.4	24.5	2.8	0.1	26.9	1.9	0.4	27	0.5	0.5	21	0.3	0	20.5	0.2	.	.	.
79 - 8679 - MAIN ST OPP LONGFELLOW RD	0.8	0	25.1	0	0	29	1.2	0	23.4	0.8	0	28.3	0.4	0.6	24.3	0.4	0.4	26.9	1.9	0.1	28.7	2	0	23	0.3	0	20.8	0.6	.	.	.
80 - 8291 - MAIN ST @ EVANS ST	1.8	0	26.9	0	0	29	1.8	0	25.2	2.3	0.1	30.5	0.6	0.1	24.8	0.8	0.2	27.4	2	0.1	30.6	1.5	0	24.5	1.3	0	22	0.8	.	.	.
81 - 8292 - 590 MAIN ST OPP HERSON ST	0	0	26.9	1	0	30	1	0	26.2	1.5	0.1	32	2.9	0	27.7	0.9	0	28.3	0.7	0	31.3	1.5	0.5	25.5	1	0	23	1.6	.	.	.
82 - 8293 - MAIN ST OPP OLCOTT ST	0.1	0	27	1	0	31	0.6	0	26.8	0.4	0	32.4	1.4	0	29.1	2.1	0	30.4	4.6	0.1	35.7	2.5	0	28	1.8	0	24.8	1.6	.	.	.
83 - 8294 - MAIN ST @ OAKLAND ST	0.9	0.1	27.8	1	0	32	1.2	0	28	0.4	0	32.7	0.8	0.6	29.2	1	0	31.4	1.3	0.1	36.9	0	0	28	0.8	0.3	25.3	1.2	.	.	.
84 - 8298 - MAIN ST @ HOWARD ST	2.7	0	30.4	0	0	32	1.8	0	29.8	1.9	0	34.6	1.4	0	30.7	2.8	0.1	34.1	3	0.3	39.6	2.5	1	29.5	3	0.3	28	1.8	.	.	.
85 - 8295 - MAIN ST @ FRENCH ST	1.7	0.1	32	0	0	32	2.2	0	32	0.6	0	35.2	1.2	0.1	31.9	1.9	0.1	35.9	0.9	0.3	40.1	2.5	0	32	1	0	29	2.4	.	.	.
86 - 8296 - MAIN ST @ CHESTNUT ST	0.8	0.1	32.7	0	0	32	2.6	0.2	34.4	1	0.3	35.9	0.7	0	32.6	1.7	0	37.6	2.3	0.3	42.1	1	0.5	32.5	1	0	30	2.6	.	.	.
87 - 8297 - MAIN ST @ CROSS ST	1.8	3	31.4	2	8	26	2.6	6	31	0.8	8.1	28.6	0.8	4	29.3	1.6	7.4	31.7	2.6	6.3	38.4	0.5	7.5	25.5	1	6.3	24.8	3.2	.	.	.
88 - 1432 - ARSENAL ST @ IRVING ST	0.6	0	32	1	0	27	2.2	0	33.2	1.7	0.5	29.8	0.5	0.1	29.8	0.9	0	32.6	1.7	0	40.1	0	0.5	25	1.5	0.5	25.8	2.6	.	.	.
89 - 1433 - ARSENAL ST @ BEACON PK	0.2	0	32.2	0	0	27	0	0	33.2	0.1	0	29.9	0.2	0	29.9	0	0	32.6	0.1	0.1	40.1	2	0	27	0.8	0	26.5	0.4	.	.	.
90 - 1434 - ARSENAL ST @ BEECHWOOD AVE	0	0	32.2	0	0	27	1	0	34.2	2	0.4	31.5	1.1	0.1	31	2.2	0	34.8	0.7	0	40.9	0.5	0	27.5	0.8	0	27.3	2.2	.	.	.
91 - 1435 - ARSENAL ST @ LOUISE ST	0.9	0	33.1	0	0	27	0.2	0	34.4	0.3	0	31.7	0.4	0	31.4	0.2	0	35	0.6	0	41.4	0.5	0	28	0.3	0	27.5	0.6	.	.	.
92 - 1436 - ARSENAL ST OPP SCHOOL ST	0.2	1.7	31.7	1	0	28	0.4	0	34.8	0.5	0.2	32	1	1.6	30.8	0.4	0.4	35	1.9	0	43.3	2	0	30	0.5	0.3	27.8	2	.	.	.
93 - 1437 - ARSENAL ST @ TALCOTT AVE	0	0	31.7	0	0	28	0	0	34.8	0	0	32.1	0.7	0	31.6	1.3	0.1	36.2	0.1	0	43.4	0	0	30	0	0.3	27.5	0.2	.	.	.
94 - 1438 - 500 ARSENAL ST - WATERTOWN +	1	1.7	31	0	0	28	0	0.2	34.6	2.5	1.1	33.4	0.1	0.2	31.5	0.3	0.1	36.4	0.4	0.3	43.6	0.5	0.5	30	0	1	26.5	0.4	.	.	.
95 - 1441 - ARSENAL ST OPP ELM ST	0	0	31	0	5	23	0	0.4	34.2	2.3	0.1	35.7	0.8	0.1	32.2	0.7	0.1	37	1	0	44.6	0.5	0	30.5	0	0.5	26	0.2	.	.	.
96 - 1442 - ARSENAL ST OPP ARLINGTON ST	0.8	0.7	31.1	0	3	20	0.2	0.8	33.6	1.4	0.7	36.3	1.5	0.4	33.3	3.3	1.6	38.8	1.6	0.3	45.9	2	0.5	32	1	0.3	26.8	1	.	.	.
97 - 1043 - WESTERN AVE @ MACKIN ST	1.2	1.7	30.7	2	1	21	1.6	1.6	33.6	1.5	1.5	36.4	1.3	1.5	33.1	2.2	1.2	39.8	1.3	1.7	45.4	0.5	1	31.5	1.3	1.3	26.8	2.6	.	.	.
98 - 1045 - 450 WESTERN AVE	0	0	30.7	1	0	22	0.2	0	33.8	0.9	0	37.2	0.3	0	33.4	1.7	0	41.4	0.6	0	46	0	0	31.5	0.5	0.5	26.8	0.4	.	.	.
99 - 1046 - WESTERN AVE @ LITCHFIELD ST	0.9	0	31.6	2	0	24	2.2	0	36	4.2	0.1	41.3	2.2	0.1	35.5	2.6	0	44	2.1	0.6	47.6	1.5	1	32	0.8	0	27.5	2.2	.	.	.
100 - 1049 - WESTERN AVE @ EVERETT ST	5	1.6	35	2	0	26	4.4	0.8	39.6	2.4	0.4	43.2	1.6	0.5	36.6	1.2	1	44.2	1.4	0.1	48.9	0.5	0	32.5	0.8	0	28.3	7.2	.	.	.
101 - 1589 - WESTERN AVE @ RIVERDALE ST	0.4	1.8	33.7	0	4	22	1.8	3.8	37.6	1.1	0.8	43.5	1.6	1.3	36.9	2.4	1.2	45.4	1.6	0.3	50.1	2.5	0.5	34.5	1.5	1	28.8	3	.	.	.
102 - 1051 - WESTERN AVE @ TRAVIS ST	0.6	1.1	33.1	0	2	20	0.4	3.2	34.8	0.5	0.9	43.2	0.7	0.2	37.4	1.3	0.6	46.2	0.3	1.1	49.3	0.5	0.5	34.5	1.5	0.5	29.8	1.4	.	.	.
103 - 1052 - 130 WESTERN AVE	0	0	33.1	0	0	20	0	0	34.8	0	0	43.1	0	0	37.4	0.1	0.2	46.1	0	0	49.3	0	0	34.5	0	0	29.8	0.2	.	.	.
104 - 1053 - WESTERN AVE @ GENZYME	0	0	33.1	0	0	20	0.2	1	34	0.1	0.5	42.8	0.2	0.1	37.4	0.7	0.6	46.2	0.3	0.7	48.9	0.5	0	35	0.5	0.3	30	1	.	.	.
105 - 1055 - RIVER ST OPP BLACKSTONE ST	0.1	1	32.2	3	0	23	2.6	0.6	36	1.9	0.4	44.2	1.1	0.4	38.1	1.9	0.4	47.7	0.4	0.9	48.4	1	0	36	1.5	1	30.5	1.2	.	.	.
106 - 1056 - RIVER ST @ FAIRMONT ST	0	0	32.2	0	0	23	1.2	0.2	37	0.2	0	44.4	0.6	0	38.7	0.1	0.2	47.6	0.6	0.1	48.9	0	0	36	0.3	0.3	30.5	0.2	.	.	.
107 - 1057 - RIVER ST @ KELLY RD	0	0	32.2	0	0	23	0	0	37	0.1	0.1	44.3	0.4	0.3	38.8	0.4	0	48	0	0.3	48.6	0.5	0.5	36	0.5	0.5	30.5	0.4	.	.	.
108 - 1058 - RIVER ST @ PLEASANT ST	0	0	32.2	0	0	23	0	0	37	0	0.1	44.3	0.1	0.5	38.3	0	0	48	0	0.4	48.1	0	0	36	0	0.5	30	0	.	.	.
109 - 72 - MASSACHUSETTS AVE @ PEARL ST	0.7	29.1	3.8	1	22	2	1	26.6	11.4	0.8	36	9	0.6	29.4	9.5	0.9	34.1	14.8	1.1	32.4	16.9	0	28.5	7.5	0.3	18.8	11.5	0.4	.	.	.
110 - 73 - MASSACHUSETTS AVE @ SIDNEY ST	0	2.6	1.2	0	2	0	0.2	9.6	2.2	0.1	8	1.3	0	6	3.5	0.6	10.1	5.2	0	6.4	10.4	0	5	2.5	0	3.8	7.8	0.6	.	.	.
111 - 730 - FRANKLIN ST @ SIDNEY ST	0	1	0.2	0	0	0	0	2	0.2	0	0.7	0.6	0	3.5	0	0	4.6	0.7	0	10.4	0	0	2.5	0	0	7.8	0	0	.	.	.
112 - 1123 - GREEN ST @ MAGAZINE ST	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Maximum			35			32			39.6			44.4			38.8			48			50.1			36			30.5				
Total	47.3	47.4		48	48		61.2	61.2		63.2	62.4		52.4	52.5		66.9	66.1		65.4	64.9		52.5	52.5		47.7	47.4		56.4			

8)(B033) [5] {FA19}		07:47 (70.5)(B034) [4] {FA19}			08:00 (70.5)(B037) [30] {FA19}			08:25 (70.6)(B039) [1] {FA19}			08:50 (70.5)(B031) [8] {FA19}			09:10 (70.6)(B190) [41] {FA19}			09:30 (70.5)(B032) [3] {FA19}			09:50 (70.6)(B033) [5] {FA19}			10:20 (70.5)(B037) [47] {FA19}			10:40 (70.6)(B039) [5] {FA19}			11:00 (70.5)(B195) [11] {FA19}			11:30 (70.6)(B032) [3] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	2.8	0	2.8	0.3	0	0.4	.	.	.	0.9	0	0.9	.	.	.	1	0	1	.	.	.	0.4	0	0.4	.	.	.	0.9	0	0.9	.	.	.			
.	.	0.5	0	3.3	0.1	0	0.5	.	.	.	0	0	0.9	.	.	.	0	0	1	.	.	.	0	0	0.4	.	.	.	0	0.1	0.9	.	.	.			
.	.	1.3	0	4.3	0.1	0	0.6	.	.	.	0.3	0	1.1	.	.	.	0	0.3	0.7	.	.	.	0.5	0	0.9	.	.	.	0.8	0.1	1.6	.	.	.			
.	.	.	.	.	.	.	.	7	0	7	.	.	.	0.7	0	0.8	.	.	.	3	0	3	.	.	.	4	0	4	.	.	.	5	0	5			
.	.	1	0	5.3	0.1	0	0.7	1	0	8	0	0	1.1	0.2	0	0.9	0	0	0.7	0	0	3	0.1	0	1	0.2	0	4.2	0.2	0	1.8	0	0	5			
.	.	0	0	5	0.1	0	0.8	1	0	9	0.1	0	1.3	0.1	0	0.9	0	0	0.7	0	0.2	2.8	0.1	0	1.1	0.2	0	4.4	0.3	0	2.1	1	0	6			
.	.	0	0	5	0	0	0.9	0	0	9	0.1	0	1.4	0.1	0	1	0	0	0.7	0	0	2.8	0.1	0	1.2	0	0	4.4	0	0	2.1	0	0	6			
.	.	0.5	0	5.5	1.3	0	2.2	1	0	10	0.1	0	1.5	0.6	0	1.6	0	0	0.7	0.4	0	3.2	0.2	0	1.4	0.2	0	4.6	0.4	0	2.5	0	0	6			
.	.	0.5	0	6	0.5	0	2.7	0	0	10	0.3	0	1.8	0.1	0	1.8	0	0	0.7	0.2	0	3.4	0.2	0	1.6	0	0	4.6	0.2	0	2.6	0.7	0	6.7			
.	.	0.5	0	6.5	0.9	0	3.6	0	0	10	0.5	0	2.3	0.9	0	2.7	0.7	0	1.3	1.4	0.6	4.2	1.1	0	2.7	0.2	0	4.8	0.4	0	3	0.3	0	7			
.	.	0.8	0	7.3	1.4	0	5	0	0	10	1.3	0	3.5	0.4	0	3.1	0.7	0.3	1.7	1	0	5.2	0.6	0	3.2	1	0.2	5.6	0.5	0	3.5	1.3	0.3	8			
.	.	4.3	0	11.5	1.8	0	6.8	0	0	10	0.8	0	4.3	1.5	0.1	4.4	1.3	0	3	1.2	0.2	6.2	1.5	0	4.7	0.4	0.4	5.6	0.4	0.1	3.7	0	0	8			
.	.	1	0	12.5	1.2	0	7.9	2	0	12	1.5	0	5.8	1	0	5.4	0.7	0	3.7	0.8	0	7	1.6	0.1	6.2	0.4	0.2	5.8	1.1	0	4.8	1	0	9			
.	.	0.8	0	13.3	0.7	0	8.6	0	0	12	0.9	0	6.6	1.1	0.2	6.2	0	0	3.7	0.8	0	7.8	0.6	0.1	6.7	0.2	0	6	1.1	0	5.9	1.3	0	10.3			
.	.	0	0	13.3	0.4	0	9	0	0	12	0.4	0	7	0.1	0.2	6.2	0	0	3.7	0	0	7.8	0.3	0.1	6.8	0	0.4	5.6	0.3	0.2	6	0.7	0	11			
.	.	2.3	0.3	15.3	0.9	0	9.9	1	0	13	2	0	9	0.6	0	6.8	0.7	0	4.3	0.4	0	8.2	0.4	0	7.1	0.6	1.2	5	0.9	0	6.9	2.7	0.7	13			
0	6.4	8.3	1.5	22	6.4	0.7	15.6	1	0	14	7.5	0.5	16	4.7	0.6	10.9	3.3	0.3	7.3	2.2	0.6	9.8	4.2	0.6	10.7	6	0.4	10.6	5.9	0.8	12	6	1	18			
0	7	0.8	0	22.8	0.8	0	16.4	0	0	14	1.3	0	17.3	0.5	0	11.4	0	0	7.3	0.2	0	10	0.4	0.1	11	0.4	0	11	0.3	0	12.3	0.3	0	18.3			
0	8.4	0.3	0	23	0.6	0	17	0	0	14	1.5	0.1	18.6	0.4	0	11.7	0	0	7.3	0.4	1	9.4	0.4	0.1	11.3	0.6	0	11.6	0.2	0	12.5	0.3	0	18.7			
0	9.6	2.5	1.8	23.8	1.4	0	18.3	2	0	16	2.1	0.1	20.6	1.1	0	12.8	0.3	0	7.7	0.2	0	9.6	0.6	0.1	11.8	0.8	0.4	12	0.4	0	12.8	0.3	0.7	18.3			
0	10	1.5	0	25.3	1	0.1	19.3	1	0	17	0.8	0.1	21.3	0.6	0	13.4	0	0	7.7	0.4	0	10	0.4	0.1	12.1	0.8	0.2	12.6	0.4	0.1	13.1	0.3	0	18.7			
0	10.4	1.8	0	27	0.8	0	20	1	0	18	0.1	0	21.4	0.3	0.1	13.7	0	0	7.7	0.4	0	10.4	0.2	0	12.3	0	0	12.6	0.9	0	14	0.7	0	19.3			
0	10.6	0.5	0	27.5	0.3	0.2	20.2	0	0	18	0.1	0.3	21.3	0.2	0	13.8	0	0	7.7	0.2	0.6	10	0.4	0.2	12.5	0.4	0	13	0.4	0	14.4	0	0	19.3			
0	10.6	0.3	0	27.8	0	0	20.1	0	0	18	0	0	21.3	0	0	13.8	0	0	7.7	0	0	10	0	0	12.6	0	0	13	0.2	0.1	14.5	0	0	19.3			
0	10.8	0	0	27.8	0.1	0.1	20.1	0	0	18	0.1	0.1	21.3	0.1	0	13.9	0	0	7.7	0	0	10	0.2	0	12.8	0.2	0	13.2	0.3	0	14.7	1.7	0	21			
0	11	1.3	0	29	1.1	0.1	21.1	3	0	21	2	0.1	23.1	0.4	0.1	14.2	0	0	7.7	0.2	1	9.2	0.8	0.3	13.2	0.2	0	13.4	1.2	0.2	15.7	0	0.7	20.3			
0	11.6	0.8	0	29.8	0.4	0	21.5	0	0	21	0.3	0	23.4	0.1	0	14.3	0	0	7.7	0	0	9.2	0.1	0	13.4	0.4	0	13.8	0.1	0	15.8	0	0	20.3			
0	12.4	1.5	0.3	31	0.6	0.2	22	0	0	21	0.1	0	23.5	0.2	0	14.5	0	0	7.7	0.2	0	9.4	0.1	0	13.5	0	0	13.8	0.2	0	16	0	0	20.3			
0	14	1	0	32	1.8	0.2	23.6	2	0	23	0.6	0.1	24	0.3	0	14.8	0	0	7.7	0.2	0	9.6	0.4	0.1	13.9	0	0	13.8	0	0.1	15.9	0.3	0	20.7			
0	15.6	2	0	34	0.9	0.1	24.4	2	1	24	0.9	0	24.9	0.5	0	15.3	2	0.3	9.3	0.8	0	10.4	0.3	0.1	14.1	0	0.4	13.4	0.7	0	16.6	0	0	20.7			
0	16.8	0.8	0.5	34.3	1.1	0.4	25.2	0	0	24	0.1	0	25	0.2	0.1	15.4	0.3	0.3	9.3	0.4	0	10.8	0.3	0.1	14.3	0.8	0	14.2	0.5	0.2	17	0	0	20.7			
0.2	18.4	4	0	38.3	2.1	0.1	27.2	7	2	29	2	0.4	26.6	1.3	0	16.7	0	0	9.3	0.6	0.2	11.2	0.6	0.1	14.7	1	0	15.2	1.6	0.4	18.3	0.3	0.3	20.7			
0.2	20.6	4.3	0	42.5	1.8	0.1	28.8	2	0	31	0.9	0	27.5	1.3	0	17.9	2.3	0	11.7	1	0	12.2	0.6	0.1	15.2	1.4	0.4	16.2	1.2	0.1	19.4	0.7	1	20.3			
0.4	22.8	2	0.3	44.3	1.6	0.3	30.1	2	0	33	1.8	0.1	29.1	1	0.2	18.8	1	0	12.7	0.6	0.2	12.6	0.8	0	15.9	1.4	0	17.6	1.2	0.2	20.4	1.3	0	21.7			
4.8	21.2	5.8	8.3	41.8	3.3	6.9	26.5	4	6	31	3.6	8.9	23.9	1.6	3.7	16.7	0.3	1.7	11.3	1	2	11.6	2.1	3.1	14.9	3.4	2.6	18.4	3.5	4.1	19.7	4.3	1.7	24.3			
0.2	23.6	5.5	0.5	46.8	1.5	0.4	27.6	0	0	31	1	0	24.9	0.8	0.1	17.4	0	0	11.3	1.2	0	12.8	0.3	0.1	15.1	0.2	0	18.6	1.6	0.2	21.2	0	0.7	23.7			
0	24	0.3	0	47	0.5	0	28.1	0	0	31	0.1	0	25	0.1	0	17.5	0	0	11.3	0	0	12.8	0.1	0	15.2	0	0	18.6	0.3	0.1	21.4	0	0	23.7			
0.2	26	1.5	0	48.5	1.6	0.2	29.5	3	0	34	0.9	0	25.9	0.4	0	17.9	0	0.3	11	0.2	0.2	12.8	0.4	0.6	15	0.4	0.4	18.6	0.3	0.2	21.5	0	0.3	23.3			
0.2	26.4	1	0	49.5	0.7	0	30.1	0	0	34	0.1	0	26	0.4	0.1	18.2	0	0	11	0.6	0.2	13.2	0.1	0	15.1	0.2	0	18.8	0	0	21.5	0	0	23.3			
0	28.4	2.5	1.5	50.5	1.4	0.8	30.7	1	2	33	0.9	0.6	26.3	0.4	0.4	18.2	0	0	11	0.8	0.4	13.6	0.3	0.1	15.2	0	0	18.8	1	0.3	22.2	0.7	0.3	23.7			
0.2	28.4	0.3	0.8	50	0.2	1.7	29.1	0	0	33	0	0.4	25.9	0.2	0.1	18.3	0	0.3	10.7	0.2	0.2	13.6	0.2	0.1	15.3	0.4	0.4	18.8	0.5	0.7	21.9	0	0.3	23.3			
1.2	27.6	0.3	0.5	49.8	0.6	0.8	28.9	2	0	35	0.3	0.9	25.3	0.4	1.7	17	0.3	1.3	9.7	0.4	1	13	0.8	1.2	14.9	1	4.8	15	2.2	1.7	22.4	1.3	1.7	23			
0	27.8	0.5	0.3	50	0.3	0.2	28.9	0	0	35	0.5	0	25.8	0.1	0.1	17.1	0	0	9.7	0.8	0.4	13.4	0.3	0.1	15	0	0.2	14.8	0.4	0.1	22.6	1	0	24			
1	27.8	2.8	0	52.8	1.3	0.4	29.8	4	1	38	1	0.5	26.3	1.1	0.2	18	0	0.3	9.3	1.2	1	13.6	0.7	0.1	15.6	0.4	0.2	15	1.1	0.2	23.5	1.7	0.3	25.3			
0.6	29.8	1.3	1.5	52.5	1.9	1.4	30.4	0	3	35	1.5	1.3	26.5	0.8	0.9	17.9	1.3	0	10.7	0.4	0	14	1	0.7	15.9	1.2	0.6	15.6	1.2	0.8	23.9	0.3	1	24.7			
0	30.2	0	0.3	52.3	0.2	0.2	30.4	0	0	35	0.3	0	26.8	0	0.1	17.8	0	0	10.7	0	0.2	13.8	0.3	0	16.1	0.6	0.2	16	0.5	0	24.4	0	0	24.7			
0	32.4	0.8	0.3	52.8	2	0.1	32.2	2	0	37	2	0.3	28.5	0.8	0.2	18.4	0.3	0	11	0.6	0	14.4	1.5	0.2	17.4	1.6	0	17.6	1.6	0.5	25.5	0.7	0.3	25			
0.2	39.4	6	0.3	58.5	2.3	1.2	33.3	5	2	40	0.8	0.4	28.9	1.1	0.5	19	0.3	0.3	11	1.8	1.2	15	1.6	0.5	18.5	1.8	0.6	18.8	1.6	0.7	26.5	1	0.3	25.7			
0.4	42	2.8	1.5	59.8	1.7	0.9	34.2	2	1	41	1.6	1	29.5	0.8	0.8	19.1	0	0	11	1.2	0.4	15.8	0.6	0.7	18.5	1.6	0	20.4	0.5	1.9	25	0.3	1.3	24.7			
1.2	42.2	1	2	58.8	0.8	1	33.9	1	1	41	0.3	0.4	29.4	0.8	0.7	19.2	0.3	0.7	10.7	0.2	0.4	15.6	0.4	0.7	18.1	0.8	1.4	19.8	0.7	1.1	24.6	0	0.7	24			
0.8	41.6	0	0.3	58.5	0	0.5	33.4	0	0	41	0	0.1	29.3	0	0.1	19.1	0	0	10.7	0	0	15.6	0	0.1	18.1	0	0.2	19.6	0	0	24.6	0	0	24			
0.4	42.2	1.3	2.5	57.3	0.1	0.2	33.3	0	0	41	0	0.4	28.9	0.3	0	19.3	0	0	10.7	0	0.2	15.4	0	0	18.1	0.2	0	19.8	0.5	0.2	25	0	0	24			
2.4	41	1	0.5	57.8	1.6	0.6	34.3	3	1	43	0.9	0.5	29.3	0.7	0.5	19.6	0	0	10.7	1.4	0.6	16.2	0.8	0.4	18.5	1	0.4	20.4	0.6	0.9	24.7	0.3	0.3	24			
0.6	40.6	0.3	0.3	57.8	0.5	0.3	34.5	0	0	43	0.4	0.4	29.3	0	0.3	19.3	0	0	10.7	0.4	0	16.6	0.1	0.1	18.5	0	0	20.4	0	0.3	24.5	1	0	25			
0	41	0.3	0	58	0.2	0.3	34.4	0	0	43	0	0.3	29	0	0.1	19.1	0.3	0	11	0.2	0.2	16.6	0.1	0.1	18.6	0	0	20.4	0.2	0	24.6	0	0	25			
0	41	0.3	0.5	57.8	0.1	0.2	34.3	0	0	43	0.1	0	29.1	0	0.2	19	0	0	11	0	0	16.6	0	0.4	18.2	0.2	0.2	20.4	0	0.3	24.4	0	0.7	24.3			
28.4	13	1.3	34.5	24.5	0.6	24.5	10.4	0	34	9	0.4	24.5	5	0.4	14	5.6	0	6.3	4.7	0	14.2	2.4	0.3	16.3	2.2	0.2	16.4	4.2	0.1	19.6	4.8	0.7	19.3	5.7			
10.6	3	0	20.3	4.3	0	8.1	2.3	0	9	0	0	4.1	0.9	0.1	2.9	3.1	0	0.3	4.3	0	1	1.4	0.1	1.1	1.2	0.4	1.4	3.2	0	1.4	3.5	0	0	5.7			
2.4	0.6	0	4.3	0	0	2.3	0.1	0	0	0	0	0.9	0	0	3.9	0	0	4.3	0	0	1.4	0	0	1	0.2	0	3.2	0	0	3.4	0.1	0	5	0.7			
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	42.2			59.8			34.5			43			29.5			19.6			12.7			16.6			18.6			20.4			26.5			25.7	
56.6		86.9	85.7		56	55.8		63	63		48.1	47.8		31.9	33.2		17.4	17.3		29.8	29.8		30.6	30		37.4	37.4		41.6	41.4		39.5	38.9			

Trip (RouteVar)(Block) [Observations]

11:53 (70.5)(B033) [18] {FA19}			12:15 (70.6)(B037) [46] {FA19}			12:43 (70.5)(B039) [6] {FA19}			13:05 (70.6)(B195) [6] {FA19}			13:40 (70.5)(B032) [2] {FA19}			14:00 (70.6)(B033) [18] {FA19}			14:25 (70.5)(B193) [12] {FA19}			14:50 (70.6)(B039) [19] {FA19}			**15:17 (70.5)(B038) [16] {SP19}**			15:20 (70.8)(B190) [19] {FA19}			15:45 (70.6)(B032) [2] {FA19}			16:06 (70.5)(B036) [4	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
1.5	0	1.6	.	.	.	1.5	0	1.5	.	.	.	2	0	2	.	.	.	0.9	0	1.1	.	.	.	2.7	0	2.7	.	.	.	.	.	.	2.4	0
0.1	0	1.7	.	.	.	0	0	1.5	.	.	.	0.5	0	2.5	.	.	.	0	0	1.1	.	.	.	0	0	2.7	.	.	.	.	.	.	0.1	0
0.6	0.1	2.2	.	.	.	2	0.2	3.3	.	.	.	1.5	0	4	.	.	.	2.3	0.1	3.4	.	.	.	4	0	6.7	.	.	.	.	.	.	2.9	0
.	.	.	4.3	0	4.3	.	.	.	3.5	0	3.5	.	.	.	6	0	6	.	.	.	4.3	0	4.3	.	.	.	.	.	.	9.5	0	9.5	.	.
0.3	0.1	2.5	1.2	0.6	5	0	0	3.3	0	0	3.5	0	0	4	0.3	0	6.3	0.7	0	4.1	0.9	0	5.2	1.4	0.1	8	.	.	.	2	0	11.5	0.3	0
0.4	0	2.9	0.4	0	5	0.3	0	3.7	0	0	3.5	0	0	4	0.3	0	6.6	0.3	0	4.3	0	0	5.2	0	0	8	.	.	.	0	0	11.5	0.4	0
0.1	0	3	0	0	5	0	0	3.7	0	0	3.5	0	0	4	0	0	6.6	0	0	4.3	0	0.1	5.1	0.1	0	8.1	.	.	.	0	0	11.5	0.1	0
0.4	0.1	3.4	0.2	0	5	0.5	0	4.2	0.2	0	3.7	0	0	4	0.3	0.1	6.8	0.5	0	4.8	0.2	0.2	5.1	0.5	0	8.6	.	.	.	0	0	11.5	0.5	0
0.1	0	3.5	0.2	0	5.2	0.5	0	4.7	0.5	0	4.2	0	0	4	0.6	0.2	7.2	0.5	0	5.3	0.1	0.1	5.2	0.4	0	8.9	.	.	.	0.5	0.5	11.5	0.8	0
0.6	0	4.1	0.4	0.1	5.5	0.8	0	5.5	0.5	0.5	4.2	2.5	0	6.5	0.2	0.1	7.4	0.3	0	5.7	0.4	0	5.6	0.8	0.1	9.6	.	.	.	1.5	0	13	0.5	0
0.1	0.1	4.1	0.3	0	5.8	0.7	0	6.2	0.3	0	4.5	0	0	6.5	0	0	7.4	0.2	0.2	5.7	0.5	0	6.1	0.8	0	10.4	.	.	.	0	0	13	0.6	0
0.6	0	4.6	0.6	0.2	6.3	2.7	0.3	8.5	2.2	0	6.7	1.5	0	8	0.9	0.2	8.1	1.2	0.3	6.5	0.9	0.1	6.9	1.3	0.2	11.4	.	.	.	5	1	17	1.3	0.5
1	0.2	5.4	1	0.3	7	2.3	0	10.8	0.5	0	7.2	3	0	11	1.3	1	8.4	2.3	0.3	8.6	1.4	0.5	7.8	1.6	0.1	12.9	.	.	.	3	0.5	19.5	2	0.1
0.3	0	5.8	1	0.3	7.7	1.8	0	12.7	0.2	0.2	7.2	3.5	0	14.5	1.2	0.3	9.3	1.3	0.3	9.6	0.6	0.3	8.2	1.8	0.3	14.4	.	.	.	0.5	1	19	0.5	0.2
0.2	0.1	5.9	0.2	0.2	7.6	0.3	0.2	12.8	0.8	0.2	7.8	0.5	0	15	0.3	0.1	9.6	0.4	0.7	9.3	0.4	0.1	8.5	0.3	0	14.7	.	.	.	0.5	1.5	18	1.1	0.1
0.6	0.1	6.4	0.3	0.1	7.9	0.3	0.3	12.8	0.3	0	8.2	0.5	0	15.5	0.2	0.1	9.7	0.8	0.2	10	0.3	0.1	8.6	0.5	0.1	15.1	.	.	.	0	0.5	17.5	1.1	0.1
5.1	0.8	10.7	6.3	0.7	13.5	4.2	0.3	16.7	4.5	1.2	11.5	4.5	2	18	7.9	1.2	16.5	11.3	1.5	19.8	5.4	0.8	13.2	5.3	1.5	18.9	6.8	0	7.6	5	1	21.5	5.9	1.4
0.2	0.1	10.9	0.5	0	14	1.2	0.2	17.7	0	0	11.5	0	0	18	0.5	0.1	16.9	0.7	0.2	20.3	0.5	0.1	13.6	0.5	0.1	19.4	0.5	0.5	7.6	0	0	21.5	1.7	0.2
0.3	0.2	11	0.4	0.3	14.2	0.5	0	18.2	0.2	0	11.7	0	0	18	0.4	0.3	17.1	0.8	0.5	20.6	0.5	0.3	13.8	1.1	0.1	20.4	0.6	0.1	8.2	1	0	22.5	0.3	0.1
0.6	0	11.6	0.8	0.2	14.8	0	0	18.2	0.2	0.2	11.7	0	0.5	17.5	0.8	0.1	17.8	1.5	0.3	21.8	1	0.3	14.5	0.8	0.3	20.9	1.1	0	9.3	0	0	22.5	0.7	0.1
0.5	0.1	12	0.8	0.2	15.5	0	1.2	17	1.2	0	12.8	0	0	17.5	0.9	0.4	18.3	1	0.2	22.7	0.7	0.3	14.9	0.4	0.2	21.1	1.4	0	10.7	0	0	22.5	0.6	0.2
0.2	0	12.2	0.3	0.2	15.5	0.3	0	17.3	0.2	0	13	0	0	17.5	0.2	0.1	18.4	0.1	0	22.8	0.3	0.1	15.2	0	0.4	20.7	0.6	0.1	11.2	0.5	0	23	0.3	0
0.4	0.1	12.5	0.3	0.2	15.7	0	0.3	17	0.3	0.3	13	0.5	0	18	1	0.3	19.1	0.3	0.2	22.8	0.2	0	15.3	0.3	0.1	20.9	0.3	0.1	11.5	0	0	23	0.7	0.3
0.1	0	12.6	0	0	15.7	0	0	17	0.3	0	13.3	0.5	0	18.5	0.1	0	19.2	0.3	0.2	22.9	0.1	0	15.4	0	0	20.9	0	0	11.5	0	0	23	0	0.1
0.2	0.1	12.6	0.3	0.1	15.9	0	0	17	0.2	0.3	13.2	0.5	0.5	18.5	0.3	0.1	19.5	0.7	0	23.6	0.3	0.1	15.6	0	0.1	20.8	0.2	0	11.7	0	0	23	0.2	0.1
0.9	0.1	13.5	0.9	0.4	16.3	0.2	0.2	17	1.2	0.5	13.8	0	1	17.5	1.8	0.3	21	2	0.8	24.8	1.2	0.2	16.6	0.6	0.3	21.2	2.6	0.2	14.1	1.5	1	23.5	1.6	0.2
0.1	0	13.6	0	0	16.3	0	0	17	0.3	0	14.2	0	0	17.5	0.1	0	21.1	0.1	0.1	24.8	0.4	0	17	0.1	0	21.3	0.3	0	14.4	0	0	23.5	0	0.1
0	0.1	13.5	0.2	0	16.5	0.3	0.2	17.2	0	1	13.2	0	0	17.5	0.1	0.2	21	0	0	24.8	0.3	0	17.3	0.1	0.1	21.3	0.1	0.1	14.4	0	0.5	23	0.4	0.6
0.3	0.1	13.7	0.3	0.2	16.6	0	0	17.2	0.5	0.2	13.5	0	0	17.5	0.2	0.3	20.8	0.8	0.1	25.6	0.2	0	17.5	0.3	0.4	21.1	0.3	0	14.7	0	0	23	0.3	0.1
0.2	0.1	13.8	0.2	0.3	16.5	0	0	17.2	0	0	13.5	0	0	17.5	0.4	0.2	21.1	0.6	0.2	26	0.1	0	17.6	0.2	0	21.3	0.1	0	14.8	0	0	23	0.5	0.1
0.2	0.2	13.8	0.2	0.2	16.5	0.2	0.3	17	0.8	0.3	14	0	0.5	17	0.2	0.1	21.2	0.2	0.5	25.7	0.5	0.2	17.9	0.1	0.2	21.3	0.1	0	14.9	1.5	0.5	24	0.3	0.1
0.8	0.1	14.6	0.7	0.2	17.1	0.3	0	17.3	1.5	0.2	15.3	0.5	0	17.5	1.2	0.1	22.3	2.2	0.3	27.6	0.5	0.1	18.4	0.8	0.3	21.7	0.9	0.3	15.5	1	0	25	0.6	0.3
0.2	0.1	14.7	0.8	0	17.8	0.2	0.2	17.3	0.3	1	14.7	0	0.5	17	0.8	0.2	22.9	0.9	0.1	28.4	1.4	0.2	19.6	1.4	0.1	23	0.8	0.2	16.2	0.5	0.5	25	0.5	0.4
0.4	0.3	14.8	0.3	0.4	17.7	0	0	17.3	0.2	0.2	14.7	0	0	17	0.3	0.3	22.9	0.7	0.4	28.7	0.3	0.3	19.5	0.1	0.1	23	0.5	0	16.7	0.5	0	25.5	0.3	0.3
3.3	3.1	15.1	2.9	3.3	17.2	1	2.2	16.2	1.7	3.2	13.2	0	1.5	15.5	2	3.2	21.7	2.6	4	27.3	3.1	4.7	17.9	1.4	4.6	19.8	1.9	2.1	16.5	2.5	5	23	3.6	4.8
0.5	0.1	15.5	0.7	0.2	17.7	0.3	0.2	16.3	0.7	0.2	13.7	1	0	16.5	0.8	0.5	21.9	1.5	0.7	28.1	2.2	0.1	20	1.3	0.1	21	1.5	0.3	17.7	2	0	25	0.9	0.6
0.1	0	15.6	0.1	0.1	17.7	0	0	16.3	0	0	13.7	0	0	16.5	0.3	0	22.2	0.4	0.1	28.4	0.3	0	20.3	0.1	0	21.1	0.3	0	18	0.5	0	25.5	0.2	0.1
0.4	0.2	15.8	0.5	0.2	17.9	0.8	0	17.2	1	0.2	14.5	0.5	0	17	1.7	0.1	23.8	1.8	0	30.2	1.5	0.3	21.5	1.4	0.1	22.4	3.5	0.1	21.4	0	0	25.5	0.3	0.2
0.1	0	15.9	0	0	17.9	0	0	17.2	0.2	0	14.7	0	0	17	0.1	0	23.9	0	0.1	30.1	0.1	0.1	21.6	0	0	22.4	0.2	0	21.6	0	0	25.5	0.2	0
0.6	0.1	16.3	0.4	0.2	18.1	0	0	17.2	0.3	0.3	14.7	0	0	17	1	0.7	24.2	1.9	1.9	30.1	1.5	0.6	22.4	0.5	0.6	22.3	1.1	0.4	22.3	0.5	1	25	1.5	0.4
0.1	0.4	16.1	0.3	0.4	18	0.3	0	17.5	0.3	0.3	14.7	0.5	1	16.5	0.9	0.6	24.6	2.3	1.4	31	1.5	0.5	23.4	0.9	0.3	22.9	0.7	0.1	22.9	0.5	1	24.5	1.8	0.2
1.3	1.5	15.9	1.6	2	17.7	1.2	1.5	17.2	1.5	0.8	15.3	1.5	0.5	17.5	2.8	2.1	25.4	3.8	1.9	32.9	1.9	2.6	22.7	1.6	1.3	23.1	2.5	1.9	23.6	2	2.5	24	1.6	1.5
0.2	0.2	15.8	0.6	0.1	18.1	0.5	0.2	17.5	1	0	16.3	0.5	0	18	0.9	0.2	26.1	1.8	0.2	34.5	1.4	0.1	24.1	0.8	0.1	23.8	1.5	0.1	25	0	0	24	1.2	0.2
1.9	0.2	17.5	1.9	0.4	19.6	1	0.3	18.2	2.8	0.5	18.7	1	0.5	18.5	2.1	0.2	28	2.7	0.3	36.9	1.1	0.3	24.8	1.7	0.4	25.1	2.1	0.3	26.8	1.5	1	24.5	3.6	0.5
1.2	1.8	16.8	0.7	1	19.3	0.2	1.2	17.2	1	1	18.7	0	1	17.5	1.9	1.7	28.2	3.3	2.3	37.9	1	1.1	24.8	1	1.5	24.6	1.4	1.6	26.6	0	2	22.5	0.9	1.7
0.4	0	17.3	0.3	0	19.7	0	0	17.2	0	0.5	18.2	0.5	0	18	0.4	0.2	28.5	0.8	0.1	38.6	0.3	0.1	25	0.8	0.1	25.3	0.4	0.2	26.8	1	0	23.5	0.6	0.4
1.7	0.1	18.9	1	0.4	20.3	0.7	0.7	17.2	0.3	0.5	18	0.5	0.5	18	0.5	0.3	28.7	1	0.5	39.1	0.8	0.2	25.7	1.2	0.2	26.4	0.8	1.1	26.5	1	1	23.5	0.7	0.5
1.3	0.3	19.8	1.3	0.6	21.1	0.3	0.3	17.2	2	0.7	19.3	0.5	0	18.5	2.1	1.2	29.6	3.4	1.7	40.8	3.3	1.8	27.2	1.8	2.1	26	2.3	1.2	27.6	2	3	22.5	1.8	1
0.6	0.9	19.4	0.5	0.8	20.8	0.7	0.8	17	0.3	0.7	19	0	0.5	18	1.1	1.1	29.6	0.8	2	39.7	0.8	1.6	26.4	0.6	2.1	24.5	0.6	1.8	26.4	1	0.5	23	0.5	2.3
0.2	1.1	18.6	0.7	1	20.5	0.5	0.2	17.3	0.2	1.3	17.8	0.5	0.5	18	0.8	0.8	29.6	1.5	0.4	40.8	1.1	1.6	25.9	0.7	0.8	24.4	0.9	1.1	26.2	2	1.5	23.5	0.7	1
0	0.1	18.5	0	0	20.4	0	0	17.3	0	0	17.8	0	0	18	0	0.1	29.5	0	0	40.8	0	0	25.9	0.1	0	24.4	0	0	26.2	0	0	23.5	0	0
0.3	0.2	18.6	0.3	0.2	20.6	0.2	0.3	17.2	0.2	0.7	17.3	0.5	0	18.5	1.5	0.3	30.7	1.4	0	42.2	1.2	0.3	26.8	0.6	0.3	24.8	1.6	0.2	27.6	1	0	24.5	1.3	0.2
1.7	0.3	20	0.8	0.6	20.9	1	0	18.2	2.5	0.8	19	0.5	0.5	18.5	1.7	0.8	31.6	1.8	0.8	43.1	1.7	0.9	27.6	2.7	0.6	26.9	4.3	0.7	31.2	2	1	25.5	1.5	1.2
0.3	0	20.3	0.1	0.2	20.8	0.2	0	18.3	0	0.3	18.7	0	0.5	18	0.2	0.2	31.6	0.5	0.2	43.4	0.4	0.3	27.8	0	0.1	26.8	0.3	0.4	31.1	0	0.5	25	0.2	0.5
0.2	0.2	20.2	0.1	0.1	20.8	0	0	18.3	0	0.2	18.5	0	0.5	17.5	0.2	0.4	31.4	0.1	0.3	43.2	0.4	0.1	28.1	0	0.1	26.7	0.1	0.3	30.8	0	0	25	0.1	0.3
0.1	0.4	19.9	0.1	0.2	20.7	0	0	18.3	0	0.2	18.3	0	0	17.5	0.2	0.2	31.3	0.1	0.5	42.8	0.1	0.3	27.9	0.1	0.3	26.5	0.1	0.1	30.8	0	0.5	24.5	0.3	0.7
0.3	16.8	3.4	0.4	16.4	4.9	0.2	13.2	5.3	1.2	15.5	4	0	17	0.5	0.2	23	8.6	0.8	40	3.8	0.3	24.4	3.8	0.1	22.3	4.3	0.3	25.9	5.2	0	19.5	5	0.4	24.4
0.1	1.7	1.8	0	0.8	4.1	0	0.5	5	0	0.7	3.3	0	0	0.5	0	0.8	7.7	0.1	0.8	3.1	0	0.7	3.1	0	0.8	3.5	0	0.6	4.6	0	1.5	3.5	0	0.7
0	1.6	0.3	0	5	0	0	5	0	0	4.5	0	0	0.5	0	0	8.1	0	0	2.4	0.7	0	3	0.1	0	3.5	0	0	4.3	0.3	0	3.5	0	0	4.4
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
		20.3			21.1			18.3			19.3			18.5			31.6			43.4			28.1			26.9			31.2			25.5		
34.5	34.6		38.7	39.6		30.2	30.5		38.1	39.4		30	30		52.2	53.2		70.3	70.3		49.9	50.2		47.7	47.5		45.6	46.4		53.5	53.5		53.4	53.5

0] {FA19}	16:25 (70.8)(B193) [12] {FA19}			16:30 (70.6)(B038) [11] {FA19}			16:55 (70.8)(B039) [7] {FA19}			16:59 (70.5)(B043) [33] {FA19}			17:24 (70.8)(B041) [5] {FA19}			17:30 (70.6)(B190) [17] {FA19}			17:56 (70.5)(B042) [36] {FA19}			18:12 (70.6)(B032) [1] {FA19}			18:30 (70.5)(B193) [6] {FA19}			18:40 (70.6)(B036) [43] {FA19}			19:00 (70.5)(B039) [3] {FA19}			19:15 (70.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
2.4	.	.	.	.	.	.	.	.	.	3.4	0	3.4	.	.	.	.	.	.	2.2	0	2.2	.	.	.	0.6	0	0.6	.	.	.	1.3	0	1.3	.
2.5	.	.	.	.	.	.	.	.	.	0	0	3.4	.	.	.	.	.	.	0	0	2.3	.	.	.	0	0	0.6	.	.	.	0	0	1.3	.
5.4	.	.	.	.	.	.	.	.	.	5.3	0	8.7	.	.	.	.	.	.	2.9	0.1	5.1	.	.	.	1	0	1.7	.	.	.	0.3	0	1.7	.
.	.	.	.	11.2	0	11.2	.	.	.	.	.	.	.	.	.	8.6	0	8.6	.	.	.	5	0	5	.	.	.	2.4	0	2.5	.	.	.	3.3
5.6	.	.	.	0.5	0.1	11.5	.	.	.	0.6	0	9.3	.	.	.	1.5	0	10.1	0.6	0	5.7	1	0	6	0.5	0	2.2	0.2	0	2.7	0	0	1.7	0
6	.	.	.	0	0	11.5	.	.	.	0.1	0	9.4	.	.	.	1.3	0.2	11.2	0.2	0	5.9	0	0	6	0.7	0	2.8	0.4	0	3.1	0	0	1.7	0
6.1	.	.	.	0	0	11.5	.	.	.	0.1	0	9.5	.	.	.	0.1	0	11.4	0.1	0	5.9	0	0	6	0	0	2.8	0	0	3.1	0	0	1.7	0
6.6	.	.	.	0.1	0.1	11.5	.	.	.	0.9	0	10.4	.	.	.	0.2	0.1	11.5	0.2	0	6.1	0	0	6	0.3	0	3.2	0.3	0	3.5	0.3	0	2	0.3
7.4	.	.	.	1.5	0.2	12.8	.	.	.	0.3	0.2	10.5	.	.	.	0.2	0.1	11.5	0.5	0	6.6	0	0	6	0.2	0	3.3	0.2	0	3.6	0	0	2	0.5
7.8	.	.	.	0.7	0.2	13.4	.	.	.	0.8	0	11.3	.	.	.	0.4	0	11.9	0.4	0	7	0	0	6	0	0	3.3	0.1	0	3.7	0.3	0	2.3	0.3
8.4	.	.	.	0.3	0.3	13.4	.	.	.	0.7	0	11.9	.	.	.	0.3	0.5	11.6	0.3	0	7.3	1	0	7	0.3	0	3.7	0.4	0.1	4.1	0.3	0	2.7	0
9.2	.	.	.	0.5	1.1	12.7	.	.	.	1.4	0.3	13	.	.	.	0.9	0.4	12.2	1.5	0.2	8.6	2	0	9	0	0	3.7	0.7	0.1	4.6	0.3	0	3	0.1
11	.	.	.	0.7	0.7	12.7	.	.	.	2.1	0.1	15	.	.	.	1.2	0.6	12.8	1.3	0	9.9	1	1	9	1.5	0	5.2	0.6	0.2	5	0	0	3	1
11.4	.	.	.	0.7	0	13.5	.	.	.	0.8	0.8	15	.	.	.	1	0.4	13.5	0.6	0.1	10.3	0	0	9	0.7	0	5.8	0.2	0	5.2	0	0	3	0
12.4	.	.	.	0.5	0.2	13.8	.	.	.	0.7	0.5	15.2	.	.	.	0.2	0.1	13.6	0.1	0	10.4	0	0	9	0.7	0	6.5	0	0	5.2	0	0	3	0
13.4	.	.	.	2.5	0.3	16.1	.	.	.	0.7	0.5	15.4	.	.	.	1.9	0.4	15.1	0.4	0.3	10.5	2	0	11	0.3	0.2	6.7	0.2	0.1	5.3	0	0	3	0
17.9	5.3	0	5.9	2.9	2.5	16.5	6.6	0	7.7	6.1	1.1	20.5	4.6	0	4.8	7.6	1.8	20.9	3.8	0.7	13.7	7	2	16	3.2	0.2	9.7	1.9	0.6	6.5	2.3	0	5.3	2.9
19.4	0.6	0	6.5	0.6	0.2	17	0.4	0.1	8	0.8	0.1	21.2	1.4	0	6.2	0.9	0.2	21.6	0.4	0.1	13.9	0	0	16	0.2	0	9.8	0.3	0	6.8	0.7	0	6	0.4
19.6	0.4	0	6.9	0	1.5	15.5	0.1	0	8.1	0.5	0.1	21.6	0.6	0	6.8	0.7	0.5	21.8	0.6	0.4	14.1	1	1	16	0	0.2	9.7	0	0.1	6.7	0	0.3	5.7	0
20.2	0.6	0	7.5	1.3	0.2	16.5	0.7	0	8.9	0.5	0.2	21.9	0.2	0	7	1.2	0.4	22.6	0.7	0.2	14.6	0	0	16	0	0	9.7	0.1	0.2	6.6	0.3	0	6	0.4
20.5	0.6	0.2	7.9	0.1	0.4	16.3	0.7	0	9.6	0.5	0.4	22	0.2	0.4	6.8	0.8	0.5	22.9	0.3	0.4	14.5	0	0	16	0.3	0.2	9.8	0.1	0.2	6.6	0.3	0	6.3	0
20.8	0.2	0	8.1	0.2	0	16.5	0	0	9.6	0.1	0.1	21.9	0	0	6.8	0.2	0.1	23	0.1	0.1	14.5	0	0	16	0.2	0.2	9.8	0	0.1	6.5	0	0	6.3	0
21.2	0.6	0.1	8.6	0.9	0.2	17.2	0.1	0.1	9.6	0.5	0.3	22.2	0	0	6.8	0.1	0.5	22.6	0.3	0.1	14.6	3	1	18	0.3	0	10.2	0	0.1	6.4	0	0	6.3	0
21.2	0.1	0	8.7	0	0	17.2	0	0	9.6	0	0	22.2	0.2	0	7	0	0	22.6	0.1	0	14.7	0	0	18	0	0	10.2	0	0	6.4	0	0	6.3	0
21.3	0.3	0.2	8.8	0.2	0	17.4	0	0.1	9.4	0.3	0.2	22.3	0	0	7	0.2	0	22.8	0.4	0.1	15	0	0	18	0	0	10.2	0	0	6.4	0	0	6.3	0
22.7	1.3	0	10.1	1	0.2	18.2	0.7	0	10.1	1	0.2	23.1	0.6	0	7.6	1.1	0.6	23.3	0.6	0.2	15.4	1	0	19	0.2	0	10.3	0.2	0.1	6.5	0.3	0	6.7	0.5
22.7	0.3	0.1	10.3	0.2	0	18.4	0	0	10.1	0.1	0	23.2	0	0	7.6	0.2	0.1	23.4	0	0.1	15.4	0	0	19	0	0	10.3	0	0	6.4	0	0	6.7	0
22.5	0.2	0	10.4	0.9	0.1	19.2	0.4	0	10.6	0.4	0.3	23.2	0	0	7.6	0.1	0.1	23.4	0.1	0.1	15.3	0	0	19	0	0	10.3	0	0	6.5	0	0	6.7	0.1
22.7	0.2	0.1	10.5	0.5	0.3	19.4	0.1	0	10.7	0.3	0.3	23.3	0.2	0	7.8	0.4	0.1	23.8	0	0	15.4	0	0	19	0	0	10.3	0	0	6.5	0	0	6.7	0
23.1	0	0.1	10.4	0.4	0	19.7	0.1	0.1	10.7	0.1	0	23.3	0	0	7.8	0.2	0.2	23.8	0.1	0.2	15.3	0	0	19	0.2	0.2	10.3	0.1	0	6.6	0.7	0	7.3	0.3
23.3	0.2	0.3	10.3	0.1	0.3	19.5	0.1	0	10.9	0.3	0.1	23.5	0	0.2	7.6	0.2	0.5	23.5	0.2	0.1	15.3	1	1	19	0	0.7	9.7	0.1	0.1	6.6	0.7	0	8	0.5
23.6	0.5	0.3	10.6	1	0.1	20.5	0.9	0	11.7	0.4	0.2	23.8	0	0	7.6	0.5	0.5	23.5	0.3	0.4	15.2	0	0	19	0	0.7	9	0.1	0	6.7	1	0	9	0.1
23.7	0.3	0.3	10.7	0.4	0	20.8	0.3	0.1	11.9	0.4	0.5	23.6	0.8	0.4	8	0.9	1.5	22.9	0.2	0.5	14.9	2	0	21	0.2	0.5	8.7	0.1	0.3	6.5	0	0	9	0.4
23.8	0.3	0.1	10.9	0.3	0.3	20.8	0.3	0.3	11.9	0.2	0.4	23.5	0.2	0.8	7.4	0.4	0.1	23.2	0.2	0.3	14.9	0	0	21	0.5	0.3	8.8	0	0.1	6.4	0	0.3	8.7	0
22.6	2.2	1.1	12	2.4	3.3	19.9	2.3	2.3	11.9	3.3	3.7	23.1	2	0.4	9	4.2	3.4	24.1	3.4	1.8	16.4	2	6	17	1.7	1.5	9	0.9	1	6.4	2.3	0.3	10.7	0.5
23	1.5	0.3	13.2	1.4	0.3	21	1.4	0.9	12.4	0.7	0.5	23.3	0.8	0	9.8	0.4	0.5	23.9	0.3	0.2	16.5	0	1	16	0.5	0.3	9.2	0.2	0.1	6.5	0	0	10.7	0.5
23.2	0.4	0.1	13.5	0.4	0	21.4	0.1	0	12.6	0.1	0	23.4	0	0	9.8	0.2	0	24.1	0.1	0	16.6	0	0	16	0	0	9.2	0	0	6.5	0.7	0	11.3	0.1
23.3	0.3	0	13.8	0.2	0.4	21.2	0.3	0.6	12.3	0.2	0	23.6	0	0	9.8	0.3	0.5	23.9	0.3	0.1	16.7	1	1	16	0	0	9.2	0.2	0.1	6.5	0.7	0	12	0.1
23.5	0.4	0.1	14.1	0.7	0	21.9	0.9	0	13.1	0.1	0	23.7	0	0	9.8	0.3	0.1	24.1	0.3	0.1	16.9	0	0	16	0	0	9.2	0	0	6.6	0	0	12	0.1
24.6	1.6	0.6	15.1	2	0.2	23.7	2	0.1	15	1.1	0.2	24.6	0.8	0.4	10.2	1.5	0.6	24.9	0.7	0.3	17.2	1	0	17	0.5	0.3	9.3	0.4	0.2	6.8	1.3	0	13.3	0.1
26.1	1.3	0.3	16.2	2.6	0.1	26.3	0.6	0.1	15.4	0.8	0.1	25.2	1.2	0	11.4	1.2	0.2	25.9	0.6	0.4	17.4	2	0	19	0.7	0.2	9.8	0.3	0	7.1	0	0	13.3	0.3
26.2	1.3	0.6	16.9	1.5	1	26.8	1.4	0.9	16	1.4	1.2	25.5	2	1.6	11.8	1.6	0.9	26.6	0.7	0.7	17.4	0	0	19	0.8	0.3	10.3	0.4	0.1	7.4	1	1	13.3	0.1
27.2	0.3	0.3	16.9	2	0	28.8	1	0.4	16.6	1.1	0.1	26.5	0.2	0	12	1.1	0.5	27.2	0.8	0.1	18.1	0	0	19	0.5	0	10.8	0.3	0	7.7	0.3	0	13.7	0.1
30.3	2.5	0.3	19.2	1.9	0.5	30.3	1.9	0.6	17.9	1.6	0.4	27.7	1	0.4	12.6	1.6	1.3	27.6	1.1	0.3	18.9	2	1	20	0.7	0.5	11	0.6	0.1	8.2	4	0.3	17.3	0.9
29.5	0.4	1.1	18.5	1.5	1.3	30.5	1.6	1.1	18.3	1	1.4	27.2	0.2	0.8	12	0.5	1.5	26.6	0.3	1.3	17.9	1	0	21	1	0.2	11.8	0.3	0.4	8	0	1.3	16	0.1
29.7	0.1	0	18.6	1	0.3	31.3	0.9	0	19.1	0.4	0.2	27.5	0.2	0	12.2	1.1	0.2	27.4	0.2	0	18.1	0	0	21	0.2	0	12	0.3	0.1	8.2	0	0	16	0
29.9	0.5	0.2	18.9	0.4	0.6	31	0	0.1	19	0.4	0.5	27.5	0.4	0	12.6	0.5	0.2	27.7	0.3	0.8	17.6	0	2	19	0.2	0.5	11.7	0.1	0.1	8.2	0.3	1	15.3	0.1
30.8	1.8	0.8	19.9	1.1	0.6	31.5	3	1.1	20.9	0.9	1.3	27	0.6	0.8	12.4	1	1.4	27.4	0.4	1	16.9	1	1	19	1.3	0.3	12.7	0.6	0.3	8.5	0.3	0.3	15.3	0.4
29	0.6	1.7	18.8	0.3	2	29.7	0.6	1.7	19.7	0.4	1.9	25.5	0.4	1.4	11.4	0.3	3.1	24.6	0.2	1.3	15.8	1	1	19	0	0.8	11.8	0.1	0.7	7.9	0.3	3	12.7	0.1
28.7	0.5	0.4	18.9	1.1	0.9	29.9	2.3	0.9	21.1	0.6	0.7	25.5	0.4	0.6	11.2	0.4	0.9	24.1	0.4	0.9	15.3	0	0	19	0	0.3	11.5	0.1	0.7	7.3	1	0	13.7	0.3
28.7	0	0	18.9	0	0	29.9	0	0	21.1	0	0	25.5	0	0	11.2	0	0	24.1	0	0	15.3	0	0	19	0	0.2	11.3	0	0	7.3	0	0	13.7	0
29.8	0.9	0	19.8	0.7	0.5	30.2	1.4	0	22.6	0.8	0.1	26.2	0.2	0	11.4	0.4	0.1	24.4	0.4	0.2	15.5	0	0	19	0	0	11.3	0.2	0.1	7.4	0	0	13.7	0.1
30.1	1.8	0.6	21.1	1.5	0.5	31.2	0.6	0.9	22.3	1	0.7	26.5	0	0.6	10.8	0.8	0.4	24.8	0.4	0.4	15.4	0	0	19	0.2	0.2	11.3	0.4	0.1	7.6	0	0.7	13	0.6
29.9	0.6	0.2	21.5	0.1	0	31.3	0.4	0.3	22.4	0.1	0.2	26.3	0	0.4	10.4	0.2	0.1	24.9	0	0.1	15.3	0	0	19	0.2	0	11.5	0.1	0	7.7	0	0	13	0
29.7	0.1	0.1	21.5	0	0.5	30.8	0.3	0.6	22.1	0.1	0.4	26	0	0.4	10	0.1	0.2	24.8	0	0.3	15	0	1	18	0	0	11.5	0	0.1	7.7	0	0	13	0
29.3	0	0.3	21.3	0.2	0.4	30.6	0.1	0.6	21.7	0.2	0.7	25.5	0	0.6	9.4	0.1	0.6	24.4	0.1	0.5	14.6	0	1	17	0	0	11.5	0	0.4	7.3	0	0.7	12.3	0.1
5.4	0.2	18.2	3.3	0.5	29.3	1.9	1.6	21.7	2.7	0.2	19.8	6.1	1	9.8	1.4	0.1	23.4	1.2	0.3	13	1.9	0	16	1	0	11	0.5	0.2	6.6	0.9	1.3	13.7	1.3	0.3
4.6	0	0.6	2.7	0	0.6	1.3	0.3	0.6	2.4	0.7	0.5	6.3	0.4	0.2	1.6	0	0.9	0.2	0.4	0.9	1.4	1	1	1	0	0.5	0	0.1	0.3	0.7	0.7	0.7	1.3	4
0.3	0	2.7	0	0	1.2	0.1	0	1	1.4	0	6.1	0.7	0	0.8	0.8	0	0.2	0.1	0	0.8	0.6	0	0	1	0	0	0	0	0.5	0.3	0	0	1.3	0
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30.8			21.5			31.5			22.6			27.7			12.6			27.7			18.9			21			12.7			8.5			17.3	
	31.3	32.4		53.7	54		36.5	37.3		47.6	47.6		20.8	21		51.4	51.7		31.4	30.2		39	38		20.6	20.5		14.5	14.4		23.3	23.6		20

6)(B037) [8] {FA19}		19:28 (70.5)(B038) [11] {SP19}			19:45 (70.6)(B196) [4] {FA19}			20:00 (70.5)(B042) [9] {FA19}			20:15 (70.6)(B032) [1] {FA19}			20:31 (70.5)(B036) [6] {FA19}			21:03 (70.6)(B037) [1] {FA19}			21:35 (70.5)(B010) [2] {FA19}			22:00 (70.6)(B044) [11] {FA19}			22:30 (70.5)(B045) [51] {FA19}			23:05 (70.5)(B040) [45] {FA19}			23:40 (70.5)(B036) [17] {SP19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
.	.	1	0	1	.	.	.	0	0	0	.	.	.	0.5	0	0.5	.	.	.	0.5	0	0.5	.	.	.	0.4	0	0.4	0.5	0	0.5	0	0	0
.	.	0	0	1	.	.	.	0	0	0	.	.	.	0	0	0.5	.	.	.	0	0	0.5	.	.	.	0	0	0.4	0	0	0.5	0	0	0
.		0.2	0	1.2	.	.		0.2	0	0.2			.	0.2	0	0.7	.	.		0.5	0	1	.	.		1	0	1.4	0.6	0	1.1	1.3	0	1.3
0	3.3	.	.	.	2.3	0	2.3	.	.	.	5	0	5	.	.	.	0	0	0	.	.	.	9.9	0	9.9	.	.	.	.	.	.	.	.	.
0	3.3	0.2	0	1.4	0.5	0	2.8	0.2	0	0.4	0	0	5	0.3	0	1	0	0	0	0.5	0	1.5	1.1	0	11	0.2	0	1.6	0.1	0	1.2	0	0	1.3
0	3.3	0.1	0	1.5	0	0	2.8	0.3	0	0.8	0	0	5	0.2	0	1.2	0	0	0	0	0	1.5	0	0.3	10.7	0	0	1.7	0	0	1.2	0	0	1.3
0	3.3	0	0	1.5	0	0	2.8	0	0	0.8	0	0	5	0	0	1.2	0	0	0	0	0	1.5	0.2	0	10.9	0	0	1.7	0	0	1.2	0	0	1.3
0	3.5	0.3	0	1.7	0.3	0	3	0.1	0	0.9	0	0	5	0.2	0	1.3	0	0	0	0	0	1.5	0	0.1	10.8	0	0	1.7	0	0	1.2	0.1	0	1.4
0	4	0.3	0	2	1	0	4	0	0	0.9	0	0	5	0	0.2	1.2	0	0	0	0	0	1.5	0	0.1	10.7	0.1	0	1.7	0.6	0	1.8	0	0	1.4
0	4.3	0	0	2	0.5	0	4.5	0	0	0.9	1	0	6	0	0	1.2	0	0	0	0.5	0	2	0	0.6	10.1	0.9	0	2.6	0.1	0	1.9	0.1	0	1.5
0.1	4.1	0.1	0	2.1	0	0	4.5	0.6	0	1.4	0	1	5	0.2	0	1.3	0	0	0	0	0	2	0	0	10.1	0.3	0	2.9	0.2	0	2	0	0	1.5
0	4.3	0.4	0.1	2.4	0.3	0	4.8	0.1	0	1.6	0	2	3	0.2	0	1.5	0	0	0	0	0	2	0.8	0.7	10.2	1.6	0	4.5	1.4	0	3.4	0.4	0.1	1.8
0	5.3	0.6	0.2	2.8	1	0.3	5.5	0.3	0	1.9	0	0	3	0	0	1.5	5	0	5	0	0	2	1.8	1.3	10.7	1	0	5.4	0.7	0	4.1	0.4	0	2.2
0.1	5.1	0.3	0	3.1	0	0.3	5.3	0.1	0	2	0	0	3	0.8	0	2.3	2	0	7	0.5	0	2.5	0.3	0	11	0.1	0	5.5	0.2	0	4.3	0.1	0	2.2
0	5.1	0	0	3.1	0	0	5.3	0	0	2	0	0	3	0	0	2.3	0	0	7	0	0	2.5	0.1	0.3	10.8	0.1	0	5.6	0	0	4.3	0	0	2.2
0	5.1	0.1	0.2	3	0	0.3	5	0	0	2	0	0	3	0.3	0	2.7	0	0	7	0	0	2.5	0	0.7	10.1	0.1	0.1	5.6	0	0	4.3	0.1	0.7	1.6
0.6	7.4	1.5	0.1	4.5	1.3	1	5.3	2.6	0.4	4.2	8	1	10	3.2	0	5.8	8	1	14	4	0	6.5	6.4	2	14.5	2.4	0.3	7.6	2.5	0.3	6.5	2.9	0.2	4.3
0	7.8	0.2	0	4.6	0.8	0.3	5.8	0.6	0.1	4.7	1	0	11	0.2	0	6	0	0	14	1.5	0	8	0.5	0.1	14.8	0.4	0.1	8	0.4	0.1	6.8	0.4	0	4.6
0.1	7.6	0	0	4.6	0	0	5.8	0	0	4.7	1	0	12	0.2	0	6.2	0	0	14	0.5	0	8.5	0.2	0	15	0.1	0.3	7.9	0.2	0.4	6.6	0	0	4.6
0.3	7.8	0.1	0	4.7	0.3	0	6	0.8	0	5.4	1	0	13	0.3	0	6.5	0	0	14	0	0	8.5	0.5	0	15.5	0.3	0.1	8	0.1	0.4	6.4	0.1	0.1	4.6
0	7.8	0	0.2	4.5	0	0	6	0.6	0	6	3	1	15	0.8	0	7.3	2	2	14	0	0	8.5	0.3	0.1	15.6	0.1	0	8.1	0	0	6.4	0	0	4.6
0	7.8	0	0	4.5	0	0	6	0	0	6	0	0	15	0	0	7.3	0	0	14	0	0	8.5	0	0	15.6	0	0	8.1	0	0	6.4	0	0	4.6
0	7.8	0	0.2	4.4	0	0.5	5.5	0	0	6	0	0	15	1	0	8.3	0	0	14	0	0	8.5	0.4	0.4	15.6	0.1	0.4	7.8	0	0.1	6.4	0.1	0.2	4.6
0	7.8	0	0	4.4	0	0	5.5	0	0	6	0	0	15	0	0	8.3	0	0	14	0	0	8.5	0	0	15.6	0	0	7.8	0	0	6.4	0	0	4.6
0	7.8	0	0	4.4	0	0	5.5	0	0	6	0	0	15	0.2	0	8.5	0	0	14	0	0	8.5	0.1	0	15.7	0.1	0	7.9	0	0	6.3	0.1	0.1	4.6
0	8.3	0.2	0.1	4.5	0.3	0	5.8	0.1	0	6.1	0	0	15	0	0	8.5	0	0	14	0	0	8.5	1	0.6	16.1	0.7	0.1	8.5	1	0	7.3	1.9	0	6.5
0	8.3	0	0.1	4.4	0	0	5.8	0	0	6.1	0	0	15	0	0	8.5	0	0	14	0	0	8.5	0	0	16.1	0	0	8.5	0	0	7.3	0	0.1	6.4
0	8.4	0.2	0.1	4.5	0	0	5.8	0	0	6.1	0	0	15	0	0	8.5	0	0	14	0	0	8.5	0.1	0	16.2	0	0	8.5	0.4	0	7.6	0	0	6.4
0	8.4	0.3	0	4.7	0	0	5.8	0.2	0	6.3	0	0	15	0	0	8.5	0	0	14	0	0	8.5	0.1	0	16.3	0.1	0	8.6	0.1	0	7.7	0	0.1	6.2
0.3	8.4	0.4	0	5.1	0	0.3	5.5	0.1	0	6.4	3	0	18	0	0	8.5	0	0	14	0	0	8.5	0	0	16.3	0.1	0.1	8.6	0.2	0	7.9	0	0	6.2
0.5	8.4	0	0	5.1	0	0	5.5	0	0	6.4	0	0	18	0.3	0	8.8	0	0	14	1	0	9.5	0.3	0	16.5	0.1	0	8.7	0	0	7.9	0	0	6.2
0.3	8.3	0.1	0.1	5.1	0	0	5.5	0	0	6.4	0	0	18	0.2	0.3	8.7	0	0	14	0.5	0	10	1	0.1	17.5	0.3	0.1	8.9	0.1	0	8	0.5	0	6.7
0	8.6	0.2	0.1	5.2	0	0.3	5.3	0.4	0	6.9	0	0	18	0	0	8.7	0	0	14	0	0	10	1.4	0.9	17.9	0.7	0	9.6	1.5	0	9.5	0.1	0	6.8
0	8.6	0	0.2	5	0	0.5	4.8	0.3	0	7.2	0	1	17	0.3	0	9	0	0	14	0	0	10	0	0	17.9	0.1	0.2	9.5	0.1	0.2	9.4	0.2	0.1	6.9
0.8	8.4	1.6	0.6	6	0.5	0.3	5	1.4	0.8	7.9	1	0	18	0.7	0.7	9	1	8	7	0.5	1.5	9	0.7	1	17.6	0.3	1.6	8.2	1	1.2	9.3	0.2	1.2	5.9
0.1	8.8	0.2	0	6.2	0.3	0.3	5	0.4	0	8.3	0	0	18	0	0	9	0	0	7	1.5	0	10.5	0	0.5	17.2	0.1	0.1	8.3	0.1	0	9.3	0.1	0.2	5.8
0	8.9	0	0	6.2	0	0	5	0	0	8.3	0	0	18	0	0	9	0	0	7	0	0	10.5	0.2	0	17.4	0	0	8.3	0	0	9.3	0.1	0	5.9
0.3	8.8	0	0.1	6.1	0	0	5	0.2	0	8.6	0	0	18	0	0	9	1	0	8	0.5	0	11	0.4	0.1	17.6	0.2	0	8.4	0	0	9.3	0	0	5.9
0.1	8.8	0	0	6.1	0	0	5	0	0	8.6	0	0	18	0.2	0	9.2	1	0	9	0	0	11	0	0	17.6	0	0	8.4	0	0	9.3	0	0	5.9
0	8.9	0	0.3	5.8	0.3	0.3	5	0.2	0.1	8.7	0	0	18	0.5	0	9.7	2	0	11	1.5	0	12.5	0.3	0	17.9	0.2	0.1	8.5	0.4	0	9.6	0.2	0.1	6
0	9.1	0.1	0	5.9	0	0	5	0.6	0	9.2	0	0	18	0.5	0.2	10	2	0	13	1.5	0	14	2.7	0.1	20.5	1.1	0	9.6	0.8	0	10.4	0.8	0	6.8
0.6	8.6	0.4	0.3	6	0	0	5	0.7	0.2	9.7	6	2	22	1.2	0.3	10.8	5	0	18	3.5	0.5	17	0.9	0	21.5	0.8	0.1	10.4	0.5	0	10.9	0.9	0.5	7.2
0.1	8.6	0.4	0.1	6.3	0.8	0.8	5	0.3	0	10	0	0	22	1.5	0	12.3	0	0	18	0.5	0	17.5	1.3	0.1	22.6	0.8	0	11.1	0.7	0	11.5	0.1	0.1	7.3
0	9.5	0.7	0.1	6.9	0.3	0	5.3	0.4	0.8	9.7	3	3	22	0.8	0.3	12.8	3	0	21	4.5	0.5	21.5	1.3	0.9	23	3.3	0.5	13.9	1.2	0.8	12	0.7	0.2	7.8
0.4	9.3	0.4	0.4	6.9	0.3	0.8	4.8	0.2	0	9.9	0	0	22	0.2	0.3	12.7	0	0	21	0	0.5	21	0.4	1.1	22.3	0.1	0.2	13.8	0.1	0.3	11.8	0	1.5	6.3
0.4	8.9	0	0	6.9	0	0	4.8	0.2	0.3	9.8	0	0	22	0.3	0	13	0	0	21	0.5	0	21.5	0.1	0	22.4	0.1	0	13.9	0.1	0	11.8	0	0	6.3
0.1	8.9	0.5	0.1	7.4	0	0.3	4.5	0.1	0.6	9.3	0	0	22	0.2	0	13.2	1	2	20	0	0	21.5	0.3	0.7	21.9	0.2	0.3	13.8	0.1	0.1	11.8	0	0.1	6.2
0.4	8.9	0.4	0.3	7.5	0.5	0	5	0.2	0.3	9.2	0	0	22	1.2	0.2	14.2	0	0	20	0	0.5	21	1.3	0.1	23.1	0.6	0.2	14.2	2.5	0.2	14.1	0.4	0.2	6.5
0.1	8.9	0.4	0.5	7.4	0	0.5	4.5	0.3	0.7	8.9	1	0	23	0.3	0.3	14.2	0	6	14	1.5	1.5	21	0.3	1	22.4	0.3	0.8	13.7	0.1	1	13.2	0	1.4	5.1
0.3	8.9	0.1	0.3	7.2	0.3	1	3.8	0.6	0.3	9.1	4	1	26	0.3	0.3	14.2	0	1	13	0	0	21	0.2	1.4	21.2	0.1	0.7	13.1	0.1	1.1	12.2	0.1	1.1	4.1
0	8.9	0	0.1	7.1	0	0	3.8	0	0	9.1	0	0	26	0	0	14.2	0	0	13	0	0	21	0	0	21.2	0	0	13.1	0	0	12.2	0	0	4.1
0.1	8.9	0	0	7.1	0	0	3.8	0.2	0.8	8.6	0	0	26	0.3	0.2	14.3	0	0	13	1	0	22	0	0	21.2	0.1	0	13.2	0.2	0	12.4	0.1	0	4.2
0.3	9.3	0.4	0.1	7.4	0.8	0	4.5	0.3	0.6	8.3	1	0	27	0.3	0	14.7	1	0	14	3.5	0.5	25	0.1	0.3	21	0.3	0.2	13.4	0	0.1	12.3	0	0.1	4.1
0.3	9	0.1	0	7.5	0	0	4.5	0	0	8.3	2	1	28	0	0.2	14.5	0	0	14	0	0	25	0.3	0.5	20.8	0	0	13.4	0	0.1	12.3	0	0	4.1
0	9	0	0	7.5	0	0	4.5	0	0.6	7.8	0	5	23	0	0.5	14	0	1	13	0	0.5	24.5	0	0.3	20.5	0	0	13.3	0	0.2	12.1	0	0.2	3.9
0	9.1	0.5	0.1	7.8	0	0.3	4.3	0	0.2	7.6	0	2	21	0	0	14	0	0	13	0	0	24.5	0	0.3	20.3	0	0.1	13.2	0	0.3	11.8	0	0	3.9
8.3	1.1	0.2	7.1	0.9	0	3.8	0.5	0.4	7.1	1.2	0	18	3	0.3	13.3	1	1	14	1	0.5	21.5	3.5	0.7	18.9	2.1	0.2	11.5	2	0.3	11.1	1	0.1	3.4	0.6
0.1	5	0.1	0.4	0.7	0.5	1	0.5	0	0.2	1	0	3	0	0.3	0.8	0.7	0	0	1	0	1	2.5	0	0.2	1.9	0.1	0.8	1.4	0.1	0.3	0.8	0	0.5	0.1
0.8	4.3	0	0.6	0.1	0	0	0.5	0	0.6	0.4	0	0	0	0	0.5	0.2	0	0	1	0	2.5	0	0	1.3	0.6	0	1.1	0.3	0	0.6	0.2	0	0	0.1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	9.5			7.8			6			10			28			14.7			21			25			23.1			14.2			14.1			7.8
15.9		13.3	13.2		13.2	13.2		14.3	14.7		41	41		18.7	18.6		35	35		31	31		38	37.1		20.3	20.1		19.3	18.9		12.6	12.5	

24:15 (70.5)(B045) [14] {FA19}			24:40 (70.3)(B040) [29] {FA19}			Total		
On	Off	Load	On	Off	Load	On	Off	Load
0.2	0	0.2	.	.	.	34	0	34.5
0	0	0.2	.	.	.	4.4	0.1	39
0.1	0	0.4	.	.	.	33.4	1	71.4
.	.	.	.	.	.	99.5	0	99.7
0.1	0	0.4	.	.	.	21.3	1.5	190.6
0	0	0.4	.	.	.	9.9	0.7	199.2
0	0	0.4	.	.	.	3.4	0.1	202.7
0	0	0.4	.	.	.	17	0.7	218.6
0	0	0.4	.	.	.	18.2	1.6	235.1
0	0	0.4	.	.	.	32	2.2	264.9
0	0	0.4	.	.	.	28.2	3.1	289.6
0	0	0.4	.	.	.	61.7	8.6	342.3
0.1	0	0.6	.	.	.	64	8	398.1
0	0	0.6	.	.	.	37.6	4.9	431.1
0	0	0.6	.	.	.	14.3	5.4	439.8
0	0	0.6	.	.	.	34.4	7.9	466.5
3.1	0	3.6	1.1	0	1.3	289.9	43.5	716.6
0.1	0	3.7	0	0	1.3	34.4	4	746.8
0.1	0	3.8	0	0	1.3	24.7	8.1	763.7
0	0	3.8	0	0	1.3	51.2	7.3	807.3
0	0	3.8	0	0	1.3	31.6	9.7	829.5
0	0	3.8	0	0	1.3	16.9	1.6	844.3
0	0	3.8	0	0	1.3	23	7.4	860.6
0	0	3.8	0	0	1.3	3.2	0.4	863.7
0	0	3.8	0	0	1.3	12.7	2.4	873.5
0.2	0	4	0	0	1.3	47.1	11.7	908.5
0	0	4	0	0	1.3	12.8	1.8	919.7
0	0	4	0	0	1.3	20.2	4.5	935.2
0	0	4	0	0	1.3	24.4	3.4	956.5
0	0	4	0	0	1.3	34.5	4.4	986.2
0	0	4	0	0	1.3	22.5	9.6	999.1
0	0	4	0	0	1.3	59.9	10.4	1049.2
0.1	0	4.1	0	0	1.3	50.1	11.4	1087.6
0.1	0.1	4.1	0	0	1.3	35.5	10.7	1112.6
0	1.9	2.2	0.1	0	1.3	112	196.5	1028.3
0	0	2.2	0	0.1	1.2	48.6	12.2	1065
0	0	2.2	0	0	1.2	9.9	0.6	1074.1
0	0	2.2	0	0	1.2	38.5	7.5	1105
0	0	2.2	0	0	1.2	12	1.1	1115.6
0	0	2.2	0	0	1.2	46.8	20.6	1141.3
0	0	2.2	0.3	0	1.5	36.4	13.5	1164
0.6	0.1	2.7	0	0	1.5	70.8	54.9	1180.4
0.1	0	2.8	0	0	1.5	34	11.6	1202.5
0	0.1	2.7	0	0	1.5	90.5	31.3	1262
0	0.4	2.4	0	0.2	1.3	48.6	58.7	1252.1
0	0	2.4	0	0	1.3	18.7	4.6	1266.2
0.1	0.8	1.6	0	0.6	0.7	50.5	21.4	1295.2
0.1	0	1.7	0	0.1	0.7	91.5	37.9	1348.9
0	0	1.7	0	0.2	0.5	45	72.3	1321.7
0	0	1.7	0	0	0.5	36.2	47.5	1310.4
0	0	1.7	0	0	0.5	0.4	2.8	1307.8
0.1	0	1.8	0	0	0.5	23.1	11.9	1319.5
0	0	1.8	0	0	0.6	63.2	28.3	1354.6
0	0	1.8	0	0	0.6	12.2	9.7	1357.3
0	0	1.8	0	0	0.6	5.4	17.1	1345.2
0	0	1.8	0	0.1	0.5	3.2	16.6	1332.2
0.1	1.1	0.9	0	0.1	0.4	24.5	1089	273.5
0.3	1	0.4	.	.	.	11.3	139.4	146.7
0	0.1	0.4	.	.	.	0	131.8	19.5
.	.	.	0	0.4	0	0	0.4	0
		4.1			1.5			1357.3
5.6	5.6		1.5	1.8		2241.2	2237.3	

Massachusetts Bay Transportation Authority
Route 70
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

	04:31 (70.5)(B031) [9] {FA19}			04:50 (70.5)(B032) [1] {FA19}			05:05 (70.5)(B034) [5] {FA19}			05:20 (70.5)(B037) [52] {FA19}			05:40 (70.5)(B035) [60] {FA19}			05:55 (70.6)(B031) [9] {FA19}			06:08 (70.5)(B191) [7] {FA19}			06:25 (70.5)(B032) [2] {FA19}			06:34 (70.6)(B192) [6] {FA19}			06:45 (70.5)(B034) [5] {FA19}			07:00 (70.
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
1 - 730 - FRANKLIN ST @ SIDNEY ST	1.1	0	1.1	0	0	0	2	0	2	0.2	0	0.2	0.8	0	0.8	0.9	0	1.1	1.9	0	1.9	0	0	0	1	0	1	1.2	0	1.2	
2 - 2755 - GREEN ST @ PEARL ST	0	0	1.1	0	0	0	0.4	0	2.4	0.4	0	0.7	3.2	0	4.1	3.6	0	4.7	0.7	0.1	2.4	3	0	3	2	0	3	4.4	0.2	5.4	
3 - 1123 - GREEN ST @ MAGAZINE ST	0.4	0	1.6	0	0	0	0.2	0	2.6	1.7	0	2.3	5	0	8.9	12	0.1	16.6	4.3	0	6.7	6.5	0	9.5	4	0	7	11.4	0	16.8	8.5
4 - 2444 - WESTERN AVE @ GREEN ST	0	0	1.6	6	0	6	0.4	0	3	0.1	0	2.4	0.7	0	9.7	2	0	18.6	1.1	0	7.9	0.5	0	10	1.3	0	8.3	2.2	0.2	18.8	
5 - 1061 - WESTERN AVE @ KINNAIRD ST	0	0	1.6	0	0	6	0	0	3	0	0	2.4	0	0	9.7	0.3	0	18.9	0	0	7.9	0	0	10	0	0	8.3	0.4	0	19.2	0.3
6 - 1062 - WESTERN AVE @ HOWARD ST	0	0	1.6	0	0	6	0	0	3	0	0	2.4	0.8	0	10.5	0	0	18.9	0	0	7.9	0	0	10	0	0	8.3	0.4	0	19.6	0
7 - 1064 - WESTERN AVE @ PUTNAM AVE	0	0	1.6	0	0	6	0.6	0	3.6	0.1	0	2.5	0.4	0.1	10.8	0.2	0.9	18.2	0	0.4	7.4	0.5	1	9.5	0.7	0.5	8.5	0.4	0.4	19.6	0
8 - 1067 - WESTERN AVE OPP GENZYME	0	0	1.6	0	0	6	0	0	3.6	0	0	2.4	0	0.3	10.5	0	1.1	17.1	0	0	7.4	0	0	9.5	0	0.3	8.2	0	0.6	19	0
9 - 1068 - 125 WESTERN AVE	0	0	1.6	0	0	6	0	0	3.6	0	0	2.4	0	0.5	10	0	0.9	16.2	0	0	7.4	0	0	9.5	0	0.2	8	0	0.2	18.8	0
10 - 1070 - WESTERN AVE @ N HARVARD ST	0.9	0	2.4	0	0	6	0	0.2	3.4	3.5	0	5.9	1.4	0.2	11.1	1.4	0.1	17.6	2	0	9.4	0.5	0.5	9.5	4.5	0	12.5	2.4	0.8	20.4	0.5
11 - 1071 - WESTERN AVE OPP RIVERDALE ST	0	0	2.4	0	0	6	0	0	3.4	0.4	0	6.3	0.1	0	11.3	0	0	17.6	0	0	9.4	0.5	0	10	0.2	0	12.7	0.4	0	20.8	0.5
12 - 1072 - WESTERN AVE @ EVERETT ST	0	0	2.4	0	0	6	0	0	3.4	0.4	0	6.6	0.8	0.3	11.7	0.3	0.4	17.4	0	0.1	9.3	0	1	9	0.2	0.2	12.7	0.2	0.8	20.2	0.5
13 - 1074 - 367 WESTERN AVE OPP BRIGHTON	0	0	2.4	0	0	6	0	0	3.4	0.6	0	7.2	0.2	0.1	11.8	0	0.3	17.1	0	0	9.3	0	0	9	0	0.2	12.5	0	0.2	20	0
14 - 1075 - WESTERN AVE OPP LITCHFIELD ST	0	0	2.4	0	0	6	0	0	3.4	0.1	0	7.3	0.2	0.3	11.7	0.3	0.6	16.9	0.3	0	9.6	0	0	9	1.3	0	13.8	1.4	0.2	21.2	0
15 - 1076 - 445 WESTERN AVE	0	0	2.4	0	0	6	0	0	3.4	0	0	7.3	0	0	11.6	0	0.1	16.8	0	0	9.6	0	0	9	0	0.2	13.7	0	0.4	20.8	0
16 - 1077 - 495 WESTERN AVE	0	0	2.4	0	0	6	0	0	3.4	0.3	0	7.5	0.9	0.1	12.4	0.2	0	17	0.9	0	10.4	1	0.5	9.5	0.8	0	14.5	3.2	0.4	23.6	0.3
17 - 1443 - ARSENAL ST @ ARLINGTON ST	0	0	2.4	0	3	3	0	0.2	3.2	0.1	1.8	5.8	0.2	1.4	11.3	0.9	2.3	15.6	0.6	0.7	10.3	0.5	0.5	9.5	0	1.7	12.8	0.2	2	21.8	0.5
18 - 1444 - ARSENAL ST @ ELM ST	0	0	2.4	0	0	3	0	0	3.2	0	0.1	5.7	0	0.1	11.2	0.8	0.1	16.2	0.1	0	10.4	0	0	9.5	0.3	0.7	12.5	0	1.4	20.4	0
19 - 1445 - ARSENAL ST @ WATERTOWN + ARSE	0	0	2.4	0	0	3	0	0	3.2	0	0	5.7	0	0	11.2	0	0.1	16.1	0.4	0.6	10.3	1	0.5	10	0.3	0.3	12.5	0	0.8	19.6	0
20 - 1447 - ARSENAL ST OPP TALCOTT AVE	0	0	2.4	0	0	3	1	0.2	4	0.2	0	5.9	0	0.8	10.4	0	0.1	16	0	0.1	10.1	0	0.5	9.5	0	0.2	12.3	0	0.2	19.4	0
21 - 1448 - ARSENAL ST @ SCHOOL ST	0	0	2.4	0	0	3	0	0	4	0	1.3	4.6	0	1.1	9.4	0	0.6	15.4	0.1	0.9	9.4	0	1.5	8	0.2	1.2	11.3	0	2.2	17.2	1
22 - 1449 - ARSENAL ST OPP LOUISE ST	0	0	2.4	0	0	3	0	0	4	0	0	4.6	0	0	9.4	0	0	15.4	0	0	9.4	0.5	0	8.5	0	0	11.3	0	0.4	16.8	0
23 - 1450 - ARSENAL ST OPP BEECHWOOD AVE	0	0	2.4	0	0	3	0	0	4	0.1	0.3	4.3	0.1	0.5	9	0.1	0.8	14.8	0	0	9.4	0	1	7.5	0	1.2	10.2	0.4	2.2	15	1
24 - 1451 - ARSENAL ST OPP BEACON PK	0	0	2.4	0	0	3	0	0.2	3.8	0	0	4.3	0	0.1	8.9	0	0.8	14	0	0	9.4	0	0	7.5	0	0	10.2	0	0.2	14.8	0.5
25 - 1452 - ARSENAL ST @ IRVING ST	0	0	2.4	0	0	3	0	0	3.8	0	0	4.3	0.1	0	8.9	0	0.2	13.8	0.1	0	9.6	0	0	7.5	0.2	0.7	9.7	0	0	14.8	0
26 - 8815 - MAIN ST @ MERCHANTS ROW	0.1	0	2.6	0	0	3	0.2	0.6	3.4	0.3	1.2	3.4	1.1	1.5	8.5	1.4	1.4	13.8	2.6	0.6	11.6	4	0.5	11	1.8	0.3	11.2	1.4	1.4	14.8	1.3
27 - 8816 - MAIN ST @ THAXTER ST	0	0	2.6	0	0	3	0	0	3.4	0	0	3.4	0	0	8.4	0	0	13.8	0	0	11.6	0	0	11	0	0.2	11	0	0	14.8	0
28 - 8817 - MAIN ST OPP CHESTNUT ST	0	0	2.6	0	0	3	0	0	3.4	0	0	3.4	0	0	8.4	0	0	13.8	0	0	11.6	0	0	11	0	0	11	0	0	14.8	0
29 - 88171 - MAIN ST OPP GREEN ST	0	0	2.6	0	0	3	0	0	3.4	0	0	3.4	0.2	0.1	8.6	0.1	0	13.9	0	0	11.6	0	0	11	0	0.2	10.8	0.2	0	15	0
30 - 8818 - MAIN ST @ WAVERLEY AVE	1	0	3.6	0	0	3	0.4	0	3.8	0.2	0	3.6	0	0.2	8.4	0.3	0	14.2	0.1	0.1	11.6	0	0	11	0.7	0.7	10.8	0	0.2	14.8	0
31 - 8819 - MAIN ST @ EDENFIELD AVE	0.1	0.1	3.6	0	0	3	0	0	3.8	0.3	0	3.8	0.2	0.7	7.9	0.8	0.8	14.2	0.3	0.6	11.3	1.5	0.5	12	0.5	0.7	10.7	0	0.8	14	0
32 - 8820 - MAIN ST @ OLNEY ST	0.1	0	3.7	0	0	3	0	0	3.8	0	0	3.8	0	0.3	7.6	0	0.3	13.9	0	0.3	11	0	1	11	0	0	10.7	0	0.4	13.6	0
33 - 8339 - MAIN ST @ OLCOTT ST	0	0	3.7	0	0	3	0	0	3.8	0	0	3.8	0	0	7.6	0.1	0.1	13.9	0	0	11	0	0	11	0	0	10.7	0.2	0	13.8	0
34 - 8821 - MAIN ST @ COPELAND ST	0	0	3.7	0	0	3	0	0	3.8	0	0.1	3.8	0.1	0.2	7.5	0.6	0.2	14.2	0.3	0.6	10.7	0	1	10	0	0.2	10.5	0	0.6	13.2	0
35 - 8822 - MAIN ST @ WILMOT ST	0	0	3.7	0	0	3	0	0	3.8	0	0	3.8	0.1	0.1	7.5	0	0.3	13.9	0.1	0.1	10.7	0	0	10	0	0	10.5	0	2.6	10.6	0
36 - 8823 - MAIN ST @ EMERSON RD	0	0	3.7	0	0	3	0	0	3.8	0	0	3.8	0	0	7.5	0	0.3	13.6	0	0	10.7	0	0.5	9.5	0	0	10.5	0	0	10.6	0
37 - 8824 - MAIN ST @ LONGFELLOW RD	0	0	3.7	0	0	3	0	0	3.8	0	0	3.8	0	0	7.5	0	0	13.6	0	0	10.7	0	0	9.5	0	0	10.5	0	0	10.6	0
38 - 8825 - MAIN ST @ WARREN ST - WALTHAM	0	0	3.7	0	0	3	0	0	3.8	0	0.7	3	0.4	0.5	7.4	0.4	1.9	12.1	0	2.4	8.3	0.5	1	9	0	0.5	10	0.2	0.8	10	0
39 - 8826 - MAIN ST @ BEAL RD	0	0	3.7	0	0	3	0	0	3.8	0	0.1	3	0	0	7.4	0	0	12.1	0	0	8.3	0	0	9	0	0	10	0	0	10	0
40 - 9521 - MAIN ST @ BOWKER RD	0	0	3.7	0	0	3	0	0	3.8	0	0	3	0	0	7.4	0	0	12.1	0	0	8.3	0	0	9	0	0	10	0	0	10	0
41 - 8828 - MAIN ST OPP WILLOW ST	0.4	0	4.1	0	0	3	0.2	0	4	0.7	0	3.7	0	0.1	7.3	0	0	12.1	0.1	0.3	8.1	0	0	9	0	0	10	0	0.2	9.8	0
42 - 8830 - MAIN ST @ ROSE HILL WAY	0	0	4.1	0	0	3	0	0	4	0	0	3.7	0	0	7.3	0	0.1	12	0	0.1	8	0	0	9	0	0	10	0	0	9.8	0
43 - 8831 - MAIN ST @ CHAMBERLAIN TERR	0	0.9	3.2	0	0	3	0	0.2	3.8	0.5	0	4.1	0	0	7.3	0	1.2	10.8	0.1	0.1	8	0	0.5	8.5	0.2	0	10.2	0.2	0.2	9.8	0.3
44 - 8832 - MAIN ST @ PLEASANT ST	0	0	3.2	0	0	3	0	0	3.8	0.1	0.1	4.1	0.1	0.2	7.2	0	0.1	10.7	0	0	8	0	0	8.5	0	0	10.2	0	0.2	9.6	0
45 - 8833 - MAIN ST @ CRAVEN CIR	0.1	0.1	3.2	0	0	3	0	0.2	3.6	0.2	0	4.3	0.1	0.3	7	0	0.2	10.4	0	0	8	0	0	8.5	0	0.3	9.8	0	0.2	9.4	0
46 - 88332 - MAIN ST @ LIBERTY ST	0	0.3	2.9	0	1	2	0	0.2	3.4	0.1	0	4.3	0	0	7	0	0.3	10.1	0	0.1	7.9	0	0.5	8	0	0.3	9.5	0	0.2	9.2	0
47 - 88333 - CARTER ST OPP COMMUTER RAIL S	0.2	0.7	2.7	0	0	2	0.6	0.2	3.8	1.2	1.2	4.3	0.5	2.8	4.6	1	3.6	7.6	0.9	2	6.7	0	2.5	5.5	0.8	2.7	7.7	0.8	2.8	7.2	
100 - 88334 - 691 MAIN ST	0	0.1	2.6	0	0	2	0	0.2	3.6	0	0	4.3	0.1	0	4.7	0.7	0.1	8.1	0.3	0	7	0	0	5.5	0.2	0.7	7.2	0	0.6	6.6	
101 - 88335 - MAIN ST @ EXCHANGE ST	0	0	2.6	0	0	2	0	0	3.6	0.4	0	4.8	0.1	0.2	4.6	0.8	0.1	8.8	0.3	0	7.3	0	0	5.5	0	0	7.2	0.4	0.6	6.4	
102 - 18335 - MAIN ST @ GRANT ST	0	0	2.6	0	0	2	0	0	3.6	0	0.2	4.5	0	0.2	4.4	0.8	0	9.6	0	0.9	6.4	0.5	0.5	5.5	0	0.2	7	0	0.6	5.8	
103 - 88336 - MAIN ST @ FISKE ST	0.1	0.2	2.4	0	0	2	0.2	0	3.8	0.2	0.1	4.6	0	0.8	3.6	0.2	0.1	9.7	0	0.4	6	0	2	3.5	0	0.2	6.8	0.4	0.4	5.8	
104 - 88337 - MAIN ST @ HAMMOND ST	0	0	2.4	0	0	2	0	0.2	3.6	0.6	0.2	5	0	0.6	3	0	0.9	8.8	0	0.6	5.4	0.5	0.5	3.5	0	0.7	6.2	1.2	0.4	6.6	
105 - 8841 - MAIN ST @ PALMER ST	0	0.1	2.3	0	0	2	0	0	3.6	0	0	5	0	0	3	0	0.6	8.2	0	0	5.4	0	0	3.5	0	0.2	6	0	0.2	6.4	
106 - 8842 - MAIN ST @ PROSPECT HILL RD	0	0	2.3	0	0	2	0	0	3.6	0	0	5	0	0	3	0	0.2	8	0	1	4.4	0	0	3.5	0	0.2	5.8	0	0.4	6	
107 - 8843 - MAIN ST @ LUNDA ST	0	0	2.3	0	0	2	0	0	3.6	0	0	5	0	0	3	0	0	8	0	0	4.4	0	0	3.5	0	0	5.8	0	0	6	
108 - 8844 - MAIN ST @ MALONE ST	0	0	2.3	0	0	2	0	0	3.6	0	0	5	0	0	3	0	0	8	0	0	4.4	0	0	3.5	0	0	5.8	0	0	6	
109 - 8845 - MAIN ST @ EDGEHILL RD	0	0	2.3	0	0	2	0	0	3.6	0	0	5	0	0	3	0	0	8	0	0	4.4	0	0	3.5	0	0	5.8	0	0	6	
110 - 8846 - MAIN ST @ HILL RD	0	0	2.3	0	0	2	0	0	3.6	0	0.2	4.8	0	0.2	2.8	0	0.7	7.3	0	1	3.4	0	0	3.5	0	0.3	5.5	0	0	6	
111 - 8848 - MAIN ST @ STOW ST	0.1	1.3	1.1	0	0	2	0	1.8	1.8	0	4.6	0.2	0	1.3	1.6	0	1.4	5.9	0	2	1.4	0	2.5	1	0	1.3	4.2	0	3	3	
112 - 8849 - STOW ST @ TAVERN RD	0	0	1.1	0	0	2	0	0	1.8	0	0	0.2	0	0.1	1.5	.		.	0	0	1.4	0	0	1	.		.	0	0	3	
113 - 8850 - TAVERN RD @ WESTON ST	0	0	1.1	0	0	2	0	0	1.8	0	0	0.2	0	0.1	1.4	.		.	0	0.6	0.9	0	0	1	.		.	0	0.8	2.2	
114 - 9522 - WESTON ST @ CEDARWOOD AVE	0	0.8	0.3	0	2	0	0	1.8	0	0	0.2	0	0	1.4	0	.		.	0	0.9	0	0	1	0	.		.	0	2.2	0	
115 - 9525 - MAIN SHOPPING CENTER @ MARSHA																0	5.9	0							0	4.2	0				
116 - 86943 - MOODY ST @ MAIN ST																															0.8
117 - 86944 - CARTER ST @ WALTHAM COMM RAIL																															0
118 - 8178 - WATERTOWN SQ TERMINAL																															
Maximum			4.1			6			4			7.5			12.4			18.9			11.6			12			14.5			23.6	
Total	4.6	4.6		6	6		6.2	6.2		13	12.4		17.9	17.8		30.2	30.3		17.6	17.6		21.5	21.5		21.2	21.7		33.6	33.6		16

3)(B033) [4] {FA19}		07:06 (70.5)(B037) [34] {FA19}			07:15 (70.6)(B039) [1] {FA19}			07:45 (70.5)(B031) [9] {FA19}			08:10 (70.6)(B190) [44] {FA19}			08:20 (70.5)(B032) [3] {FA19}			08:45 (70.6)(B033) [4] {FA19}			09:15 (70.5)(B037) [47] {FA19}			09:35 (70.6)(B039) [3] {FA19}			09:55 (70.5)(B195) [11] {FA19}			10:30 (70.6)(B032) [3] {FA19}			10:50 (70.5)(B033) [19] {FA19}			11:16 (70.6)(B037) [4	
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
.	.	1.4	0	1.8	0	0	0	5.2	0	5.9	2.7	0	2.7	2.3	0	2.3	4.3	0	5	2.9	0	2.9	2.7	0	2.7	1.8	0	1.9	3.7	0	3.7	2.5	0	2.7	1	0
.	.	6.4	0	8.2	6	0	6	13.8	0.2	19.7	8.5	0	11.2	3.3	0.3	5.7	5	0	10	6.3	1.5	8.7	6	0	8.7	3.1	0	5	4.3	0	8	3.8	0	6.5	1.6	0
0	8.5	12	0.1	20.1	7	0	13	18.7	0.1	38.2	12.2	0.1	23.3	6.3	0	12	10.5	0	20.5	11.4	0.6	19.9	10.7	0.3	19	11.7	0	16.7	10.7	0.3	18.3	10.6	0.3	16.7	4.3	0.1
.	.	2.9	0	23	1	0	14	4.3	0.3	42.2	3.7	0.1	27	1	0	13	2.5	0	23	3.3	0	23.2	1	0	20	1.6	0	18.4	0.7	0.3	18.7	1.5	0.1	18.2	0.5	0
0	8.8	1	0	24	0	0	14	0.8	0.3	42.7	0.8	0	27.8	1.3	0	14.3	0.3	0	23.3	0.3	0.1	23.4	0	0	20	0.3	0	18.6	0.3	0	19	0.1	0	18.2	0.1	0
0	8.8	1.4	0.1	25.3	1	0	15	1.2	0.1	43.8	0.7	0.1	28.4	0.3	0	14.7	1.3	0	24.5	0.3	0.3	23.4	0	0	20	0.1	0.4	18.4	0.3	1	18.3	0.3	0.5	18	0.1	0.1
1.8	7	0.8	2.4	23.7	0	0	15	2.3	3.6	42.6	1.1	1.4	28.1	0.3	1.3	13.7	1.8	2.3	24	0.7	0.8	23.3	0.3	0.7	19.7	0.8	0.9	18.3	0.3	0.7	18	0.7	0.8	17.9	0.4	0.3
0	7	0	0.4	23.3	0	0	15	0.2	1.3	41.4	0.1	0.9	27.3	0	0.7	13	0	1.3	22.8	0.6	0.4	23.5	0	0	19.7	0.3	0.5	18.1	1.7	1	18.7	0.2	0.2	17.9	0	0.1
0.3	6.8	0	0.2	23.1	0	0	15	0	0.1	41.3	0.1	0.4	27	0	0	13	0.5	1	22.3	0.1	0.4	23.2	0	2	17.7	0	0.5	17.6	0.3	1.3	17.7	0	0.3	17.6	0	0.1
0.3	7	1.8	0.2	24.7	0	1	14	1.9	0.3	42.9	3.1	0.6	29.5	1	1	13	3.5	0.8	25	2.5	0.7	25	1	0.7	18	2.2	0.8	19	2	0.3	19.3	2.1	0.8	18.9	1	0.1
0	7.5	0.4	0	25.1	0	0	14	1.1	0.3	43.7	1.4	0.2	30.7	1	0	14	1	0.5	25.5	1	0	25.9	0	0	18	0.3	0.4	18.9	0.7	0	20	0.3	0.1	19.1	0.3	0.1
0	8	1.3	1	25.5	0	0	14	1.2	1.8	43.1	1.2	1	31	0	0.7	13.3	1	1.5	25	0.4	0.8	25.4	0	0.7	17.3	0.2	0.6	18.5	0.7	1.7	19	0.2	1.3	17.9	0.3	0.3
0	8	0.9	0.1	26.2	0	0	14	0.7	1.1	42.7	0.6	0.5	31	0.7	0	14	0.3	0.3	25	0.3	0.3	25.5	0.7	1	17	0.7	0.3	18.9	0.3	0	19.3	0.5	0.1	18.4	0.2	0.1
0.3	7.8	0.5	0.2	26.4	0	0	14	0.4	1	42.1	0.3	1	30.3	0	0	14	0	0.3	24.8	0.3	0.3	25.4	0.3	0.3	17	0.5	0.4	19	0	1	18.3	0.5	0.5	18.4	0.1	0.2
0	7.8	0.1	0.3	26.2	0	0	14	0	0.1	42	0.1	0.7	29.7	0	0.7	13.3	0	0.5	24.3	0	0.3	25.2	0	0.7	16.3	0	0.5	18.5	0	0.3	18	0.2	0.3	18.3	0	0.2
0.3	7.8	1.8	0.6	27.4	2	1	15	1.2	2.4	40.8	2.2	1.3	30.5	2	0	15.3	1.8	1	25	2.3	1.3	26.1	1.7	0.3	17.7	0.9	1	18.5	1.3	0	19.3	1.7	0.4	19.6	0.4	0.4
1	7.3	0.6	1.4	26.6	0	3	12	0.7	4.8	36.7	0.2	2.5	28.2	0.3	2.7	13	0	4	21	0.5	1.6	25	0	0.7	17	0.3	1.2	17.5	0.3	0.7	19	0.3	0.9	19	0.1	0.4
0	7.3	0.1	2	24.8	0	2	10	0.3	2.1	34.9	0	1.6	26.6	0.7	2	11.7	0	1.5	19.5	0.1	1.2	23.9	0	1.7	15.3	0	1	16.5	0	0.7	18.3	0.1	0.9	18.2	0	0.5
0.8	6.5	0.2	0.6	24.4	0	1	9	0.2	1.3	33.8	0.3	1.1	25.8	0.3	1.3	10.7	0	1	18.5	0.8	1.5	23.2	0.3	0.7	15	1.5	1.6	16.5	2	2	18.3	2.5	2.1	18.6	1	0.9
0	6.5	0	1.1	23.3	0	0	9	0	1.7	32.1	0.3	2.1	24	0	0.3	10.3	0	2	16.5	0.2	0.7	22.7	0	0.7	14.3	0.3	0.3	16.5	1	0.3	19	0.1	0.4	18.3	0.1	0.1
0.3	7.3	0.7	0.6	23.4	0	0	9	0.9	1.9	31.1	0.4	0.9	23.5	1.3	1	10.7	0.5	1	16	0.4	2.1	21	1	2.3	13	0.3	0.9	15.8	0.3	1	18.3	0.1	0.6	17.7	0.1	0.3
0	7.3	0.1	0.1	23.4	0	1	8	0	0.9	30.2	0.1	0.1	23.4	0	0	10.7	0	0	16	0	0.1	20.9	0	0	13	0.1	0	15.9	0	0	18.3	0	0.2	17.5	0	0
0	8.3	0.9	0.6	23.6	0	0	8	0.4	0.8	29.9	0.2	0.4	23.1	0	0	10.7	0	0	16	0.3	0.2	20.9	0.3	0.3	13	0.1	0.2	15.8	0	0.3	18	0.1	0.5	17.1	0.1	0.1
0	8.8	0	0.6	23.1	0	0	8	0.1	1.3	28.7	0	0.4	22.7	0	0	10.7	0.3	0	16.3	0	0.1	20.8	0	0	13	0	0.5	15.4	0	0	18	0	0.2	16.8	0	0.1
0	8.8	0.1	0.3	22.8	1	0	9	1	1.3	28.3	0.3	0.5	22.5	0	0.3	10.3	0	0.3	16	0.3	0.5	20.7	1.3	0	14.3	0.1	0.6	14.8	0	0	18	0.2	0.3	16.7	0	0.1
1	9	2.5	2.9	22.4	1	1	9	1.8	2.6	27.6	2.4	4.6	20.3	0.7	4.3	6.7	2	5.5	12.5	3.4	3.3	20.7	2.7	1.3	15.7	3.5	2.6	15.7	2.3	2	18.3	2.3	1.7	17.3	1.5	0.7
0.3	8.8	0.1	0.6	21.9	0	0	9	0.4	0.4	27.6	0.2	0.4	20.1	0	0	6.7	0	0	12.5	0.3	0.7	20.4	0	0.7	15	0.5	0.4	15.8	0.3	2	16.7	0.3	1.1	16.5	0.7	0.1
0	8.8	0	0	21.9	0	0	9	0	0	27.6	0	0	20	0	0.3	6.3	0	0	12.5	0	0	20.4	0	0	15	0	0.1	15.7	0	0	16.7	0	0	16.5	0	0
0	8.8	0.2	0	22.1	0	0	9	0.2	0	27.8	0.3	0.5	19.8	0.3	0	6.7	0.5	0	13	0.2	0.2	20.3	0	0	15	0.1	0.1	15.7	0	0.3	16.3	0.2	0.4	16.3	0	0.1
0	8.8	0.6	0.7	22	1	0	10	0.1	0.1	27.8	0.1	0.4	19.6	0	0.3	6.3	0.3	0.5	12.8	0.5	1	19.8	0.3	1	14.3	0.2	1.6	14.3	0	0.3	16	0.3	0.4	16.2	0.3	0.2
0.8	8	0.3	0.6	21.6	0	1	9	0.7	0.4	28	0.7	0.6	19.7	0.7	0	7	0.3	0.3	12.8	0.5	0.8	19.6	0.3	0	14.7	0.4	0.5	14.1	0	0	16	0.6	0.5	16.3	0.2	0.3
0.5	7.5	0.4	0.4	21.7	0	0	9	0	0	28	0.1	0.1	19.7	0	0	7	0	0	12.8	0.1	0.1	19.6	0.3	0	15	0	0.1	14	0	0	16	0.2	0	16.5	0	0.1
0	7.5	0.8	0	22.5	0	0	9	0.2	0.1	28.1	0	0.2	19.6	0	0	7	0	0	12.8	0.1	0	19.7	0.3	0	15.3	0.1	0.3	13.8	0	0	16	0	0.2	16.3	0.1	0.1
0.3	7.3	0.1	1	21.5	0	0	9	0.8	0.8	28.1	0	0.5	19	0	0.7	6.3	0	0.5	12.3	0	0.4	19.3	0	0	15.3	0.3	0.3	13.8	0	0.7	15.3	0.1	0.3	16.1	0	0.1
0.3	7	0	0.6	20.9	0	0	9	0	0.6	27.6	0.2	0.1	19.1	0	0	6.3	0	0	12.3	0	0	19.3	0	0	15.3	0.1	0.1	13.8	0	0	15.3	0.1	0.1	16	0	0
0.3	6.8	0	0.2	20.7	0	0	9	0	0	27.6	0	0.1	19	0	0	6.3	0	0	12.3	0	0.1	19.2	0	0	15.3	0	0	13.8	0	0	15.3	0.1	0	16.1	0	0
0	6.8	0	0	20.7	0	0	9	0	0.1	27.4	0	0	19	0	0	6.3	0	0	12.3	0	0.1	19.1	0	0	15.3	0	0	13.8	0	0	15.3	0	0	16.1	0	0.1
0.3	6.5	0.1	0.9	19.9	0	0	9	0	0.9	26.6	0.1	1.1	18.1	0	0	6.3	0	0.3	12	0.3	0.8	18.6	0	0.3	15	0.3	0.7	13.4	0.3	0	15.7	0.4	0.5	16	0.2	0.1
0	6.5	0.1	0.1	19.9	0	0	9	0.1	0.7	26	0.2	0.9	17.4	0	0	6.3	0	0.3	11.8	0.1	0.4	18.2	0.3	0.3	15	0	0.5	12.8	0	0.7	15	0	0.1	15.9	0	0.1
0	6.5	0	0.1	19.9	0	0	9	0	0	26	0	0.1	17.3	0	0	6.3	0	0.3	11.5	0	0	18.2	0	0	15	0	0	12.8	0	0	15	0	0.1	15.8	0	0
0.5	6	0.2	0.2	19.8	0	0	9	0.2	1.3	24.9	0.2	0.3	17.2	0	0	6.3	0	0.3	11.3	0.3	0.4	18.2	1.3	0.7	15.7	0	0.2	12.6	0.3	0.3	15	0.2	0.3	15.7	0.1	0.1
0	6	0	0.1	19.7	0	0	9	0.1	0	25	0.1	0.2	17.1	0.7	0	7	0	0	11.3	0.1	0.4	17.9	0	0	15.7	0	0.2	12.5	0	0	15	0	0	15.7	0	0.1
0	6.3	0.4	0.3	19.8	1	0	10	0.3	1	24.3	0.2	0.5	16.8	0	0	7	0	0	11.3	0.3	0.6	17.6	0	0	15.7	0.2	0.4	12.3	0	0.3	14.7	0.2	0.5	15.4	0.1	0.1
0	6.3	0.1	0.3	19.6	2	0	12	0.6	0.6	24.3	0.3	0.2	16.9	0	0.3	6.7	0	0	11.3	0.2	0.3	17.5	0	0.7	15	0.3	0	12.5	0	0.3	14.3	0.2	0.2	15.4	0	0.1
0.5	5.8	0	0.1	19.4	0	0	12	0	1	23.3	0	0.5	16.5	0	0	6.7	0	0	11.3	0	0.4	17.1	0	1	14	0.1	0.9	11.7	0	1	13.3	0	0.8	14.5	0.1	0.1
0	5.8	0	1.1	18.4	1	0	13	0	1	22.3	0.1	1.3	15.3	0	0.3	6.3	0	1	10.3	0.1	0.4	16.9	0.3	0	14.3	0	0	11.7	0.3	0.7	13	0.3	1.6	13.2	0.2	0.5
.	.	1.6	5.9	14.1	3	2	14	2.6	5.8	19.1	1.4	4.2	12.5	1	1	6.3	1.5	2.5	9.3	1	4.7	13.1	0.3	7.3	7.3	1.5	4.9	8.3	1.3	2	12.3	0.4	4.6	9	1.3	1.6
.	.	0.4	0.3	14.2	1	0	15	0.8	1.3	18.6	0.4	1.5	11.5	0	0.7	5.7	0	0.3	9	0.2	0.8	12.5	0	0	7.3	0.1	0.5	7.8	0	0	12.3	0.2	0.5	8.7	0.2	0.1
.	.	0.3	0.7	13.8	0	0	15	0.3	0.9	18	0.1	0.5	11.1	0	0.3	5.3	0.3	0	9.3	0.1	0.5	12.1	0.3	1.3	6.3	0	0.2	7.6	0	0	12.3	0.1	0.5	8.3	0.1	0.3
.	.	0.1	0.4	13.5	0	0	15	0	0.2	17.8	0.2	0.2	11.1	0	0	5.3	0	1	8.3	0.1	0.3	11.9	0	0	6.3	0	0.7	6.9	0	0.7	11.7	0	0.6	7.7	0.1	0.1
.	.	0.1	0.5	13.1	0	0	15	0.6	0.9	17.4	0.5	0.8	10.8	0	1	4.3	0	0.8	7.5	0.1	1.1	10.9	0.7	0	7	0.2	1.3	5.8	0	3	8.7	0.1	1.1	6.7	0.3	0.9
.	.	0.1	2	11.2	0	0	15	0	0.6	16.9	0.4	0.6	10.6	0	1	3.3	0	1.3	6.3	0.2	1.3	9.8	1	1	7	0.1	0.7	5.2	1.3	0	10	0.1	0.9	5.8	0.1	1.4
.	.	0.1	0.5	10.9	0	1	14	0	0.4	16.4	0	0.4	10.3	0	0.7	2.7	0	1.3	5	0	0.8	9	0	0.3	6.7	0.1	0.4	4.9	0	0	10	0	0.4	5.5	0.1	0.4
.	.	0.1	1.9	9.1	0	1	13	0	0.8	15.7	0	0.9	9.4	0	0.3	2.3	0	0	5	0	0.4	8.7	0	0	6.7	0.1	0.6	4.4	0	0.7	9.3	0	0.2	5.3	0.2	0.5
.	.	0	0.3	8.7	0	0	13	0	0.3	15.3	0	0.3	9.2	0	0	2.3	0	0.3	4.8	0	0.6	8.1	0	0.3	6.3	0	0.2	4.2	0	0.7	8.7	0.2	0.3	5.2	0	0.1
.	.	0	0	8.7	0	0	13	0	0	15.3	0	0	9.2	0	0	2.3	0	0	4.8	0	0	8.1	0	0	6.3	0	0	4.2	0	0	8.7	0	0.3	4.8	0	0.1
.	.	0	1	7.8	0	1	12	0.1	2	13.4	0	1.4	7.8	0	0	2.3	0	0.3	4.5	0	0.4	7.7	0	0.7	5.7	0	0.2	4	0	0	8.7	0	0	4.8	0	0.1
.	.	0	0.2	7.6	0	0	12	0	0.2	13.2	0	0	7.8	0	0	2.3	0	0	4.5	0	0.4	7.3	0	0	5.7	0.1	0.6	3.5	0.7	0.7	8.7	0	0.8	4	0	0.1
.	.	0	3.7	3.9	0	2	10	0	7.1	6.1	0	3.3	4.5	0	1	1.3	0	2	2.5	0	2.9	4.4	0	0	5.7	0.2	1.5	2.3	0	1	7.7	0	1.1	2.9	0	0.5
.	.	0	0.2	3.7	.	.	.	0	0.3	5.8	.	.	.	0	0	1.3	.	.	.	0	0.2	4.2	.	.	.	0	0.2	2.1	.	.	.	0	0	2.9	.	.
.	.	0.1	3.6	0.2	.	.	.	0	4.1	1.7	.	.	.	0.3	1	1	.	.	.	0	1.8	2.4	.	.	.	0	1.1	1	.	.	.	0.1	1.2	1.8	.	.
.	.	0	0.1	0.1	.	.	.	0	1.4	0.2	.	.	.	0	0.3	0.7	.	.	.	0	1	1.4	.	.	.	0	0.8	0.2	.	.	.	0	1.7	0.1	.	.
.	.	.	.	.	0	10	0	.	.	.	0	4.4	0.1	.	.	.	0	2.5	0	.	.	.	0	5.7	0	.	.	.	0	7.7	0	.	.	.	0	4
3.8	2.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	0.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	9	.	.	27.4	.	.	15	.	.	43.8	.	.	31	.	.	15.3	.	.	25.5	.	.	26.1	.	.	20	.	.	19	.	.	20	.	.	19.6	.	.
15.7		44.2	44.4		28	28		66.5	67		48.8	49		25.8	25.8		39.5	40.6		43.5	43.4		35.4	35.7		35.7	35.5		37.7	38		35.3	34.8		17.6	17.8

Trip (RouteVar)(Block) [Observations]

i7] {FA19}	11:40 (70.5)(B039) [5] {FA19}			12:00 (70.6)(B195) [6] {FA19}			12:35 (70.5)(B032) [1] {FA19}			12:55 (70.6)(B033) [18] {FA19}			13:25 (70.5)(B193) [6] {FA19}			13:45 (70.6)(B039) [11] {FA19}			14:08 (70.5)(B041) [1] {FA19}			14:30 (70.8)(B190) [17] {FA19}			14:40 (70.6)(B032) [2] {FA19}			15:00 (70.5)(B036) [40] {FA19}			15:22 (70.6)(B038) [43] {FA19}			15:30 (70.8)(B193) [12] {FA19}		
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1.1	5.4	0	6.2	3.2	0	3.2	2	0	2	2.2	0	2.3	1.3	0	2.2	3.4	0	3.4	2	0	2.5	3.8	0	4.5	2	0	2.5	3.7	0	3.7	4.7	0	4.7	4.7	0	4.9			
2.7	3	0.2	9	5.2	0.2	8.2	5	1	6	6.3	0	8.6	4.8	0	7	5.4	0.2	8.5	8.5	0	11	5.6	0.2	9.9	9.5	0	12	11.9	0.7	14.9	7.7	0.1	12.3	7.6	0.4	12.1			
6.8	10.2	0.4	18.8	8.5	0	16.7	14	0	20	13.6	0.3	21.9	9.8	0.3	16.5	14.2	0.2	22.5	15	0	36	7.2	0.2	16.8	14.5	0	26.5	17.2	0.5	31.9	14.6	0	27.1	14.8	0.3	26.6			
7.3	2.2	0	21	1.8	0	18.5	3	0	23	3.1	0.1	24.9	2.5	0.7	18.3	1.5	0.1	23.9	1	0	37	2.1	0.2	18.7	2	0	28.5	2.5	0.1	33.6	3.9	0.1	30.9	2.7	0.2	29.1			
7.3	0.4	0	21.4	0	0	18.5	0	0	23	0.3	0.1	25.2	0.2	0	18.5	0	0	23.9	0	1	36	0.1	0	18.8	1	0	29.5	0.2	0.1	33.7	0.4	0	31.3	0.4	0	29.5			
7.3	0.4	0	21.8	0	0	18.5	0	0	23	0.3	0.6	24.9	0	0	18.5	0.1	0.4	23.6	0	0	36	0	0.1	18.6	0.5	1	29	0.2	0.4	33.4	0.1	1.2	30.2	0.7	0.8	29.3			
7.4	0.8	1.2	21.4	0.8	0.5	18.8	1	0	24	0.8	2	23.7	0.8	0.8	18.5	0.5	1.9	22.2	0	1	35	1	0.4	19.2	3.5	1.5	31	1.2	1.4	33.2	1.3	1.2	30.3	0.5	1.1	28.8			
7.3	0	0.2	21.2	0.5	0.2	19.2	0	0	24	0.1	0.3	23.4	0	0.2	18.3	0.2	0.1	22.3	0	0	35	0.1	0.1	19.2	0	0	31	0.3	0.5	33	0.2	0.7	29.8	0.2	0.5	28.4			
7.2	0.6	0.4	21.4	0.2	0	19.3	0	0	24	0.1	0.3	23.2	0	0.7	17.7	0.1	0.1	22.3	0	1	34	0.2	0.1	19.3	0	0	31	0.5	0.2	33.3	0.1	0.1	29.8	0.1	0.3	28.3			
8	0.2	0.8	20.8	2.2	0.3	21.2	2	0	26	2.4	0.6	25	1.5	0.5	18.7	2.5	0.4	24.4	2	1	35	2.7	1	21	3.5	3	31.5	3.6	1.3	35.6	2.6	3.1	29.3	4	1.4	30.8			
8.2	0	0	20.8	0.3	0.2	21.3	1	0	27	0.4	0.3	25.1	0.3	0.2	18.8	0.4	0.3	24.5	0	0	35	0.4	0.2	21.1	0.5	2	30	0.7	0.2	36.1	1	0.6	29.7	0.1	0.8	30.1			
8.2	1.2	1.8	20.2	0.3	1	20.7	0	2	25	0.6	0.9	24.8	0.7	0.8	18.7	0.4	0.6	24.2	2	2	35	0.6	1.1	20.7	1	6.5	24.5	2.2	1.9	36.4	0.6	1.8	28.5	1.3	2.4	29			
8.3	0.8	0.6	20.4	0.8	1.2	20.3	1	1	25	0.5	0.6	24.7	0.2	1	17.8	0.2	1.2	23.2	0	3	32	0.6	0.5	20.8	1	0	25.5	1	1.3	36.1	0.3	0.8	28	0.7	0.8	28.8			
8.3	0	1	19.4	0.2	0	20.5	0	0	25	0.3	0.7	24.3	0	0	17.8	0.4	0.6	22.9	0	0	32	0	1.1	19.8	0	2.5	23	0.4	2.1	34.4	0.2	1.1	27.1	0.2	1.8	27.3			
8.1	0	0	19.4	0.3	0.3	20.5	0	0	25	0.4	0.5	24.2	0	0	17.8	0	0.1	22.8	2	0	34	0.1	0.1	19.8	0	0	23	0.1	0.4	34.1	0	0.3	26.8	0.2	0.3	27.2			
8.1	1.2	2	18.6	1.3	1.5	20.3	0	0	25	0.4	0.9	23.7	2.8	0.3	20.3	2.4	1.5	23.7	6	2	38	1	1.4	19.4	2	2.5	22.5	2.8	1.9	35	1.8	1.2	27.3	1.5	1.9	26.8			
7.7	0.2	0.6	18.2	0	2.3	18	0	1	24	0.6	1.4	22.9	0.3	1.5	19.2	0.1	1.3	22.5	0	4	34	0.2	0.8	18.8	1	0.5	23	0.7	1.9	33.9	0.2	0.7	26.8	0.2	1.8	25.2			
7.3	0	1.2	17	0.2	0.3	17.8	0	2	22	0.2	1.5	21.6	0	0.8	18.3	0.2	0.9	21.8	0	2	32	0.9	0.7	18.9	0	0	23	0.5	1.4	32.9	0.3	1	26.1	0.3	0.8	24.7			
7.4	2.2	0.4	18.8	1	2.3	16.5	1	3	20	2.3	2.6	21.3	2.7	1.5	19.5	2.8	1.8	22.8	3	4	31	1.4	0.7	19.6	5	0.5	27.5	2.5	2.3	33.1	2.1	2.1	26.2	1.4	0.9	25.2			
7.4	0.2	0	19	0.3	0.8	16	1	1	20	0.2	0.4	21.1	0.2	1.7	18	0.4	1.7	21.5	0	0	31	0.2	0.5	19.3	0.5	0.5	27.5	0.5	1.2	32.4	0.2	0.6	25.8	0.1	0.5	24.8			
7.2	0.4	0.2	19.2	0	0.5	15.5	0	1	19	0.3	0.7	20.7	0.8	0.2	18.7	0.3	0.4	21.4	0	1	30	0.9	0.4	19.8	1.5	0	29	0.9	1	32.3	0.6	0.9	25.5	0.6	1	24.3			
7.2	0.2	0.2	19.2	0	0	15.5	0	0	19	0.2	0.1	20.8	0	0.2	18.5	0	0.2	21.2	0	0	30	0	0.1	19.6	0	0.5	28.5	0.2	0.3	32.2	0	0.1	25.5	0.3	0	24.6			
7.1	0	0.2	19	0.3	0	15.8	0	0	19	0.1	0.2	20.7	0	0.5	18	0.1	0.4	20.9	0	0	30	0.3	0.2	19.8	0.5	0	29	0.5	0.4	32.3	0.2	0.3	25.4	0.1	0.2	24.5			
7	0	0	19	0	0.2	15.7	0	0	19	0.2	0.1	20.7	0	0.5	17.5	0.1	0.5	20.5	0	0	30	0.2	0.1	19.9	0	0	29	0.2	0.4	32.2	0	0.6	24.9	0.2	0.2	24.5			
7	0.2	0.8	18.4	0	0.2	15.5	0	0	19	0.2	0.6	20.3	0.3	0	17.8	0.3	0.5	20.3	0	1	29	0.2	0.6	19.5	1	0	30	0.3	0.7	31.7	0.5	0.9	24.5	0.4	0.7	24.3			
7.8	2.4	3.4	17.4	2.8	2.8	15.5	3	4	18	4	2.6	21.8	3	2	18.8	4.7	2.3	22.7	4	1	32	4.1	2.1	21.5	8	8.5	29.5	11	3.7	39.1	4.7	2.1	27.1	3	2.2	25.1			
8.3	0.8	0.8	17.4	0.7	0	16.2	2	0	20	0.4	0.3	21.9	0.5	0.2	19.2	0.4	0.5	22.5	1	1	32	0.1	0.6	21	0	1	28.5	1.1	1.7	38.6	0.4	0.3	27.2	0.2	0.5	24.8			
8.3	0	0	17.4	0	0	16.2	0	0	20	0	0	21.9	0	0	19.2	0	0	22.5	0	0	32	0	0	21	0	0	28.5	0	0	38.6	0	0	27.2	0	0	24.8			
8.3	0	1	16.4	0.3	0.7	15.8	0	0	20	0.2	0.7	21.3	0	0.3	18.8	0.2	0.5	22.2	0	1	31	0.1	0.4	20.7	0.5	0	29	0.4	0.8	38.2	0.3	0.6	26.9	0.3	1.2	23.8			
8.3	0.4	0.6	16.2	0.8	0.8	15.8	0	0	20	0.2	0.7	20.9	0.2	0.7	18.3	0.4	0.6	21.9	0	1	30	0.2	1.1	19.8	0	0	29	0.5	1.9	36.8	0.1	0.9	26.1	0.2	1.2	22.8			
8.3	0.4	0.6	16	0	0.7	15.2	0	0	20	0.2	1.3	19.8	0	0.8	17.5	0	0.5	21.4	0	3	27	0.4	1.7	18.5	0.5	1	28.5	0.3	1.4	35.6	0.4	1.6	24.9	0	2.1	20.8			
8.2	0	0	16	0.3	0.2	15.3	0	1	19	0	0.3	19.5	0	0.2	17.3	0.1	0.2	21.3	0	0	27	0	0.1	18.4	0	0.5	28	0.2	0.2	35.6	0.1	0.5	24.4	0.2	0.7	20.3			
8.2	0.4	0.4	16	0.2	0	15.5	0	0	19	0.3	0.9	18.8	0	0.5	16.8	0.3	0.5	21.1	0	0	27	0	0.2	18.1	0	0.5	27.5	0.1	1.6	34	0	0.5	24	0	0.5	19.8			
8.1	0	0	16	0	0.2	15.3	0	0	19	0.1	0.1	18.8	0	0.7	16.2	0.3	0	21.4	0	0	27	0.1	0.3	17.9	0	0	27.5	0.1	1.3	32.8	0	0.3	23.7	0	0.4	19.3			
8.1	0	0.4	15.6	0	0	15.3	0	0	19	0.1	0.1	18.8	0	0.2	16	0.2	0	21.5	0	0	27	0	0.1	17.8	0	0	27.5	0.3	0.1	32.9	0	0.3	23.4	0.1	0.3	19.2			
8.1	0	0.2	15.4	0	0	15.3	0	0	19	0.1	0	18.9	0.2	0.2	16	0.1	0	21.6	0	0	27	0	0.3	17.5	0	0	27.5	0.1	1.1	31.9	0	0.4	23	0	0.5	18.7			
8.1	0	0.2	15.2	0	0	15.3	0	1	18	0	0.3	18.6	0	0	16	0	0.1	21.5	0	0	27	0	0.2	17.4	0	0	27.5	0	0.1	31.8	0	0.1	23	0	0	18.7			
8.2	0	0.2	15	0.7	0.7	15.3	0	0	18	0.3	1.1	17.8	0.2	0.7	15.5	0.6	1.5	20.6	0	1	26	0	0.6	16.7	1	0	28.5	0.5	1.5	30.8	0.1	1.1	22	0.4	1.3	17.8			
8.1	0	0	15	0	0.2	15.2	0	0	18	0.2	0.2	17.7	0.2	0.3	15.3	0	0.4	20.3	0	1	25	0.2	0.1	16.9	0.5	1	28	0.1	0.3	30.6	0.2	0.5	21.7	0	0.1	17.7			
8.1	0	0	15	0	0	15.2	0	1	17	0	0.1	17.7	0	0	15.3	0.1	0	20.4	0	0	25	0	0.1	16.8	0	0	28	0.1	0.1	30.6	0	0.1	21.6	0	0.2	17.5			
8.1	0.4	0.4	15	0	0.2	15	0	1	16	0.1	0.2	17.6	0	0.7	14.7	0	0.5	19.8	0	1	24	0	0.4	16.5	0	0.5	27.5	0.2	0.6	30.1	0.1	0.5	21.2	0.1	0.4	17.2			
8.1	0	0	15	0.2	0.2	15	0	0	16	0.4	0.4	17.5	0	0.3	14.3	0.2	0.4	19.6	2	0	26	0.1	0.5	16.1	0.5	0	28	0.1	0.4	29.8	0.2	0.2	21.3	0	0.2	17			
8.1	0	0.8	14.2	0.2	1.2	14	0	2	14	0.1	0.5	17.1	0	0.7	13.7	0.1	1	18.7	0	2	24	0.3	1.4	14.9	0	2.5	25.5	0.2	1.7	28.3	0.2	1.3	20.2	0	0.7	16.3			
8	0.4	0.2	14.4	0	0	14	0	0	14	0.3	0.6	16.8	0	0.3	13.3	0.2	1	17.9	0	0	24	0	0.6	14.4	0	1	24.5	0.1	1.3	27.1	0	1.1	19.1	0.1	2.2	14.3			
7.9	0.2	1	13.6	0	0.3	13.7	1	0	15	0.1	0.4	16.5	0.3	0.5	13.2	0.1	0.9	17.1	0	0	24	0	0.2	14.1	0	0	24.5	0.2	0.6	26.6	0.1	0.3	18.9	0	0.8	13.4			
7.6	0.6	0.4	13.8	0.2	0.7	13.2	0	0	15	0.2	0.9	15.7	0	1.2	12	0.1	0.9	16.3	0	1	23	0	2.6	11.5	0	0	24.5	0.3	2.1	24.8	0	1.1	17.9	0	1.4	12			
7.4	1	6.2	8.6	0.5	5.7	8	0	3	12	0.7	5.7	10.8	0.8	4.7	8.2	0.9	6.9	10.3	1	10	14				1.5	10.5	15.5	1.1	10.5	15.4	2.4	6	14.3						
7.4	0.4	1.4	7.6	0.2	0.5	7.7	0	0	12	0.1	0.8	10.1	0.2	1.7	6.7	0.5	1.1	9.6	0	0	14				1	2	14.5	0.3	2.6	13.1	0.5	1.3	13.5						
7.3	0.2	1	6.8	0	0.2	7.5	0	0	12	0.4	0.4	10.2	0.2	0.5	6.3	0.3	0.5	9.4	0	2	12				2	1	15.5	0.3	1.4	12	0.3	0.6	13.2						
7.4	0	0.6	6.2	0.2	0.2	7.5	0	3	9	0.2	0.4	9.9	0.5	1.5	5.3	0.3	0.5	9.1	0	0	12				1.5	0	17	0.1	0.9	11.3	0.1	0.8	12.5						
6.8	0	1	5.2	0.2	1.2	6.5	0	2	7	0.1	1.3	8.7	0.7	0.8	5.2	0.5	1.7	7.8	0	2	10				0	1	16	0.2	2.5	9	0.2	1.2	11.5						
5.5	0	0.2	5	0	1.8	4.7	0	0	7	0.4	1.2	8	0.5	0.2	5.5	0.5	0.7	7.5	0	3	7				0	4	12	0.2	2.4	6.8	0.4	1.7	10.1						
5.1	0	0	5	0.2	0.3	4.5	0	2	5	0	0.5	7.5	0	0.5	5	0.1	0.4	7.3	0	3	4				0	0	12	0.1	0.7	6.1	0.2	0.9	9.3						
4.8	0	0	5	0	0.5	4	0	2	3	0.2	0.9	6.8	0.2	1	4.2	0	1.1	6.2	0	0	4				0	0	12	0.1	0.9	5.3	0.1	0.8	8.6						
4.7	0	0	5	0	0	4	0	0	3	0	0	6.8	0	0.2	4	0	0	6.2	0	0	4				0.5	0	12.5	0.1	0.8	4.5	0	0.9	7.8						
4.7	0	0	5	0	0	4	0	0	3	0	0.2	6.6	0	0	4	0	0	6.2	0	0	4				0	0	12.5	0	0	4.5	0	0	7.8						
4.6	0	0	5	0	0.3	3.7	0	0	3	0.2	0.6	6.2	0	1	3	0	0.2	6	0	0	4				0	0	12.5	0	0.4	4.1	0	0.5	7.2						
4.5	0	0.6	4.4	0	0	3.7	0	0	3	0	0.2	6	0	0.2	2.8	0	0	6	0	0	4				0	0	12.5	0	0.4	3.7	0.2	0.4	7.1						
4	0	2	2.4	0	0.5	3.2	0	3	0	0	0.8	5.2	0	2.3	0.5	0	0.6	5.1	0	2	2				0	1	11.5	0	2.1	1.6	0	2	5.2						
	0	0.6	1.8				0	0	0				0	0	0.5				0	0	2							0	0.5	1.1									
	0	0.4	1.4				0	0	0				0	0	0.5				0	0	2							0	0.2	0.9									
	0	1.4	0				0	0	0				0	0.5	0				0	0	2							0	0.9	0.1									
0.1				0	3.2	0				0	5.2	0				0	5.5	0										0	11.5	0				0	5	0.3				
																						0.9	8.8	3.6											0.7	8.4	4.3		
																						0	2.8	0.8											0	3.6	0.7		
8.3			21.8			21.3			27			25.2			20.3			24.5			38			21.5			31.5			39.1			31.3			30.8		
	37.4	38.2		35.1	35.3		37	37		45.7	45.7		36.9	38		47.2	46.4		49.5	58		36.3	36		68	68.5		73.2	72.3		54.9	55.4		48.6	48			

15:50 (70.5)(B043) [37] {FA19}			16:00 (70.8)(B039) [7] {FA19}			16:20 (70.6)(B190) [17] {FA19}			16:30 (70.8)(B041) [5] {FA19}			16:50 (70.5)(B042) [37] {FA19}			17:00 (70.6)(B032) [1] {FA19}			17:20 (70.5)(B193) [12] {FA19}			17:30 (70.6)(B036) [40] {FA19}			17:50 (70.5)(B039) [6] {FA19}			18:05 (70.6)(B037) [6] {FA19}			18:25 (70.5)(B041) [5] {FA19}			18:40 (70.6)(B196) [13] {FA19}			19:00 (70.
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
8.9	0	8.9	6.9	0	6.9	11.4	0	11.4	4.2	0	5.4	10.1	0	10.1	7	0	7	12.5	0	12.5	15	0	15.1	11.3	0	11.7	9.3	0	11	10	0	10	6.8	0	6.9	4.1							
8.4	0.4	17	8.3	0.4	14.7	9.9	0.6	20.8	8	0.2	13.2	15	0.7	24.6	4	0	11	17.3	0.3	29.4	18.9	0.4	33.7	13.3	0.3	24.7	11	0.2	21.8	9.2	0.4	18.8	14.2	0.1	21	11.3							
11.4	0.4	28.9	5.3	0.4	19.6	12.8	0.4	33.1	9.4	0	22.6	14	0.9	40.1	19	0	30	15.9	0.6	44.8	18	0.3	51.5	14.2	0.3	38.5	14.5	0.5	35.8	12.8	0.4	31.2	16.4	0.2	37.2	12.3							
2.6	0.1	30.7	2.1	0.1	21.6	3	0.2	35.9	5.2	0	27.8	2.4	0.1	41.5	2	0	32	2.7	0.3	47.1	3	0.2	54.2	4.5	0	43	1.7	0	37.5	2.6	0.2	33.6	3.8	0.3	40.6	2.4							
0.2	0	31.8	0.1	0	21.7	0.2	0	36.1	0.2	0	28	0.6	0	42.1	0	0	32	0.2	0.2	47.1	0	0	54.3	0	0	43	0	0.2	37.3	0.6	0	34.2	0	0	40.6	0.1							
0.1	0.7	31.2	0.1	0	21.9	0.2	0.5	35.8	0.2	0.2	28	0.2	0.3	41.9	0	0	32	0.4	0.6	46.9	0.5	0.6	54.1	1.3	1.2	43.2	0.5	0.7	37.2	0	0.2	34	0.2	0.6	40.2	0.3							
0.4	1.1	30.4	1.6	0.3	23.1	0.9	1.1	35.6	1.4	1.8	27.6	0.8	1.2	41.6	0	1	31	1.2	1.9	46.2	1.5	1.8	53.9	1	1.7	42.5	1.2	1	37.3	1.4	1.8	33.6	1.1	1.2	40.1	1							
0.4	0.6	30.2	0.4	0	23.6	0.5	1	35.1	0.2	0	27.8	0.4	0.6	41.4	0	0	31	0	0.5	45.7	0.3	0.7	53.6	0.5	0.5	42.5	0	0	37.3	0.4	0.4	33.6	0.4	0.3	40.2	0.1							
0.3	0.1	30.4	1.1	0	24.7	0.6	0.4	35.4	1.4	0.2	29	0.9	0.1	42.2	0	1	30	0.5	0.6	45.6	0.4	0.5	53.5	0.2	0.3	42.3	0	0	37.3	0.6	0.4	33.8	0.1	0.1	40.2	0.3							
4	1.6	32.7	2.6	2	25.3	2.2	2.3	35.2	2	1.6	29.4	3	2.6	42.6	6	0	36	2.4	1.5	46.5	2.2	2.9	52.8	1.2	2.3	41.2	2.3	1.7	38	0.8	1.8	32.8	2.8	1.5	41.5	2.3							
0.4	0.3	32.8	0.3	0.1	25.4	0.6	0.6	35.2	0.6	0.6	29.4	0.4	0.6	42.4	0	0	36	0.8	0.5	46.8	1.1	2.8	51.5	1.7	0.2	42.7	0.3	0.3	38	0.4	0.4	32.8	0.6	0.8	41.2	0.6							
0.9	1	32.7	0.4	0.9	25	1.4	1.1	35.5	1.4	4	26.8	1.7	1.6	42.5	0	6	30	1.2	1.3	46.8	0.9	1.8	51.3	0.5	1.2	42	1	1.7	37.3	0.2	1.4	31.6	0.4	1.5	40.2	0.6							
0.7	0.4	33	0.4	0.6	24.9	0.2	0.9	34.9	0.4	0.2	27	0.8	1.3	41.9	0	0	30	0.5	1.2	46.1	0.6	1.5	50.4	0.2	1.2	41	1.2	1.5	37	0.4	1	31	0.4	2.2	38.4	0.2							
0.3	1	32.3	0	0.7	24.1	0.2	1	34.1	0.4	0.4	27	0.4	1.3	41	0	0	30	0.3	2.2	44.2	0.4	1.9	48.9	0	0.8	40.2	0.2	1.3	35.8	0.2	1.4	29.8	0.6	1.5	37.5	0.4							
0	0.1	31.9	0	0	24.1	0	0.4	33.8	0	0.4	26.6	0.1	0.1	41	0	0	30	0.1	0.3	44	0.1	0.1	48.9	0.3	0.3	40.2	0	0.7	35.2	0	0	29.8	0	0.2	37.4	0.1							
1.6	1.4	32.2	0.4	0.6	24	3.3	1.4	35.7	1.6	1.4	26.8	2.4	1.4	41.9	6	1	35	1.3	1.7	43.7	1.7	1.4	49.2	2.2	1.2	41.2	0.8	1.7	34.3	0.4	1.6	28.6	1.3	2	36.7	1.1							
0.8	1.2	32	0	1.3	22.7	0.6	2.2	34.1	1	3.2	24.6	0.4	2.5	39.8	0	3	32	0.5	4.9	39.3	0.6	4	45.8	0.7	2	39.8	0.8	2.3	32.8	0.2	2	26.8	0.1	1.6	35.2	0.3							
0.6	0.8	31.8	0.1	0.6	22.3	0.2	0.8	33.5	0.2	0.4	24.4	0.3	1.4	38.7	1	2	31	0.1	0.4	38.9	0.5	0.9	45.4	0.7	0.3	40.2	0	1	31.8	0.6	0.8	26.6	0.4	1.2	34.4	0.2							
1.2	1.4	31.6	0.7	1.3	21.7	2.4	1.9	34	2.2	0.6	26	2.1	0.8	40.1	10	2	39	2.5	1.3	40.2	2.1	0.9	46.6	1.2	0.5	40.8	1.7	0.3	33.2	1	0.6	27	2.3	1.2	35.5	1.1							
0.3	0.4	31.6	0	0.6	21.1	0.1	0.3	33.8	0.2	0	26.2	0.5	1	39.6	0	0	39	0.2	0.5	39.8	0.4	1	45.9	0.5	0.8	40.5	0.2	0.8	32.5	0	0	27	0.2	0.5	35.2	0							
0.9	0.4	32.1	0.4	1.4	20.1	1.6	0.5	34.8	1.2	0.6	26.8	1.2	1.1	39.8	2	6	35	0.6	1.3	39.1	0.4	1.3	45	0.3	1	39.8	0.7	0.7	32.5	0.2	1	26.2	0.8	0.9	35	0.2							
0.2	0.2	32.1	0	0	20.1	0.1	0.2	34.8	0	0.2	26.6	0.2	0.4	39.6	0	0	35	0	0.1	39	0.1	0.8	44.2	0	0.5	39.3	0.2	0.7	32	0	0.2	26	0	0.8	34.2	0.1							
0.2	0.3	32	0.1	0.4	19.9	0.1	0.5	34.3	0.2	0.8	26	0.4	0.9	39.1	2	0	37	0.1	1	38.1	0.2	2	42.5	0	1	38.3	0	1.3	30.7	0.2	0.8	25.4	0.4	0.5	34.1	0.2							
0	0.3	31.7	0	0	19.9	0.1	0.3	34.1	0	0.4	25.6	0.4	0.6	38.8	0	1	36	0.2	1.3	36.9	0	0.8	41.7	0	1	37.3	0	1.2	29.5	0	0.2	25.2	0	0.6	33.5	0.1							
0.1	0.5	31.4	0.3	0.1	20	0.2	0.6	33.6	0.2	1.4	24.4	0.2	1.1	38	4	0	40	0	1.3	35.6	0.3	1.3	40.7	0	0.8	36.5	0.2	0.8	28.8	0	1.2	24	0.2	0.9	32.8	0.1							
6	3.6	33.8	4.9	2.9	22	7.2	3	37.8	8.6	4.6	28.4	6.1	2.5	41.6	14	6	48	5.1	4.3	36.4	8	2.9	45.8	5.2	6.3	35.3	6.2	1.2	33.8	1.8	3	22.8	6.1	1.3	37.5	3.6							
0.4	0.5	33.6	0.1	0.3	21.9	0.3	0.5	37.6	0.2	1	27.6	0.5	0.6	41.5	1	0	49	0.4	0.5	36.3	0.5	0.6	45.6	0.3	0.2	35.5	0.3	0.7	33.5	0	0.4	22.4	0.5	0.1	37.9	0.4							
0	0	33.6	0	0	21.9	0	0	37.6	0	0	27.6	0	0	41.5	0	0	49	0	0	36.3	0	0	45.6	0	0	35.5	0	0	33.5	0	0	22.4	0	0	37.9	0							
0.2	0.6	33.2	0	0.9	21	0.1	0.9	36.8	0.8	0.4	28	0.2	1	40.7	2	1	50	0.2	0.5	36	0.4	1.7	44.3	0	0.3	35.2	0	1	32.5	0	1.6	20.8	0.2	0.5	37.5	0.1							
0.3	0.6	32.9	0.3	0.9	20.4	0.5	1.4	35.9	0.8	4	24.8	0.5	1.2	39.9	0	1	49	0.7	1.6	35.1	0.2	1.6	42.9	0	1.8	33.3	0.3	2.2	30.7	0	0.6	20.2	0	1.4	36.2	0							
0.5	1.3	32.1	0.3	1.6	19.1	0.5	1.5	34.9	0.4	2.4	22.8	0.5	1.7	38.7	0	4	45	0.3	2.2	33.3	0.1	2.5	40.5	0.7	1.3	32.7	0	1	29.7	0.2	1.4	19	0.2	1.9	34.5	0.2							
0.1	0.6	31.6	0	0	19.1	0.4	0.5	34.8	0	0.6	22.2	0	0.6	38.1	0	0	45	0.1	0.6	32.8	0.2	1.1	39.6	0	1.2	31.5	0	0.3	29.3	0	0	19	0.1	0.5	34	0.1							
0	0.6	31	0	0.3	18.9	0	1	33.8	0	0.8	21.4	0	1.9	36.2	1	2	44	0.1	1.1	31.8	0.1	1.8	37.9	0	1.8	29.7	0	1.2	28.2	0	1.2	17.8	0	1.2	32.8	0							
0.1	0.8	30.3	0	0.7	18.1	0.4	0.5	33.7	0	0.8	20.6	0.2	1.9	34.6	1	3	42	0.3	2.2	29.9	0.1	1.6	36.4	0	3.2	26.5	0	1.8	26.3	0	0.6	17.2	0.1	1.2	31.6	0							
0.1	0.2	30.2	0	0	18.1	0.1	0.4	33.5	0	0.2	20.4	0.1	0.2	34.4	0	0	42	0.1	0.5	29.5	0.1	0.2	36.3	0	0.2	26.3	0	0.2	26.2	0	0	17.2	0	0.2	31.5	0							
0	0.3	29.9	0	0.1	18	0	0.4	33.1	0	0	20.4	0.1	0.5	34.1	0	1	41	0	0.4	29.1	0	0.2	36.1	0	0	26.3	0	0.5	25.7	0	0.4	16.8	0	0.4	31.1	0							
0	0.2	29.7	0	0	18	0	0.2	32.9	0	0	20.4	0.1	0.2	33.9	0	0	41	0	0.5	28.6	0	0.4	35.7	0	0.3	26	0	0.5	25.2	0	0.6	16.2	0	0.2	30.8	0							
0.1	1	28.8	0	1.4	16.6	0.1	0.9	32	0.2	0.4	20.2	0.1	1.1	32.9	0	2	39	0.1	1.7	27	0.2	2.1	33.8	0	0.7	25.3	0.2	0.3	25	0	0.6	15.6	0.1	1.5	29.4	0.1							
0.2	0.4	28.6	0	0.4	16.1	0.1	0.4	31.7	0	0.6	19.6	0.1	0.6	32.4	0	0	39	0	0.2	26.8	0.2	1.1	33	0.3	0.2	25.5	0	0	25	0	0	15.6	0.2	0.1	29.5	0.1							
0	0.1	28.6	0	0.1	16	0	0.1	31.6	0	0	19.6	0	0.1	32.4	0	0	39	0	0.3	26.5	0	0.1	32.9	0	0.2	25.3	0	0	25	0	0.2	15.4	0	0.2	29.2	0							
0.2	0.4	28.4	0.1	1	15.1	0.1	0.7	30.9	0	0.2	19.4	0.2	0.8	31.8	0	1	38	0.1	0.5	26.1	0.1	0.8	32.2	0	0.7	24.7	0	0.3	24.7	0	0.4	15	0.1	0.5	28.8	0							
0	0.2	28.2	0	0.3	14.9	0.1	0.5	30.6	0	0.4	19	0	0.9	30.9	0	1	37	0	0.8	25.3	0	1	31.2	0	0.7	24	0	1.2	23.5	0	0.6	14.4	0	0.9	27.8	0.1							
0.3	0.9	27.6	0	0.7	14.1	0.1	0.7	30	0	3	16	0.3	1.1	30.1	0	1	36	0	1	24.3	0.1	2.4	29	0	1.5	22.5	0	0.7	22.8	0	0.6	13.8	0.2	1.7	26.3	0.1							
0.6	0.6	27.6	0	0.9	13.3	0.1	1.7	28.4	0.2	2	14.2	0	1.4	28.7	0	1	35	0	0.5	23.8	0.1	2.4	26.8	0.3	1.2	21.7	0	2.3	20.5	0	1.4	12.4	0	0.4	25.9	0							
0.3	0.7	27.2	0	0.3	13	0.2	1.4	27.1	0	0.6	13.6	0	1.1	27.7	0	0	35	0.2	1.3	22.7	0.1	0.4	26.4	0	1.2	20.5	0	0.8	19.7	0	0.6	11.8	0.1	0.5	25.5	0							
0.3	1	26.5	0	1.4	11.6	0.5	0.8	26.8	0	1.2	12.4	0.3	1.7	26.2	0	0	35	0.2	1.6	21.3	0.1	2.7	23.9	0	2.5	18	0	1.7	18	0	0.4	11.4	0	2.8	22.7	0.1							
3	9.9	19.6	.	.	.	1.7	9.6	18.9	.	.	.	0.9	9.9	17.2	1	22	14	1	4.8	17.5	0.6	9	15.5	0.5	8.2	10.3	0.7	7.2	11.5	0.8	4.2	8	1	8.1	15.6	0.4							
0.6	0.8	19.7	.	.	.	0.1	1	18	.	.	.	0.2	1	16.5	1	0	15	0.3	0.7	17.1	0.1	0.6	15	0	0.5	9.8	0.3	0.5	11.3	0.4	1.2	7.2	0.2	0.8	14.9	0							
0.4	1.3	18.8	.	.	.	0.1	0.6	17.5	.	.	.	0.2	0.9	15.7	0	0	15	0	0.7	16.4	0.2	0.8	14.4	0	1.2	8.7	0	0.3	11	0	0.5	7.5	0	0.3	14.6	0							
0.2	1.2	17.8	.	.	.	0	0.8	16.7	.	.	.	0.1	1	14.8	0	0	15	0	1.4	15	0	0.7	13.7	0	0.5	8.2	0	1.2	9.8	0	0.8	6.8	0	1.8	12.8	0							
0.1	2.8	15.1	.	.	.	0	2.9	13.8	.	.	.	0.1	3.1	11.7	3	3	15	0	3.3	11.8	0.1	3.6	10.2	0	2	6.2	0	1.5	8.3	0	1.3	5.5	0	3.2	9.6	0							
0.6	3.2	12.5	.	.	.	0.3	3.1	11	.	.	.	0.2	2.5	9.4	0	3	12	0.3	2.5	9.6	0.1	2.9	7.4	0	1.8	4.3	0.2	2.2	6.3	0	1.3	4.3	0.1	1.4	8.3	0							
0.1	1.3	11.3	.	.	.	0	0.8	10.2	.	.	.	0.1	0.6	8.8	0	2	10	0	3.3	6.3	0.1	0.9	6.5	0	1	3.3	0	1.2	5.2	0	1.5	2.8	0	1.6	6.7	0							
0.1	1.4	10	.	.	.	0	2.9	7.3	.	.	.	0.1	1.4	7.5	0	3	7	0.1	2.1	4.3	0.1	1.3	5.3	0	1.2	2.2	0	1.2	4	0	0.6	2.4	0	1.7	5	0.1							
0	0.9	9.1	.	.	.	0	0.8	6.5	.	.	.	0	0.7	6.8	0	2	5	0	0.6	3.7	0.1	0.4	5	0	0.2	2	0	0.8	3.2	0	0.4	2	0	0.2	4.8	0							
0	0	9.2	.	.	.	0	0.2	6.4	.	.	.	0	0.1	6.7	0	0	5	0	0	3.7	0	0	5	0	0	2	0	0	3.2	0	0.4	1.6	0	0	4.8	0							
0	0.9	8.2	.	.	.	0.2	1.1	5.5	.	.	.	0	1.2	5.5	0	0	5	0	0.8	2.9	0	0.5	4.5	0	0	2	0	0.5	2.7	0	0.2	1.4	0	0.5	4.3	0							
0	0.9	7.4	.	.	.	0	0.5	5	.	.	.	0	0.8	4.8	0	0	5	0	1.2	1.8	0	1.1	3.4	0	0.3	1.7	0	0	2.7	0	0	1.4	0	0	4.3	0							
0.1	5.4	2.1	.	.	.	0.2	1.6	3.5	.	.	.	0	0.8	4	0	0	5	0	0.3	1.5	0	0.9	2.5	0	0.3	1.3	0	0.5	2.2	0	0	1.4	0	0.6	3.7	0							
0	0.6	1.5	.	.	.	.	.	.	.	.	.	0	2.1	1.9	.	.	.	0	0.8	0.7	.	.	.	0	0.3	1	.	.	.	0	0.2	1.2	.	.	.	0							
0	0.5	1	.	.	.	.	.	.	.	.	.	0	0.5	1.4	.	.	.	0	0.3	0.3	.	.	.	0	0.3	0.7	.	.	.	0	0.6	0.6	.	.	.	0							
0	0.7	0.3	.	.	.	.	.	.	.	.	.	0	1	0.4	.	.	.	0	0.3	0	.	.	.	0	0.7	0	.	.	.	0	0.6	0	.	.	.	0							
.	.	.	.	.	.	0	3.5	0	.	.	.	.	.	.	0	5	0	.	.	.	0	2.4	0.6	.	.	.	0	2.2	0	.	.	.	0	3.7	0							
.	.	.	1.6	8.9	4.3	.	.	.	0.2	8.6	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.							
.	.	.	0	3.1	1.1	.	.	.	0	3.8	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.							
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.							
		33.8			25.4			37.8			29.4			42.6			50			47.1			54.3			43.2			38			34.2			41.5							
59.8	61.1		38.9	38		66.2	66.1		53.2	54.2		70.1	71.3		87	87		71.1	71.2		81.2	82.6		63.1	63.4		56	57.8		45.4	46.6		62.7	62.1		44.9							

5)(B042) [39] {FA19}		19:15 (70.6)(B032) [1] {FA19}			19:35 (70.5)(B036) [43] {FA19}			20:07 (70.6)(B037) [7] {FA19}			20:40 (70.5)(B010) [8] {FA19}			21:05 (70.6)(B044) [10] {FA19}			21:35 (70.5)(B045) [49] {FA19}			22:10 (70.5)(B040) [43] {FA19}			22:50 (70.5)(B044) [10] {FA19}			23:25 (70.5)(B045) [48] {FA19}			24:10 (70.8)(B040) [45] {FA19}			25:04 (70.2)(B045) [32] {FA19}			Total	
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
0	4.6	6	0	7	4	0	4.2	7.1	0	7.4	3.4	0	3.6	4.1	0	4.1	3.2	0	3.2	2.6	0	2.6	2.8	0	3.5	3.2	0	3.3	0.8	0	0.9				232.7	0
0.4	15.9	6	0	13	10.3	0	14.4	13.6	0.1	20.9	9.9	0.1	13.4	9.4	0.5	13.1	11.1	0.1	14.2	11.3	0	13.9	6.8	0	10.3	7.4	0	10.6	3.4	0	4.4				404.3	10.5
0.3	28.2	11	0	24	11.4	0.2	25.7	15.9	0.4	36.3	14.5	0.1	27.8	11.2	0.3	24	12.1	0.2	26.1	11.1	0.1	24.8	10.7	0	21	9.7	0.1	20.2	7.4	0	11.5	2.2	0	2.2	626.9	10.3
0.1	30.5	3	0	27	2.8	0.1	28.4	3.1	0.3	39.1	2.6	0.1	30.3	2.9	0.2	29.1	2.8	0.1	29.3	2.3	0.1	27.1	2.5	0	23.5	1.3	0.1	21.4	0.7	0	12.1				128.6	5.1
0	30.6	1	0	28	0.1	0	28.5	0	0	39.1	0	0	30.3	1	0.1	30	0.4	0.1	29.6	0.1	0	27.2	0.2	0.2	23.5	0	0	21.4	0.1	0.1	12.1	0	0	2.2	14.4	2.5
0.2	30.6	0	0	28	0.2	0.1	28.6	0.9	1.1	38.9	0.1	0	30.4	0.4	0.4	30	0.2	0.2	29.6	0.2	0	27.3	0.2	0	23.7	0.2	0.5	21	0.1	0	12.2	0	0	2.2	17	15.2
1	30.5	0	1	27	0.8	0.9	28.4	0.7	2.4	37.1	0.4	0	30.8	0.9	1	29.9	0.7	0.6	29.7	1	1	27.3	0.3	0.8	23.2	0.1	0.5	20.6	0.7	0.2	12.7	0	0.2	2	43.7	58.8
0.3	30.4	0	0	27	0.2	0.2	28.5	0	0.3	36.9	0	0.1	30.6	0.3	0.2	30	0.1	0.2	29.7	0.2	0.4	27.1	0	0.3	22.9	0.5	0	21.1	0.1	0.2	12.6	0	0	2	9.7	18.7
0.1	30.6	0	0	27	0.1	0.1	28.5	0	0.1	36.7	0	0	30.6	0.5	0.1	30.4	0.1	0	29.8	0	0.1	27	0	0.2	22.7	0	0	21.1	0	0	12.6	0	0	2	10	16
1.3	31.6	0	0	27	1.9	1.6	28.9	2.9	3.6	36	2	1.5	31.1	2	2.4	30	2.6	1	31.3	2.8	1.2	28.6	2.9	1.2	24.4	1.5	1.1	21.5	1.1	0.3	13.4	0	0	2.1	121.9	59.8
0.5	31.7	0	0	27	0.2	0.8	28.3	0.3	1.4	34.9	0.3	0.5	30.9	0.1	0.5	29.6	0.2	0.6	30.8	0.2	0.5	28.3	0.3	0.7	24	0.1	0.3	21.3	0	0.1	13.3	0	0	2	24.2	19.5
1.4	30.9	0	2	25	0.8	1.5	27.6	0.7	1	34.6	0.6	1.9	29.6	0.2	0.9	28.9	0.9	1.1	30.6	0.9	0.5	28.7	2.2	0.7	25.5	0.2	0.2	21.3	0.1	0.2	13.2	0.1	0	2.1	37.1	71.9
0.9	30.3	0	0	25	0.5	0.8	27.3	0.4	0.7	34.3	0.1	0.3	29.5	0.6	1.1	28.4	0.4	0.8	30.3	0.4	0.8	28.3	0.6	0.4	25.7	0.6	0.4	21.5	0	0.6	12.7	0	0	2.1	23.4	35.4
1.5	29.2	0	0	25	0.2	1.2	26.3	0.1	1.3	33.1	0	0.4	29.1	0.1	1.9	26.6	0.1	1.2	29.1	0.2	1.7	26.8	0	1.1	24.6	0	0.5	21	0.1	1.9	10.8	0	0.1	2	12.4	43.8
0.3	28.9	0	0	25	0	0.5	25.8	0.1	0.4	32.9	0	0.1	29	0.1	0.1	26.6	0	0	29.1	0.1	0.1	26.8	0.2	0.3	24.5	0	0.4	20.6	0	0.1	10.8	0	0	2	4.7	12.2
1.6	28.5	0	3	22	0.8	2	24.6	1.9	1.1	33.6	0.8	0.5	29.3	0.7	1.8	25.5	0.9	1	28.9	0.8	1.6	26	1.2	0.9	24.8	1.1	0.8	21	0.3	0.5	10.6	0	0.1	1.9	82.7	59.8
1.3	27.5	0	0	22	0.2	1.2	23.5	0	1.1	32.4	0.5	0.8	29	0.6	0.7	25.4	0.9	0.8	29	1	1.5	25.6	1.3	2.5	23.6	0.2	0.5	20.7	0.1	0.2	10.5	0.1	0.9	1.1	20.7	98
0.7	27	0	0	22	0.2	0.4	23.3	0.6	0.4	32.6	0	0.8	28.3	0.3	2.3	23.4	0.2	2.7	26.6	0.1	1.3	24.3	0.2	1.5	22.3	0.1	0.9	19.9	0.1	0	10.6	0	0	1.1	11.8	53.8
0.5	27.6	2	0	24	1.1	0.8	23.6	2.9	1.1	34.3	1.4	0.4	29.3	0.5	0.3	23.6	1.2	0.1	27.7	1.2	0.1	25.3	1.4	0	23.7	0.5	0	20.3	1.3	0	11.8	0	0	1.1	82.2	56.4
0.2	27.4	0	0	24	0	0.3	23.3	0	0	34.3	0	0	29.3	0.3	0.6	23.3	0.1	0.5	27.2	0.2	0.2	25.3	0	0.1	23.6	0.3	0	20.6	0.2	0	12	0	0	1.1	10.7	28.5
0.9	26.7	0	2	22	0.2	1.2	22.3	0.4	0	34.7	0.5	0.1	29.6	1	0.8	23.5	1.4	0.6	28	0.6	0.3	25.6	0.8	0.7	23.7	0	0.1	20.5	0	0.2	11.9	0	0	1.1	29	52.1
0.3	26.4	0	0	22	0.1	0.1	22.2	0	0.1	34.6	0	0.4	29.3	0	0.1	23.4	0	0.1	27.9	0	0.2	25.4	0	0	23.7	0	0	20.5	0	0.1	11.8	0	0	1.1	2.7	10
1.1	25.6	0	1	21	0	0.6	21.7	0.3	1.4	33.4	0	0.5	28.8	0	0.2	23.2	0.1	0.3	27.7	0	0.2	25.2	0	0.5	23.2	0	0.1	20.3	0	0.2	11.6	0	0	1.1	10.7	27.4
0.6	25	0	0	21	0	0.3	21.3	0	0.7	32.7	0	0.6	28.1	0.1	0.3	23	0	0.2	27.5	0	0.3	25	0.1	0.1	23.2	0	0.1	20.2	0	0	11.6	0	0	1.1	2.8	18
0.6	24.5	0	2	19	0.1	0.9	20.6	0	1.3	31.4	0	0.3	27.9	0.3	1.1	22.2	0.2	1.3	26.4	0.1	0.4	24.6	0.1	0.8	22.5	0.2	0.4	20	0.1	0.4	11.3	0	0.1	1	15	30.7
1.4	26.7	10	0	29	5.1	1.3	24.3	4.4	1.9	34	7.1	1	34	4.8	2.2	24.8	4.8	1.2	30	5.6	1.2	29	4.4	0.3	26.6	2	0.5	21.4	1.5	0.7	12.1				227.5	131
0.2	26.9	2	1	30	0.2	0.3	24.2	0.1	0.4	33.7	0.5	0	34.5	0.1	0.3	24.6	0.1	0.4	29.7	0	0.1	28.8	0.2	0.2	26.6	0	0	21.4	0	0	12.1				18.5	22.1
0.1	26.8	0	0	30	0	0	24.2	0	0	33.7	0	0	34.5	0	0	24.6	0	0	29.7	0	0	28.8	0	0	26.6	0	0	21.4	0	0	12.1				0	0.5
0.7	26.3	0	0	30	0.1	0.7	23.6	0	0.4	33.3	0.1	0.9	33.8	0.3	0.7	24.2	0.1	1.1	28.6	0.1	1.2	27.7	0.1	0.9	25.8	0	0.2	21.2	0	0.6	11.5				9.8	26.9
1.6	24.7	1	3	28	0.1	1.1	22.6	0.1	0.7	32.7	0.1	1.8	32.1	0	1.6	22.6	0.1	1	27.7	0.1	0.8	27	0	1.2	24.6	0.1	0.4	20.9	0	0.2	11.3				14.6	48.9
1.8	23	0	0	28	0.3	1.5	21.4	0.1	1	31.9	0.3	1.8	30.6	0	0.9	21.7	0.3	1.6	26.4	1.3	1.9	27	0.5	1.2	23.9	0.1	1.6	19.5	0	0.5	10.8				17.4	61.3
0.3	22.8	0	0	28	0	0.3	21.2	0.1	0.4	31.6	0	0.3	30.4	0	0.1	21.6	0	0.3	26.1	0	0.2	26.8	0.1	0.7	23.3	0	0.1	19.4	0	0.5	10.3				3.3	16.7
1.4	21.4	0	1	27	0	1	20.2	0	0.6	31	0	0.5	29.9	0	0.6	21	0	0.2	25.9	0	0.3	26.5	0	0.1	23.2	0	0.1	19.2	0	0.1	10.2				4.4	27.4
0.6	20.8	0	1	26	0	0.4	19.8	0.3	0	31.3	0.1	0.5	29.5	0	0.3	20.7	0	0.3	25.6	0	0.4	26.1	0	0.2	23	0	0.3	18.9	0	0	10.2				5.5	34.1
0.1	20.7	0	1	25	0	0.1	19.7	0	0	31.3	0	0.1	29.4	0	0	20.7	0	0	25.6	0	0.1	26	0	0.2	22.8	0	0.1	18.8	0	0	10.2				1.8	10.4
0.2	20.6	0	0	25	0	0.2	19.5	0	0.3	31	0	0.3	29.1	0	0	20.7	0	0.5	25	0	0.7	25.4	0	0	22.8	0	0.1	18.7	0	0	10.1				0.7	10.7
0.2	20.4	0	0	25	0	0	19.4	0	0	31	0	0	29.1	0	0	20.7	0	0	25	0	0	25.4	0	0	22.8	0	0	18.7	0	0	10.1				0.1	5.6
0.5	19.9	0	3	22	0.1	0.4	19.1	0.3	0.4	30.9	0	1.1	28	0.2	0.9	20	0	0.6	24.4	0.4	0.3	25.4	0	0.2	22.6	0	0.1	18.6	0	0.2	9.9				9.2	44.8
0.2	19.9	0	0	22	0	0.2	19	0	0.1	30.7	0	0.4	27.6	0	0.4	19.6	0.1	0.1	24.4	0.2	0.1	25.5	0.1	0.8	21.9	0	0.3	18.4	0	0.2	9.7				3.8	15.1
0.1	19.8	0	0	22	0	0.3	18.6	0	0.3	30.4	0	0.3	27.4	0	0	19.6	0	0.1	24.3	0	0.3	25.2	0	0.1	21.8	0	0.1	18.3	0	0	9.7				0.2	5.2
0.4	19.5	0	0	22	0.1	0.3	18.3	0.4	0.4	30.4	0	0.4	27	0	0.1	19.5	0.1	0.2	24.1	0	0.4	24.8	0	0.9	20.9	0	0.8	17.5	0	0.3	9.4				6.6	23.1
0.4	19.1	0	3	19	0	0.8	17.6	0	0.7	29.7	0.1	1.4	25.8	0	0.5	19	0	0.3	23.8	0	0.8	24	0	0.3	20.6	0	0.6	17	0	0.2	9.2				5	21.3
1	18.2	0	2	17	0	1	16.7	0.1	0.6	29.3	0	1	24.8	0.1	1.6	17.5	0	1	22.8	0	0.8	23.2	0.1	1.9	18.8	0	0.9	16	0	0.8	8.5				6.5	50.5
0.8	17.4	0	3	14	0	2	14.6	0	0.7	28.6	0.1	1	23.9	0	1	16.5	0	1	21.8	0	1.3	21.8	0	2	16.8	0	0.7	15.4	0	0.6	7.9				6.4	41.8
0.5	16.9	0	0	14	0	0.3	14.3	0	0.9	27.7	0	1	22.9	0	0.9	15.6	0.1	0.8	21.2	0.1	2.1	19.9	0.1	0.7	16.2	0	0.2	15.2	0	0.2	7.7				3.8	29.1
2.1	14.9	0	1	13	0.2	1.9	12.6	0	2	25.7	0.5	1.6	21.8	0.2	1.3	14.5	0.2	1.4	19.9	0	0.8	19	0.2	1.5	14.9	0.1	1.1	14.1	0	0.8	7				6.7	56.4
6.1	9.2	1	4	10	0.3	4.8	8.1	0.6	11	15.3	0	9	12.8	0.1	5.6	9	0.1	8.8	11.3	0.3	10	9.3	0.1	8.8	6.2	0	6.2	7.9							46.9	301.4
0.5	8.8	0	0	10	0	0.4	7.9	0	1.3	14	0	0.3	12.5	0	0.3	8.7	0	0.7	10.7	0	0.2	9	0	0.2	6	0	0.7	7.2							11	30.8
0.4	8.4	0	0	10	0.1	0.4	7.5	0	1.1	12.9	0	1	11.5	0	0.3	8.4	0	0.6	10.1	0	0.9	8.1	0	0.4	5.6	0	0.6	6.5							8.3	26
0.9	7.5	0	0	10	0	0.9	6.6	0	0.7	12.1	0	1.8	9.8	0	0.7	7.7	0.1	0.9	9.3	0.1	1.6	6.7	0	0.8	4.8	0	2	4.6							5.2	34.4
2.2	5.3	0	3	7	0	2.1	4.5	0	4.4	7.7	0.1	4	5.9	0.1	2.1	5.7	0	2.3	7	0.1	2.3	4.5	0	0.8	4	0	0.7	3.9							9.2	80.9
1.2	4.1	0	2	5	0	1.5	3.1	0	2.1	5.6	0	2.8	3.1	0	1.3	4.4	0	1.8	5.3	0	1.7	2.8	0	1.2	2.8	0	1.1	2.8							9.4	70.7
1.1	3.1	2	0	7	0	1.6	1.5	0	1.1	4.4	0	0.8	2.4	0	1.7	2.7	0	1.2	4	0	0.5	2.3	0	1.3	1.5	0	0.8	2							3.2	40.3
1.2	2	0	1	6	0	0.2	1.2	0	0.7	3.7	0.1	1	1.5	0	0.6	2.1	0	0.6	3.4	0	0.1	2.2	0	0.3	1.2	0	0.5	1.5							1.6	39.3
0.2	1.8	0	0	6	0	0.3	0.9	0	1	2.7	0	0.3	1.3	0	0	2.1	0	0.2	3.3	0	0.3	1.9	0	0.1	1.1	0	0.3	1.2							0.9	15
0	1.8	0	0	6	0	0	0.9	0	0	2.7	0	0.3	1	0	0	2.1	0	0.1	3.2	0	0	1.9	0	0	1.1	0	0.1	1.1							0	1.8
0.1	1.7	0	0	6	0	0.2	0.7	0	0	2.7	0	0.3	0.8	0	0	2.1	0	0.3	2.9	0	0.3	1.7	0	0	1.1	0	0.3	0.9							0.5	17.3
0.3	1.4	0	0	6	0	0.2	0.5	0	0.6	2.1	0	0	0.8	0	0.2	1.9	0	0.2	2.7	0	0.2	1.4	0	0.2	0.9	0	0	0.9							1	13.9
0	1.4	0	2	4	0.2	0.3	0.6	0	0.3	1.9	0	0.3	0.5	0	0.2	1.7	0	1.2	1.5	0	0.1	1.3	0	0	0.9	0	0.1	0.8							0.8	76.5
0.2	1.3				0	0	0.6				0	0	0.5				0	0.6	1	0	0.1	1.2	0	0	0.9	0	0	0.8							0	7
0.4	0.9				0	0.1	0.5				0	0	0.5				0	0.3	0.7	0	0.1	1.1	0	0.2	0.7	0	0.1	0.7							0.5	18.3
0.5	0.3				0	0.3	0.2				0	0.5	0				0	0.4	0.3	0	0.5	0.6	0	0.7	0	0	0.6	0							0	25.2
		0	4	0				0	1.9	0				0	1.5	0.2																		0	99
																												0	3.3	3.7				4.2	41.8
																												0	3.6	0.1				0	18.9
																															0	1	0	0	1
	31.7			30			28.9			39.1			34.5			30.4			31.3			29			26.6			21.5			13.4			2.2		
46		45	46		43	43.2		58.4	58.3		46.2	47.3		43.5	45.8		46	46.1		45.7	45.3		40.7	41.4		29.5	29.3		18.2	18.1		2.4	2.4		2433.8	2456.8

Load
245.4
641.5
1271.4
1385
1408.4
1409.8
1394.6
1385.9
1380
1441.7
1446.3
1412.3
1400.6
1369.1
1361.8
1384.4
1307.4
1265.3
1291.2
1272.9
1249.9
1242.4
1225.7
1210.4
1194.5
1289.9
1286.5
1285.8
1268.5
1234.1
1191.1
1177.7
1154.7
1125.8
1117.3
1107.5
1101.9
1066
1055.1
1050.4
1034
1018.1
974.2
938.9
913.1
863.3
549.1
529.7
512.7
483.8
411.8
350.8
313.6
276.2
262.3
260.7
244.2
231.6
156
50
32.6
7.2
1.3
22.7
3.7
0
1446.3

Massachusetts Bay Transportation Authority
Route 86
Weekday - Inbound
Fall 2019
(Urban Transportation Associates)

	05:00 (86.0)(B117) [17] {FA19}			05:23 (86.0)(B119) [45] {FA19}			05:46 (86.0)(B121) [2] {FA19}			06:01 (86.0)(B123) [43] {FA19}			06:11 (86.0)(B124) [28] {FA19}			06:20 (86.0)(B117) [16] {FA19}			06:28 (86.0)(B118) [1	
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
1 - 29005 - SULLIVAN STATION BUSWAY - BER	22.9	0	22.9	25.6	0	25.6	17	0	17	17	0	17	15.4	0	15.4	11	0	11.1	12.5	0
2 - 2757 - CAMBRIDGE ST @ BRIGHTON ST	0.1	0	22.9	0	0	25.6	0	0	17	0.1	0	18	0	0	15.4	0.1	0	11.2	0.1	0
3 - 2758 - CAMBRIDGE ST @ PARKER ST	0	0	22.9	0	0	25.7	0.5	0	17.5	0.5	0	18	0.3	0	15.7	0.3	0	11.4	0.2	0.2
4 - 2759 - WASHINGTON ST @ MT VERNON ST	0	0.2	22.8	0.3	0.6	25.4	1	0.5	18	1	0.2	19.1	1	2.1	14.6	0.2	0.3	11.4	0.2	0.3
5 - 12759 - WASHINGTON ST @ MYRTLE ST - C	1.1	0	23.8	0.5	0	25.9	0.5	0	18.5	0.5	0	18.9	1.1	0.6	15.1	0.7	0	12.1	0.7	0
6 - 2760 - WASHINGTON ST @ FRANKLIN ST	0	0.5	23.3	0	0	25.9	0	0	18.5	0.1	0	18.9	0	0	15.1	0.1	0	12.1	0.2	0
7 - 2761 - WASHINGTON ST @ TUFTS ST	0.1	0	23.4	0.1	0	26	0	0	18.5	0	0	19	0.1	0	15.2	0.3	0	12.4	0.8	0.6
8 - 23921 - CROSS ST @ FOUNTAIN AVE	0.6	0	24.1	0.1	0	26	0	0	18.5	0.2	0.2	19	0.4	0.3	15.3	0.3	0.2	12.4	0.6	0.2
9 - 2393 - CROSS ST @ OLIVER ST	0	0	24.1	0.1	0	26.1	0	0	18.5	0.3	0	19.2	0.4	0	15.8	0.1	0	12.6	0.1	0.2
10 - 2394 - PEARL ST @ CROSS ST	3.2	0.1	27.2	2.2	0	28.3	1	0	19.5	1.6	0.1	20.8	2.3	0.2	17.9	1.8	0.1	14.3	3.2	0
11 - 2689 - 422 MCGRATH HWY	0	0.4	26.8	0	0	28.3	0	1.5	18	0.2	0.3	20.7	0	0.1	17.8	0	0.3	14.1	0.3	0.2
12 - 2763 - WASHINGTON ST @ BOSTON ST	1.3	1.4	26.7	3.4	0.1	31.5	0	1.5	16.5	0.3	0.4	20.6	0.6	0.3	18.2	1.1	0.6	14.6	1	0.5
13 - 2610 - WASHINGTON ST @ WASHINGTON TE	0	0.2	26.5	0	0.1	31.5	1	0	17.5	0.1	0	20.7	0.5	0.1	18.6	0.4	0	14.9	0.1	0
14 - 2612 - SOMERVILLE AVE @ STONE AVE	0.4	1	25.9	0.2	3.3	28.4	0.5	0.5	17.5	0.8	1.1	20.3	0.6	1.1	18.1	0.3	0.9	14.3	0	2.4
15 - 2613 - WASHINGTON ST @ WEBSTER AVE	1.5	0.2	27.3	1.3	0.2	29.5	2.5	0	20	0.9	0.3	21	0.5	0.3	18.3	2	0.1	16.1	1.2	0.6
16 - 2615 - WASHINGTON ST OPP PARKER ST	0.1	0	27.4	0.2	0	29.6	0	0	20	0.5	0.6	20.8	0.5	0.5	18.4	0.6	0.2	16.6	0.5	0.5
17 - 2616 - WASHINGTON ST @ LELAND ST	0.1	0	27.4	0.1	0	29.7	0	0	20	0.3	0	21.2	0.1	0	18.5	0.4	0	16.9	1.2	0
18 - 2545 - WASHINGTON ST @ DANE ST	0	0	27.4	0.1	0	29.8	0	0	20	0.4	0.1	21.5	0.4	0.1	18.8	1.1	0	18	1.8	0.2
19 - 2546 - WASHINGTON ST @ BEACON ST	0.6	0.4	27.6	0.6	1	29.4	0.5	0.5	20	0.8	0.9	21.4	0.8	0.4	19.2	0.7	1.1	17.6	0.5	1
20 - 2547 - KIRKLAND ST OPP TROWBRIDGE ST	0.1	0.2	27.5	0	0	29.4	0	0.5	19.5	0.1	0.6	20.9	0.1	0.4	18.9	0.8	0.5	17.9	0.5	0.6
21 - 2548 - KIRKLAND ST @ KIRKLAND PLACE	0.3	2.6	25.2	0	2.4	27	1	2	18.5	0.3	0.8	20.4	0.3	1.9	17.3	0.1	0.4	17.6	0	1.6
22 - 22549 - HARVARD SQ @ GARDEN ST - DAWE	0.6	8.1	17.6	0.5	9.5	18	1.5	1.5	18.5	0.7	7.2	13.9	0.8	5.6	12.5	0.8	6.2	12.2	0.5	5.8
23 - 32549 - ELIOT ST @ BENNETT ST	1	5.5	13.1	1	6.4	12.6	1.5	4	16	2.3	4.7	11.5	2	4.1	10.4	1.8	2.4	11.6	1.8	2.7
24 - 2550 - JFK ST @ ELIOT ST	0	0.1	13	0.2	0.7	12.1	0	1	15	0.2	0.6	11.1	0.1	0.1	10.5	0.1	0.1	11.6	0.1	0.2
25 - 2551 - N HARVARD ST @ GATE 2 HARVARD	0	0.1	12.9	0	0.3	11.8	0	1.5	13.5	0	0.9	10.2	0	0.3	10.2	0	0.5	11.1	0	0.1
26 - 2553 - N HARVARD ST @ WESTERN AVE	0.1	2.9	10	0.1	2.3	9.6	1	1	13.5	1.2	0.9	10.5	0.2	0.8	9.6	0.1	0.6	10.7	0.2	0.5
27 - 1071 - WESTERN AVE OPP RIVERDALE ST	0.1	0.1	10	0.1	0.2	9.5	0	0	13.5	0.5	0.1	10.9	0.4	0.3	9.6	0	0.2	10.5	0.2	0
28 - 1072 - WESTERN AVE @ EVERETT ST	0.1	2.3	7.8	0.1	1.3	8.3	1	1	13.5	0.6	1.7	9.7	0	0.7	9	0.1	0.8	9.8	0	0.8
29 - 1074 - 367 WESTERN AVE OPP BRIGHTON	0.3	0	8.1	0.5	0.1	8.7	1	0	14.5	0.3	0.4	9.7	0.3	0.2	9.1	0.2	0.1	9.9	0.2	0.2
30 - 1075 - WESTERN AVE OPP LITCHFIELD ST	0	0	8.1	0.1	2.3	6.5	0.5	0	15	0.4	0	10.1	0.5	0.1	9.4	0.7	0	10.6	0.7	0.2
31 - 1076 - 445 WESTERN AVE	0	0	8.1	0	0	6.5	0	0	15	0	0	10.1	0	0	9.4	0.1	0.1	10.6	0.4	0.2
32 - 1077 - 495 WESTERN AVE	0.9	0.4	8.6	0.2	0.4	6.4	1	0.5	15.5	1.3	0.2	11.2	0.5	0.3	9.6	1.4	0.1	11.9	1.4	0.3
33 - 1079 - MARKET ST @ VINELAND ST	0.9	0.6	8.9	0.1	1.2	5.2	1.5	0	17	0.2	1.8	9.6	0.6	2.7	7.6	0.6	3.1	9.4	0.8	1.5
34 - 1081 - MARKET ST OPP GARDENA ST	1.5	0	10.5	1.6	0.1	6.7	0.5	0	17.5	2.7	0.4	11.9	1.5	0.4	8.7	1.1	0.5	10	1.8	0.5
35 - 1083 - MARKET ST @ ARLINGTON ST	0.1	0	10.5	0.4	0.1	7.1	1	0	18.5	0	0.7	11.3	0.1	0.3	8.5	0.2	0.3	9.9	0	1.1
36 - 1084 - CHESTNUT HILL AVE @ WASHINGTO	0.4	1.6	9.3	1	1.9	6.2	2	1	19.5	0.9	3.7	8.5	0.2	1.8	7	0.8	3.1	7.6	1.2	3.5
37 - 1085 - CHESTNUT HILL AVE @ ACADEMY H	0	0	9.3	0.1	0	6.3	0	0	19.5	0.1	0	8.6	0	0	6.9	0.4	0	8	1.2	0.1
38 - 1086 - CHESTNUT HILL AVE @ JACKSON A	0.4	0	9.7	0.1	0	6.5	0	0	19.5	0.1	0	8.7	0	0.1	6.9	0.2	0	8.2	0.2	0.2
39 - 1087 - CHESTNUT HILL AVE @ WILTSHIRE	0.5	0.1	10.1	0.5	0	7	0.5	1	19	0.5	0	9.2	1.1	0.3	7.7	0.9	0.4	8.7	1	0.5
40 - 1088 - CHESTNUT HILL AVE @ EMBASSY R	0	0.1	9.9	0.1	0	7.1	0	1	18	0.4	0	9.6	1.1	0.3	8.5	2.9	0.6	11	1.1	0.2
41 - 1089 - CHESTNUT HILL AVE @ SOUTH ST	0	0.5	9.4	0.2	0.4	6.8	0	0	18	0.3	0.7	9.1	0.4	0.4	8.5	0.6	0.4	11.2	1.3	0.3
42 - 1090 - CHESTNUT HILL AVE @ COMMONWEA	0	0.4	9.1	0	0.1	6.8	0	4	14	0.1	0.3	8.9	0	0.2	8.4	0.1	0.8	10.5	0.5	0.4
43 - 1092 - CHESTNUT HILL AVE @ BEACON ST	0.1	0.9	8.2	0	1.7	5.1	0	0.5	13.5	0	2.4	6.5	0	0.9	7.5	0	0.9	9.6	0	1.5
44 - 21917 - RESERVOIR BUSWAY	0	7.8	0.4	0	4.7	0.4	0	13.5	0	0	6.2	0.3	0	6.7	0.8	0	9	0.6	0	10.2
Maximum			27.6			31.5			20			21.5			19.2			18		
Total	39.4	38.7		41.7	41.4		38.5	38.5		38.8	38.5		35.2	35		35.5	34.9		40.3	40.1

L3] {FA19}	06:37 (86.0)(B135) [57] {FA19}			06:45 (86.0)(B119) [43] {FA19}			06:54 (86.0)(B136) [26] {FA19}			07:03 (86.0)(B120) [10] {FA19}			07:14 (86.0)(B121) [2] {FA19}			07:26 (86.0)(B122) [12] {FA19}			07:38 (86.0)(B123) [42] {FA19}			07:53 (86.0)(B124) [25] {FA19}			08:09 (86.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
12.5	17.9	0	17.9	13.2	0	13.3	15	0	15	16.9	0	16.9	14.5	0	15	23.8	0	23.8	14	0	14.1	17.4	0	17.5	15.9
12.5	0	0.1	17.8	0	0	13.3	0	0	15	0.1	0	17	0	0	15	0.3	0	24	0.2	0	14.3	0.1	0	17.6	0.3
12.6	0.1	0.1	17.8	0.1	0	13.4	0.3	0	15.3	0.1	0	17.1	1.5	0	16.5	0.7	0.1	24.6	1	0	15.3	0.9	0	18.5	1.2
12.5	0.1	0.3	17.7	0.1	0.2	13.3	0.2	0.3	15.2	0.4	0.2	17.3	1	0	17.5	0.4	0.4	24.6	0.5	0.2	15.5	0.7	0.5	18.7	1
13.2	0.9	0.2	18.4	0.8	0.1	14	0.7	0.3	15.6	0.4	0.3	17.4	0	0	17.5	3.8	0.3	28.2	1.7	0.3	16.9	1.3	0	20	2.2
13.5	0.1	0.1	18.3	0	0	14	0.2	0.5	15.3	0	0.1	17.3	0	0	17.5	0.9	0.5	28.6	0.6	0.3	17.2	0.4	0.1	20.3	0.7
13.6	0.8	0.1	18.9	0.3	0	14.3	0	0	15.3	0.1	0	17.4	0	0	17.5	0.1	0.1	28.6	0.4	0.1	17.5	0.4	0.3	20.4	0.3
14	0.3	0.3	18.9	0.2	0.2	14.3	0.5	0.4	15.4	0.2	1.1	16.5	1.5	0	19	0.7	2.1	27.2	0.8	0.7	17.6	0.9	0.8	20.5	2.3
13.9	0.1	0.1	19	0.3	0	14.6	0.4	0	15.8	0	0	16.5	0	0	19	0.5	0	27.7	0.3	0	17.9	0.4	0	20.9	0.3
17.2	1.3	0.1	20.2	1	0.1	15.5	1.8	0	17.6	4.7	0.1	21.1	3	0	22	4.6	0.3	32	6.1	0.2	24	4.3	0	25.5	5.9
17.3	0.3	0.4	20.2	0.5	0	16	0.8	0	18.4	1.6	0	22.7	1.5	0	23.5	0.6	0	32.6	1.1	0.1	24.6	0.8	0	25.8	1.7
17.8	1.4	0.7	20.8	0.6	0.3	16.3	1.7	0.5	19.5	3.4	1.3	24.8	4.5	0.5	27.5	2.1	1.3	33.4	3.2	0.7	27.2	2.2	0.9	27	2.6
17.9	0.1	0	20.9	0.1	0	16.3	0.2	0.1	19.7	1.4	0	26.2	0	0	27.5	0.3	0.4	33.3	0.2	0.1	27.3	0.2	0.1	27.1	0.3
15.5	0.3	0.9	20.3	0.3	0.4	16.3	0.7	1.4	19	0.6	3.3	23.5	2	4.5	25	1.3	5	29.7	2.4	1.4	28.3	1.8	1.3	27.6	2.1
16.2	2.2	0.9	21.6	1.8	0.5	17.6	2	1.1	19.8	4.4	1.7	26.2	5.5	2.5	28	5.6	0.8	34.4	3.3	0.4	31.2	3.7	0.5	30.7	6.1
16.2	0.3	0.7	21.2	0.3	0.1	17.9	0.7	0.6	19.9	1	0.6	26.6	1.5	6	23.5	1.3	4	31.8	1.7	2.4	30.6	2.1	0.7	32.1	1.3
17.4	0.8	0	22	1.3	0	19.2	1.7	0	21.6	1.3	0	27.9	2.5	0	26	0.8	0.2	32.4	2	0.1	32.5	2	0.1	34.1	1.7
19	1.5	0.5	23.1	0.9	0.1	20	1.1	0.3	22.4	1.1	0.2	28.8	1.5	0	27.5	2.6	0.5	34.5	3.9	0.6	35.8	3.5	0.9	36.7	2.4
18.5	1.1	1.3	22.8	1.5	0.9	20.6	3.9	0.7	25.7	4.2	1.4	31.6	3	1	29.5	3.9	1	37.4	4.9	1.9	38.8	5.4	1.8	40.3	5.5
18.3	0.2	1.1	22	0.3	0.8	20.1	0.7	0.6	25.8	0.9	1.5	31	2	1	30.5	1.8	1.2	38.1	1.3	0.8	39.3	1.5	0.9	40.9	1
16.7	0.1	1.5	20.5	0.2	0.9	19.4	0.5	0.9	25.4	0.8	1.2	30.6	0	1.5	29	0.3	0.9	37.5	0.7	1.2	38.8	0.4	2.4	38.9	0.5
11.4	1.4	6.3	15.6	2	6	15.3	3.2	10.4	18.2	6.2	11.6	25.2	6	11.5	23.5	5.1	12.7	29.9	4.7	14	29.5	2.6	15.7	25.8	3.3
10.5	2	3.9	13.7	4	3.7	15.7	4.6	3	19.8	6.1	5.4	25.9	4.5	8	20	5.5	6.6	28.8	6.2	6.5	29.3	3.9	7.4	22.2	3.6
10.5	0.5	0.1	14.1	0.4	0	16.1	0.3	0	20.2	1	0.4	26.5	0.5	0	20.5	1	0.7	29.2	1.9	0.3	30.9	2.1	0.2	24.1	0.9
10.4	0	1.4	12.7	0	1.1	15	0.3	2.3	18.1	0	2.3	24.2	0	2	18.5	0.3	4.7	24.8	0.1	3.4	27.6	0.2	1.6	22.7	0.3
10	0.1	0.8	12	0.4	1	14.4	1.2	1	18.3	0.5	1.4	23.3	0.5	1.5	17.5	0.6	1.8	23.5	0.5	2	26.1	0.7	1.8	21.6	0.4
10.2	0.1	0.1	12	0	0.2	14.3	0.7	0.5	18.5	1.7	0.9	24.1	0	0	17.5	0.4	0.9	23	0.7	0.7	26	0.9	0.8	21.7	1.1
9.5	0.2	1.5	10.7	1	1.3	14	1.5	1.6	18.4	0.6	3.2	21.5	0.5	1	17	0.8	2.2	21.6	0.8	1.4	25.4	0.4	0.9	21.3	0.7
9.4	0.9	0.1	11.4	2.4	0.1	16.3	1.7	0.1	20	1.6	0.4	22.7	4	0	21	1.6	0.3	22.9	1.5	0.3	26.7	1	0.2	22.1	0.5
9.8	0.3	0.4	11.3	0.4	0.4	16.3	1.7	0.3	21.4	1.8	0.4	24.1	1.5	0	22.5	0.8	0.8	23	0.5	0.7	26.4	0.6	0.5	22.2	0.2
10	0.2	0.3	11.2	0.1	0.7	15.6	0.2	0.3	21.3	0.1	0.6	23.6	0	1	21.5	0	0.8	22.2	0	0.8	25.6	0.1	2.4	19.9	0
11.1	1.7	0.7	12.2	1.4	1.1	15.9	1.8	0.7	22.4	3.8	0.5	26.9	1.5	1	22	0.8	0.6	22.4	1	0.7	25.9	1	0.6	20.3	0.6
10.3	1.1	2.4	10.8	1.5	4.4	13	2.9	4.8	20.5	2.4	8.6	20.7	1.5	7.5	16	1.3	4.8	18.8	1.5	7.3	20	1.3	4.7	16.9	0.7
11.5	1.7	0.5	12.1	1.4	0.3	14.1	2.1	1	21.6	6.3	0	27	6.5	0	22.5	2.9	0.1	21.7	3.5	0.8	22.7	2.6	0.4	19.1	2.3
10.5	0.8	0.8	12	1.1	1.7	13.5	1.5	2.2	21	1.9	3.3	25.6	0	2	20.5	1.7	1.8	21.5	1.9	1.4	23.2	1.4	1.4	19.2	1
8.2	1.5	3.8	9.6	1.7	3.6	11.6	2.7	7.7	16	2.4	12.5	15.5	3	9	14.5	1.3	5.7	17.1	1.6	4.8	20	1.4	4.7	15.9	0.8
9.3	1.6	0.1	11	1	0.3	12.3	1.2	1.1	16.1	1.1	1.3	15.3	0.5	0	15	0.9	0.7	17.3	0.7	0.9	19.9	0.6	0.6	15.8	0.3
9.4	0.7	0	11.8	1	0	13.2	1.2	0.1	17.2	2	0.2	17.1	2	0.5	16.5	0.3	0.4	17.2	0.3	1.3	18.9	0.2	0.4	15.7	0.1
9.9	0.9	0.3	12.4	1.2	0.4	14	1.3	0.5	17.9	1.5	0.6	18	1	0.5	17	1.2	0.7	17.7	0.9	0.7	19	0.5	1	15.2	0.6
10.8	1.5	0.5	13.4	2.7	0.7	16	1.2	0.3	18.9	2.6	0.8	19.8	4.5	2	19.5	2.1	1	18.8	2.4	1	20.4	1.8	1.6	15.5	0.6
11.8	0.3	0.7	13	0.4	0.9	15.5	0.6	1.4	18	1	1.4	19.4	0.5	2.5	17.5	0.3	2.3	16.7	0.6	2.7	18.3	0.4	2	14	0.4
11.8	0.4	0.6	12.8	0.7	0.9	15.2	0.5	2	16.6	0.2	1.1	18.5	0.5	0	18	0.2	1.7	15.2	0.5	1.8	16.9	0.2	2	12.2	0.2
10.4	0	1.3	11.5	0	0.7	14.5	0.1	1.4	15.3	0	1.8	16.7	0	0	18	0	1.3	13.9	0	2	14.9	0	2.2	10	0
0.2	0	11.4	0.1	0	14.5	0	0	15.2	0.2	0	16.7	0	0	18	0	0	13.4	0.5	0	14.6	0.3	0	9.9	0.1	0
19			23.1			20.6			25.8			31.6			30.5			38.1			39.3			40.9	
	47.8	47.4		48.6	48.6		65.6	65.6		88.4	88.4		84.5	85		85.5	85.1		82.1	81.6		74.3	74.3		73.9

0)(B117) [15] {FA19}		08:25 (86.0)(B118) [11] {FA19}			08:48 (86.0)(B119) [44] {FA19}			09:17 (86.0)(B029) [57] {FA19}			09:47 (86.0)(B123) [36] {FA19}			10:22 (86.0)(B189) [13] {FA19}			11:00 (86.0)(B137) [9] {FA19}			11:40 (86.0)(B138) [45] {FA19}			12:15 (86.0)(B139) [57] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	15.9	10.6	0	10.6	13.6	0	13.6	14.5	0	14.5	12	0	12.1	10.3	0	10.3	15.7	0	15.7	13.7	0	13.7	9.2	0	9.2
0	14.9	0.2	0	10.8	1	0	14.5	0.4	0	14.9	0.3	0.1	12.4	0	0	8.2	0.2	0	15.9	0.4	0	14.1	0.1	0	9.4
0	16.1	0.7	0	11.5	0.6	0	15.1	0.3	0	15.2	0.4	0	13.1	0.7	0	8.9	0.4	0.1	16.2	0.4	0	15	0.2	0.1	9.5
0.4	16.7	0.7	0	12.3	0.4	0	15.5	0.6	0	15.8	1.8	0.1	14.9	0.5	0	9.4	0.6	0.2	16.6	0.4	0.3	14.6	0.4	0.2	9.8
0.1	18.8	1.5	0.4	13.4	0.7	0.7	15.5	1.6	0.3	17	1.1	0.4	15.6	1.6	0.2	10.8	0.9	1.8	15.7	1.3	1.3	14.8	0.8	0.5	10.1
0.1	19.4	0.6	0.2	13.8	0.3	0	15.9	0.4	0	17.5	0.5	0.1	15.9	1.1	0.1	11.8	0.2	0	15.9	0.7	0.1	15.4	0.3	0	10.3
0.6	19.1	0.5	0.2	14.1	0.2	0.1	16	0.2	0.2	17.4	0.1	0.1	15.9	0.3	0	12.1	0.6	0.1	16.3	0	0.1	15.4	0	0	10.3
1.3	20.2	1.6	0.2	15.5	3.1	0.2	19	0.6	0.3	17.8	0.2	0.1	16	0	0	12.1	0.2	0	16.6	0.4	0.5	15.3	0.2	0.1	10.4
0.1	20.4	0.8	0	16.4	0.3	0.1	19.2	0.5	0.1	18.4	0.4	0.1	16.4	0.4	0	12.5	0.7	0	17.2	0.1	0	15.4	0.1	0	10.5
0.1	26.1	3.3	0	20.6	2.7	0.2	21.9	2.9	0.1	21.2	2.7	0.2	18.7	2.3	0	14.3	1.3	0.1	18.4	1.8	0.3	16.9	1.7	0.2	11.8
0.1	27.7	0.7	0	20.1	0.9	0.1	22.3	1.1	0.1	22.1	0.7	0.1	19.4	0.5	0	15.1	0.8	0.3	18.9	0.3	0.4	16.8	0.2	0.2	11.9
0.8	29.5	2.8	0.6	22.3	1.9	0.5	23.7	1.9	0.3	23.4	2.8	0.8	21.4	1.5	0.6	16	1.7	1.1	19.4	2.2	1	18.1	0.7	0.4	12.1
0.3	29.5	0.5	0.2	22.5	0.2	0.2	23.8	0.4	0	23.7	0.2	0.1	21.4	0.2	0.2	16	0.2	0	19.7	0.2	0.3	17.9	0.2	0.1	12.3
1.3	30.3	0.7	1.3	22	1.4	1.3	23.9	2.4	1.5	24.6	0.7	2.3	19.8	0.5	1.5	15	0.7	1.3	19	0.9	3.1	15.8	0.4	0.7	12
0.5	35.9	4.7	0.5	26.2	4	0.5	27.3	4.6	0.5	28.7	3.3	0.7	22.5	3.5	0.9	17.5	3.2	1.3	20.9	3.3	0.7	18.4	2.5	0.6	13.9
0.1	37.1	0.6	0	26.8	0.8	0.1	28	0.7	0.1	29.2	0.8	0.1	23.1	0.4	0	17.9	0.2	0.1	21	0.2	0.6	18	0.3	0.1	14.1
0.1	38.7	1.1	0.3	27.6	1.5	0.4	29.1	0.6	0.1	29.8	0.6	0.1	23.7	0.2	0.1	18.1	0.4	0	21.4	0.5	0.1	18.5	0.7	0.1	14.7
0.3	40.7	3.9	0.3	31.3	1.6	0.4	30.3	1.8	0.5	31.1	1.4	0.1	24.9	0.8	0.2	18.7	0.7	0.3	21.8	0.5	0.4	18.5	0.8	0.3	15.1
1.2	45	3.2	0.9	33.5	3.4	1.4	32.4	2.8	1.2	32.7	3	1.4	26.5	1.5	0.2	19.9	1.1	1.3	21.6	1.3	0.5	19.4	0.8	0.6	15.3
0.9	45.1	0.6	1.4	32.8	0.5	0.5	32.4	1.3	0.5	33.5	0.7	0.5	26.6	0.2	0.2	20	0.6	1	21.1	0.4	0.6	19.2	0.3	0.4	15.2
3.7	41.9	0.2	4.1	28.9	0.5	4.3	28.5	0.3	3.4	30.4	0.3	2.9	24	0.5	3.2	17.3	0.3	2.2	19.2	0.8	1.8	18.2	0.9	1.1	15
15.9	29.3	1.8	10.4	20.4	3	9.5	22.1	2.9	10.8	22.5	2.3	7.8	18.6	2.5	6.4	13.4	3.4	5.8	16.9	3.7	6.4	15.6	4.6	6.3	13.4
8.3	24.5	4.8	5.9	19.3	3.1	6	19.2	4.9	5	22.4	4.2	5.9	16.9	2.1	2.8	12.6	2.7	2.7	16.9	4.2	3.3	16.5	4.8	2.3	15.8
0.5	24.9	1	0.1	20.2	1.9	0.1	21	1	0.5	22.9	1.2	0.3	17.8	0.8	0.1	13.4	1.1	0.1	17.9	2.3	0.1	18.7	1.5	0.1	17.1
2.7	22.4	0.2	2.2	18.2	0.2	0.9	20.2	0.2	1.9	21.3	0.3	0.8	17.3	0.2	1	12.5	0.1	0.9	17.1	0.2	0.8	18.1	0.4	0.4	17
1.5	21.3	0.6	0.7	18.1	0.4	1.5	19.2	0.7	1.8	20.2	1	1.5	16.7	0.2	1	11.7	0.8	1.6	16.3	0.9	1.8	17.2	1.6	2	16.8
0.8	21.7	0.5	0.5	18.1	0.5	0.5	19.2	0.3	0.5	20	0.4	0.3	16.8	0.3	0.3	11.7	0	2.3	14	0.3	0.7	16.8	0.3	0.4	16.5
1.4	20.9	0.6	0.9	17.8	0.5	0.6	19.1	0.3	1.7	18.6	0.3	1.4	15.8	0.6	0.6	11.7	0.3	1.2	13.1	0.5	1.3	16.1	0.8	1.1	16.1
0.2	21.2	0.2	0.3	17.7	0.6	0.3	19.4	0.8	0.5	18.8	1	0.2	16.5	0.2	0.4	11.5	0.4	0.6	13	0.9	0.8	16.2	0.8	0.7	16.1
0.7	20.7	0.2	0.5	17.5	0.5	0.2	19.6	0.6	1	18.6	0.4	0	16.9	0.2	0	11.7	0.8	0.3	13.4	0.3	0.3	16.2	0.5	0.8	15.9
1.3	19.4	0.2	1.1	16.5	0.1	0.7	19	0.2	0.6	18.4	0	0.5	16.4	0.2	0.1	11.8	0.2	0	13.7	0.1	0.1	16.2	0.1	0.3	15.8
0.7	19.3	1.2	1	16.7	1.7	1.2	19.5	1.6	1	19	1.6	1	17	1	0.5	12.4	1.8	0.4	15	1.9	0.9	17.3	1.3	1.1	16
6.8	14.3	0.2	6.7	10.2	0.9	5.7	14.7	1.5	6.3	14.2	1.2	3.6	14.7	0.8	4.6	8.5	1.8	2.2	14.6	1.5	2	16.8	1	2.4	14.8
0.2	16.4	3.5	0.1	13.6	3.6	0.4	17.9	1.7	0.3	15.6	0.7	0.4	15	0.3	0.3	8.5	0.4	0.4	14.6	1.1	0.9	16.9	2	0.8	15.9
0.9	16.5	0.7	0.1	14.3	0.5	0.5	17.8	0.5	1.2	14.9	0.8	1.3	14.5	0.5	0.6	8.5	0.7	1.1	14.1	0.9	1.3	16.6	0.4	0.9	15.4
3	14.3	0.8	1.7	13.4	1.8	3.5	16.1	1.9	2.8	14.1	1.9	3.5	12.9	1.5	1.1	8.9	1.8	4.4	11.4	1.8	5.1	13.3	1.8	4	13.2
0.8	13.8	0.4	2.1	11.6	0.3	1.8	14.6	0.4	0.5	13.9	0.1	0.2	12.8	0.8	0.5	9.2	0.4	0.8	11.1	0.1	0.5	12.9	0.2	0.4	13
0.4	13.4	0.4	0	12	0.1	0.4	14.4	0.2	0.5	13.7	0.3	0.4	12.7	0.2	0.2	9.2	0.2	0.6	10.8	0.1	0.8	12.3	0.1	0.9	12.2
1	13.1	0.5	2.1	10.4	0.5	0.9	14	0.5	0.9	13.2	0.9	1.2	12.4	0.1	0.8	8.5	1.1	1.7	10.2	0.2	1.2	11.2	0.2	1.3	11.1
0.7	12.9	0.9	0.2	11.1	0.6	0.7	13.9	0.3	0.5	13	0.6	1.1	11.9	0.2	0.2	8.4	0.2	0.7	9.8	0.4	1.2	10.5	0.1	1	10.2
1.1	12.3	0.4	1.8	9.6	0.1	1	13	0.3	1.2	12.1	0.4	1.6	10.7	0.2	1.6	6.9	0.1	1.3	8.6	0.1	1	9.6	0.1	1	9.3
1.3	11.2	0.9	1.9	8.6	0.1	3.6	9.5	0.1	3	9.2	0.1	2.4	8.4	0.1	1.9	5.1	0	1.9	6.7	0.1	1.7	8	0.1	1.8	7.6
1.9	9.3	0.1	1.4	7.4	0	2	7.5	0	1.5	7.7	0	1.2	7.2	0	1.2	3.8	0	1.4	5.2	0	2	6.1	0.1	2.2	5.5
9.1	0.2	0	7.4	0	0	7.5	0	0	7.5	0.1	0	6.4	0.8	0	6.2	0	0	5.2	0	0	5.6	0.5	0	5.3	0.2
	45.1			33.5			32.4			33.5			26.6			20			21.8			19.4			17.1
73.2		59.6	59.7		60.6	60.5		60.8	60.7		53.7	53.3		40	39.8		49	48.8		51.4	51.9		43.6	43.2	

Trip (RouteVar)(Block) [Observations]

12:35 (86.0)(B141) [65] {FA19}			12:55 (86.0)(B142) [12] {FA19}			13:10 (86.0)(B143) [35] {FA19}			13:24 (86.0)(B144) [42] {FA19}			13:44 (86.0)(B145) [18] {FA19}			14:04 (86.0)(B146) [9] {FA19}			14:24 (86.0)(B141) [64] {FA19}			14:44 (86.0)(B140) [23] {FA19}			15:02 (86.0)(B147) [	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
9.8	0	9.8	12.8	0	12.8	8.9	0	8.9	11.8	0	11.8	12.6	0	12.6	19.4	0	19.4	16.9	0	16.9	11.3	0	11.3	18.5	0
0.1	0	9.9	0.2	0	13	0.1	0	9	0.1	0	11.9	0.3	0	12.8	0.1	0	19.6	0.1	0	17	0.1	0	11.3	0.3	0
0.2	0	10.1	0	0.1	12.9	0.2	0	9.3	0.1	0	12	0.3	0.1	13.1	0.2	0.1	19.7	0.2	0.1	17.2	0.1	0	11.4	0.8	0
0.5	0.3	10.3	0	0.1	12.8	0.2	0.1	9.3	0.4	0.4	11.9	0.6	0.4	13.3	0.9	0.1	20.4	0.7	0.4	17.5	0.8	0.2	12	1.3	0.6
0.7	0.4	10.6	0.7	0.5	13	0.9	0.4	9.8	0.8	0.5	12.2	0.7	0.5	13.4	1.4	0.9	21	1.3	0.6	18.1	0.7	0.3	12.4	1	1
0.1	0.1	10.7	0.3	0.3	13	0.1	0.2	9.8	0.1	0.2	12.1	0.7	0.3	13.8	1.7	0.2	22.4	0.2	0.1	18.2	0.2	0	12.6	0.1	0.4
0	0	10.7	0.2	0.3	12.9	0.1	0.3	9.6	0.1	0.1	12.1	0.1	0.1	13.8	0	0	22.4	0.1	0	18.3	0.1	0	12.7	0.3	0.1
0.2	0.3	10.6	0.3	0	13.2	0.1	0.3	9.4	0.2	0.3	12	1.3	0.2	15	1.9	0.3	24	0.2	0.4	18.2	0.8	0.5	13	1	0
0.1	0.2	10.5	0	0	13.2	0.1	0	9.6	0.1	0	12	0.1	0.2	14.9	0.1	0.2	23.9	0.1	0	18.2	0.1	0	13.5	0	0.3
1	0.3	11.3	1.3	0.6	13.9	1.1	0.2	10.4	1	0.3	12.8	1.6	0.3	16.2	0.9	0.8	24	1.4	0.4	19.2	3.6	0.3	16.8	1.9	0.3
0.3	0.2	11.3	0.1	0.5	13.5	0.3	0.3	10.4	0.3	0.6	12.5	0.7	0.6	16.4	0	0.3	23.7	0.2	0.3	19	0.2	0.9	16.1	0.3	0.3
0.9	1.2	11	1.2	0.7	14	0.4	0.3	10.5	0.7	1	12.1	1.2	0.7	16.9	1.4	0.4	24.7	0.9	1.4	18.5	0.9	1.3	15.2	0.9	1.5
0.2	0.2	11	0.2	0.3	13.9	0.1	0.2	10.4	0.4	0.3	12.1	0.2	0.1	16.9	0	0	24.7	0.1	0.2	18.4	0.1	0.1	15.2	0	0.5
0.4	1.5	10	0.4	0.6	13.8	0.5	1.1	9.8	0.4	1.9	10.6	0.7	2.6	15.1	1.1	4.2	21.6	0.7	3.3	15.8	1	2.7	13.4	1.1	5.1
1.8	1	10.8	1.6	0.8	14.5	0.9	0.9	9.9	1.2	0.6	11.3	1.8	0.8	16.1	1	1	21.6	2.8	1.4	17.3	3.9	1.7	15.6	3.3	1.4
0.1	0.1	10.7	0.3	0.2	14.7	0.2	0.3	9.7	0.1	0.1	11.3	0.2	1.1	15.3	0.4	1.4	20.6	0.4	0.4	17.3	0.1	0.3	15.4	0	0.1
0.2	0	10.9	0	0.1	14.6	0.2	0.1	9.7	0.1	0	11.4	0.1	0.1	15.3	0.3	0	20.9	0.1	0.1	17.3	0.1	0.1	15.3	0.3	0.1
0.4	0.2	11	0.5	0.2	14.9	0.1	0.1	9.8	0.5	0.2	11.7	0.4	0.2	15.5	0.9	0.6	21.2	0.5	0.9	16.9	0.7	0.6	15.5	0.3	0.1
0.9	0.8	11.2	0.9	0.6	15.3	0.6	0.6	9.8	0.6	0.5	11.8	1.3	0.5	16.3	0.7	1.3	20.6	0.7	0.7	16.8	1	0.7	15.8	1.3	0.3
0.2	0.3	11.1	0.2	1.3	14.2	0.3	0.3	9.8	0.2	0.3	11.7	0.3	0.7	15.9	0.3	1.2	19.7	0.3	1.1	16	0.8	0.3	16.4	0.4	0.3
0.4	0.8	10.7	0.5	0.9	13.8	0.8	0.4	10.2	0.5	0.5	11.7	1.2	0.9	16.2	1.6	1.7	19.6	1.1	1.7	15.4	2.4	1	17.8	1.4	0.5
2.7	3.4	10	1.8	5.4	10.2	1.9	3.2	8.8	3.5	3.7	11.6	2.7	5.8	13.2	5.1	5.8	18.9	5.1	5.2	15.3	7.2	5.7	19.2	6.8	7.5
2.9	2.5	10.4	2.5	1.8	10.9	2.4	2.4	8.9	3.8	2.2	13.2	3.9	2.9	14.1	6.4	2	23.3	5.3	2.2	18.3	10.7	2.8	27.1	5.8	2.8
1.2	0.1	11.4	1.7	0	12.6	1	0	9.9	1	0.2	14	2.1	0.3	15.9	3.9	0.2	27	1.6	0.2	19.7	1.7	0.2	28.6	1.8	0
0.2	0.3	11.4	0.6	0.1	13.1	0.3	0.3	9.9	0.3	0.2	14	0.6	0.2	16.3	0.9	0.3	27.6	0.5	0.2	20	0.8	0.4	29	0.5	0.4
0.8	1.1	11.1	1.2	0.8	13.4	0.8	0.8	9.9	1	1.9	13.1	1.2	1.1	16.4	1.7	3.8	25.4	1.5	2.4	19.1	2.5	2.3	29.1	1.1	1.6
0.2	0.2	11.2	0.2	0.1	13.5	0.2	0.4	9.7	0.9	0.4	13.6	0.7	0.6	16.5	1.8	0.8	26.4	0.6	0.7	19	0.6	1.1	28.6	0.9	0.1
0.8	1.5	10.5	0.3	0.6	13.3	0.6	1.3	9	0.9	2.2	12.3	1	1.2	16.3	2	1.2	27.2	0.8	0.9	18.8	1.8	1.1	29.3	0.8	0.6
0.8	0.3	10.9	0.4	0.5	13.2	0.7	0.4	9.3	0.5	0.4	12.4	1.1	0.3	17	1.6	0.7	28.1	2.3	0.8	20.3	3.5	1	31.8	1.8	0.4
0.1	0.2	10.8	0.2	0.6	12.8	0.2	0.2	9.3	0.2	0.3	12.4	0	0.5	16.5	0.2	1.2	27.1	0.1	0.7	19.7	0.4	0.6	31.6	0	0.3
0.1	0.2	10.8	0	0.2	12.6	0	0.1	9.3	0.2	0.1	12.5	0.2	0.3	16.4	0	0.2	26.9	0	0.2	19.5	0.2	0.3	31.6	0	0
1.1	0.7	11.1	1.1	1.3	12.4	1	0.4	9.8	0.9	0.9	12.5	1.1	0.7	16.8	2	0.9	28	1.6	0.9	20.2	3.1	1.3	33.4	1.5	0.6
0.9	1.7	10.3	1.2	1.2	12.4	0.7	2	8.5	1.3	1.3	12.5	1.6	2.2	16.1	3.1	3.1	28	1.4	2.5	19	1.4	3.2	31.7	1.1	2.9
1.5	0.8	11.1	0.9	0.3	13.1	0.6	0.7	8.4	0.7	1	12.2	1.2	1.1	16.2	0.8	2.6	26.2	0.6	2.3	17.3	1	3.7	29	0.9	2.9
0.3	0.7	10.8	0	0.5	12.6	0.3	0.8	7.9	0.7	0.7	12.3	0.4	1.2	15.4	0.8	1.8	25.2	1	1.6	16.7	1.3	2.8	27.5	0.3	2.5
1	3.2	8.5	1.6	3.2	11	1.1	2	7.1	1.8	3.2	10.9	2.1	3.7	13.7	2.8	5.4	22.6	1.8	4.3	14.3	2.2	6.5	23.2	1.4	4.1
0	0.3	8.3	0	0.2	10.8	0.1	0.4	6.7	0.1	0.5	10.5	0.1	1.1	12.7	0.1	1.2	21.4	0.1	0.9	13.6	0.1	1.4	21.9	0	1.1
0	0.4	7.8	0.1	0.3	10.7	0.1	0.3	6.5	0.1	0.7	9.9	0.1	0.9	11.9	0	4.1	17.3	0.1	1.2	12.5	0.1	1.7	20.3	0	1.3
0.1	0.8	7.1	0.3	0.6	10.3	0.1	0.6	6	0.2	1	9.1	0.3	1.2	11	0.1	2	15.4	0.1	0.8	11.8	0.2	2.7	17.8	0	2.5
0.1	0.7	6.6	0	0.6	9.8	0.1	0.9	5.2	0.1	1.3	7.9	0.3	1.1	10.3	0.4	2.3	13.6	0.2	2.1	9.9	0.2	4.3	13.7	0.3	2.1
0.1	0.7	6	0.2	0.9	9	0.1	0.5	4.8	0.2	1	7.1	0.3	0.8	9.7	0	0.8	12.8	0.1	0.8	9.1	0	2.3	11.5	0.1	1.8
0.1	1.4	4.7	0	1.3	7.8	0	1.3	3.5	0	1.6	5.5	0.2	2.2	7.7	0.3	2.6	10.6	0.2	1.9	7.4	0	2.7	8.8	0	2.6
0	1.4	3.3	0	2.1	5.7	0.1	0.8	2.8	0	0.9	4.7	0	1.2	6.5	0.1	4	6.7	0	2.6	4.9	0	3.3	5.5	0	2.1
0	3.2	0.1	0	5.7	0	0	2.8	0	0	4.6	0.1	0	6.4	0.1	0	6.3	0.3	0	4.8	0.1	0	5.5	0	0	5.9
		11.4			15.3			10.5			14			17			28.1			20.3			33.4		
33.5	33.7		36	36.4		28.6	28.7		38.1	38.1		47.6	47.4		68.4	68		54	53.7		68	67.9		59.6	59

8] {FA19}	15:17 (86.0)(B127) [9] {FA19}			15:32 (86.0)(B128) [51] {FA19}			15:47 (86.0)(B129) [11] {FA19}			16:02 (86.0)(B109) [53] {FA19}			16:17 (86.0)(B130) [7] {FA19}			16:34 (86.0)(B148) [12] {FA19}			16:51 (86.0)(B131) [11] {FA19}			17:08 (86.0)(B125) [6] {FA19}			17:25 (86.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
18.5	11.7	0	11.7	14.5	0	14.5	14.5	0	14.5	15.3	0	15.3	16.6	0	16.6	19.3	0	19.3	18	0	18	26.3	0	26.3	20.2
18.8	0.2	0.2	11.7	0.3	0	14.7	0.5	0	15	0.2	0	15.5	0.3	0	16.9	0.1	0	19.3	0.2	0	18.2	0.4	0	32	0.4
19.5	0	0	11.7	0.3	0.1	14.9	0.3	0	15.3	0.2	0	16	0	0	16.9	0.3	0	19.6	0.4	0.1	18.5	0.4	0	32.4	0.3
20.1	0.7	0.1	12.2	1.3	0.1	16.1	0.7	0	16	0.3	0.1	16.3	0.3	0	17.1	0.1	0	19.7	0.6	0.3	18.8	0.8	0	33.2	0.6
20.1	0.3	0.6	12	0.4	1	15.6	0.7	1.5	15.2	0.5	1	15.8	0.3	1	16.4	0.4	1	19.1	0.6	1.5	17.9	0.2	1.3	27	0.5
19.9	0.2	0.1	12.1	0.3	0.2	15.7	0.8	0.4	15.6	0.4	0.2	16	0.1	0.1	16.4	0.3	0.3	19.2	0.3	0.4	17.8	0	0.3	26.7	0.2
20	0.1	0.1	12.1	0.5	0.2	16.1	0.5	0.3	15.8	0	0.2	15.9	0	0.1	16.3	0	0.4	18.8	0	0.4	17.5	0.3	0.7	26.3	0.2
21	0.1	0.2	12	0.6	0.7	16.1	0.5	0.3	16.1	0.2	1.2	14.9	0.1	0.6	15.9	0.5	0.9	18.3	0.2	1.5	16.2	0.5	4.8	22	0.2
20.8	0	0	12	0	0.1	16.1	0.3	0.7	15.6	0.1	0.1	14.8	0	0.6	15.3	0.1	0.1	18.3	0.1	0.2	16.7	0.8	0.7	22.2	0.3
22.4	1	0.4	12.6	1.9	0.6	17.4	1.3	0.4	16.5	2.2	0.4	16.6	1.7	0.3	16.8	1.8	1.5	18.6	2.2	0.8	18.1	3.3	1.5	24.2	1.7
22.4	0.2	0.1	12.7	0.3	0.3	17.4	0.3	0.4	16.5	0.3	0.2	16.6	0.5	0.3	17	0.3	0.7	18.2	0.3	0.4	18	0	0.2	24	0.2
21.8	0.7	0.6	12.8	0.7	1	17.1	0.8	1.1	16.2	0.8	0.9	16.5	1.3	0.9	17	1.1	1	18.3	0.7	1.2	16.8	0.8	1.8	23	1.1
21.3	0.2	0.6	12.4	0.1	0.5	16.7	0.2	0.5	15.8	0.2	0.4	16.2	0.1	0.3	16.9	0.1	0.3	18	0.1	1.1	15.8	0.3	0.7	22.7	0.2
17.3	1	3.6	9.9	0.6	2.4	15	0.4	1.7	14.5	0.5	1.6	15.2	1.9	1.7	17	0.6	3.7	14.9	1.2	2.6	14.4	1.8	6.7	17.8	1.5
19.1	1.7	0.4	11.1	2.1	1.9	15.2	1.9	1.9	14.5	1.9	0.9	16.1	1.6	1.4	17.1	1.7	3	13.6	2.1	0.7	15.7	5	1.2	21.7	2.4
19	0.1	0.4	10.8	0.1	0.5	14.8	0.5	0.1	14.8	0.1	0.1	16.1	0.3	0.1	17.3	0	0.9	12.7	0.6	0.6	15.7	2.2	0	23.8	0.6
19.1	0.2	0	11	0.2	0.2	14.8	0.2	0.3	14.7	0.2	0.2	16.1	0.6	0.3	17.6	0.5	0.4	12.8	0.2	0.5	15.4	0	0	23.8	0.3
19.3	0.1	0.4	10.7	0.3	0.7	14.4	0.4	0.3	14.8	0.5	0.5	16.2	0.1	0.9	16.9	0.6	0.7	12.7	0.5	0.5	15.4	1	2.2	22.7	1.3
20.3	0.7	0.6	10.8	1.8	1.1	15	1	1	14.8	1.9	1.3	16.8	1.9	0.9	17.9	1.1	0.7	13.1	1.5	1	15.9	1.7	2.7	21.7	1.8
20.4	0.9	0.1	11.6	0.6	0.4	15.2	0.5	0.4	15	0.5	0.1	17.2	0	0.1	17.7	1	0.3	13.8	0.7	0.1	16.5	1.7	0.7	22.7	0.7
21.3	1.4	0.3	12.7	1.7	0.5	16.3	2.3	0.5	16.8	2.1	0.8	18.5	3.1	0.3	20.6	4.3	0.8	17.3	8.5	0.9	24.2	5.2	1.3	26.5	2.5
20.5	5.4	5	13.1	5.4	6.4	15.4	5.9	5.6	17.1	8.8	5.6	21.6	10.3	5.9	27.9	12.2	5.5	24	13.1	6.9	30.4	12	9	29.5	9.4
23.5	5.9	2	17	6.5	1.5	20.4	7.1	2	22.2	9.2	2	28.8	11.1	2.1	36.6	9.1	1.6	31.5	11.9	1.5	40.7	17.3	2.3	44.5	8.7
25.3	2.8	0	19.8	2.2	0.3	22.3	2.8	0	25	2.3	0.2	30.8	4.5	0.2	39	2.3	0.2	33.7	4.9	0	45.6	3.5	0.5	47.5	2.8
25.4	0.9	0.2	20.4	1.7	0.3	23.5	0.9	0.1	25.8	1.6	0.2	32.2	3.4	0.1	43.6	3.5	0.9	36.3	3.6	0.2	49.1	1.5	0.3	48.7	1.4
24.9	2.8	1.8	21.4	1.8	1.6	23.7	2.9	1.5	27.3	2.1	1.7	32.6	2.6	1.7	44.4	3.3	2.8	36.7	4.3	2.8	50.5	2.5	2.3	48.8	3.2
25.6	0.7	0.8	21.3	0.3	0.5	23.5	0.2	0.4	27.1	0.8	0.5	32.9	0.6	0.4	44.6	0.8	0.3	37.2	1.3	1.3	50.5	0.5	0.7	48.7	1
25.8	1.7	1.3	21.7	1.3	1.1	23.8	0.6	1	26.7	1.2	1.8	32.3	1.4	0.6	45.4	0.8	0.8	37.2	0.8	0.7	50.6	1.3	1.3	48.7	0.2
27.1	1.3	0.8	22.2	1.2	0.5	24.5	1	1.5	26.3	1	0.7	32.6	2	1	46.4	1.7	0.8	38	0.8	1	50.5	1	0.7	49	0.8
26.9	0.2	1.2	21.2	0.2	0.6	24	0.1	0.4	26	0.3	0.5	32.4	0.1	0.1	46.4	0.2	0.6	37.6	0.6	0.5	50.6	0	0.8	48.2	0.2
26.9	0	0.4	20.8	0	0.2	23.9	0	0.2	25.8	0.1	0.2	32.2	0.3	0.4	46.3	0.1	0.4	37.3	0.6	0.7	50.5	0.2	0.3	48	0.1
27.8	1	0.6	21.2	1.6	0.7	24.8	3.3	0.8	28.3	2.4	0.9	33.7	2.6	1.6	47.3	3.9	0.8	40.4	4.5	1.6	53.4	3.3	1.3	50	1.5
26	0.4	1.7	20	0.9	2.5	23.3	2.1	2.8	27.5	2.3	3.7	32.4	3.6	2.7	48.1	3.3	3.1	40.7	3.9	3.6	53.6	2.3	3.5	48.8	1.2
24	1.1	3.1	18	0.6	2	21.9	0.7	2.6	25.6	0.7	2.6	30.5	1.1	3	46.3	0.4	3.5	37.6	0.8	1.5	52.9	1.5	1.8	48.5	0.2
21.8	0.6	1.7	16.9	0.3	2.4	19.8	0.2	1.7	24.1	0.9	2.7	28.8	0.3	2.1	44.4	0.6	3.2	35	1.5	4.7	49.7	0.8	1.7	47.7	0.2
19	1.7	6.1	12.4	1.7	4	17.5	1	6.6	18.5	1.6	5.3	25	1.1	4.4	41.1	1.3	4.8	31.6	2.7	7.4	45.1	2.7	6.7	43.7	1.9
17.9	0.8	1.6	11.7	1.8	1.7	17.6	0.8	0.7	18.5	0.3	1.9	23.4	0.6	2.4	39.3	0.6	1	31.2	0.5	1.4	44.3	0.3	2.7	41.3	0.2
16.6	0	1	10.7	0.1	1.2	16.5	0.1	1.2	17.5	0	2	21.4	0	4.1	35.1	0.2	1.3	30	0.5	1.9	42.9	0.5	1.8	40	0.2
14.1	0	0.7	10	0.1	1.3	15.3	0	0.5	17	0.3	1.3	20.4	0.6	2.4	33.3	0.3	1.8	28.5	0	2.3	40.6	0.5	2.8	37.7	0
12.3	0.3	2	8.3	0.1	3.6	11.8	0.5	1.7	15.7	0.4	3	17.8	0.9	5.9	28.3	0.1	4	24.6	0.5	7.5	33.6	0.5	5.5	32.7	0.2
10.6	0	0.6	7.8	0.1	1.3	10.5	0.1	1.3	14.5	0	2.2	15.7	0.1	3.7	24.7	0	4.7	19.9	0	5.8	27.8	0.2	4	28.8	0.1
8	0	2	5.8	0	2	8.5	0.3	3	11.8	0.1	2.4	13.4	0	3.7	21	0.2	5.3	14.8	0.1	6.2	21.7	0	7.3	21.5	0.1
5.9	0.1	1.6	4.3	0	2	6.5	0	3	8.8	0	5.9	7.5	0	6.4	14.6	0	5	9.8	0	9.1	12.6	0	7.8	13.7	0
0	0	4.3	0	0	6.1	0.3	0	8.8	0	0	7.5	0	0	14.6	0	0	9.8	0.1	0	12.6	0	0	13	0.7	0
27.8			22.2			24.8			28.3			33.7			48.1			40.7			53.6			50	
	49.2	49.3		56.5	56.3		59.2	59.2		64.8	65		78	79.4		79.1	78.9		95.9	96		105.1	104.9		70.8

0)(B126) [17] {FA19}		17:43 (86.0)(B127) [9] {FA19}			18:01 (86.0)(B128) [51] {FA19}			18:19 (86.0)(B129) [12] {FA19}			18:41 (86.0)(B130) [19] {FA19}			19:08 (86.0)(B131) [39] {FA19}			19:36 (86.0)(B126) [30] {FA19}			20:04 (86.0)(B129) [12] {FA19}			20:32 (86.0)(B130) [19] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	20.2	28.3	0	28.3	23.6	0	23.6	18.2	0	18.2	15.7	0	15.8	15.2	0	15.2	15	0	15	12.8	0	12.8	10.2	0	10.2
0	20.5	1.7	0.1	29.9	0.9	0.1	24.5	0.7	0	18.8	0.6	0.1	16.4	1	0.1	16.2	0.7	0	15.7	0.5	0	13.3	0.2	0	10.4
0	20.8	0.9	0.1	30.7	0.6	0	25	0.5	0	19.3	0.5	0	16.8	0.6	0	16.7	0.3	0	16	0.3	0	13.7	0.4	0	10.8
0.1	21.4	0.7	0	31.3	0.6	0.3	25.3	0	0.4	18.9	0.5	0.3	17.1	0.4	0.1	17	0.1	0	16	0.1	0	13.8	0.2	0.3	10.8
1.8	20.1	0.6	1.2	30.7	0.4	0.8	25	0.3	1.1	18.2	0.3	1.2	16.2	0.3	1.3	16.1	0.2	1.8	14.5	0.2	0.8	13.1	0.4	0.7	10.5
0.5	19.7	0.1	0.9	29.9	0.2	0.4	24.7	0.3	0	18.4	0	0.2	16.1	0	0.3	15.8	0.2	0.2	14.5	0.2	0.2	13.1	0.2	0.1	10.6
0.4	19.5	0	0.9	29	0.2	0.4	24.5	0	0.3	18.1	0.2	0.4	15.8	0.2	0.3	15.6	0.2	0.4	14.3	0.3	0.2	13.3	0.1	0.1	10.7
1.5	18.2	0	2.3	26.7	0.2	2.3	22.4	0.1	0.4	17.8	0.1	1.1	14.7	0.1	1.1	14.6	0.2	0.8	13.7	0.2	0.6	12.8	0.1	0.8	10
0.1	18.2	0.2	0	26.9	0.1	0.3	22.2	0	0.2	17.6	0.1	0.2	14.7	0	0.2	14.4	0.1	0.3	13.5	0	0.3	12.5	0.1	0.2	9.9
0.3	19.6	1.1	0.7	27.3	1.1	1.4	22.3	0.7	0.5	17.8	1.2	0.8	15	0.9	0.8	14.5	1.2	0.7	14.1	1.1	0.9	12.7	1.1	0.4	10.6
0.6	19.2	1.1	2.3	26.1	0.4	0.6	21.6	0.4	0.8	17.4	0.2	0.4	14.8	0.3	0.5	14.3	0.2	0.3	14	0.3	0.5	12.4	0.1	0.4	10.3
0.5	19.9	0.9	0.9	26.1	0.9	1.8	20.8	0.8	1.3	17	0.4	0.6	14.7	0.9	0.5	14.7	0.8	1.1	13.6	1	1	12.4	0.3	1.3	9.4
0.4	19.8	0.2	0.2	26.1	0.2	0.6	20.4	0.5	0.3	17.3	0.3	0.6	14.3	0.2	0.4	14.4	0.1	0.1	13.5	0.3	0.3	12.5	0.1	0.4	9.1
2.9	18.4	1.1	4.4	22.8	1	2	19.5	0.9	1.7	16.5	1.2	2.5	12.9	0.9	2.1	13.3	0.7	1.7	12.5	0.3	1.8	11	0.5	1.7	7.8
1.1	19.6	2.6	1.7	23.7	2.2	1.6	20.2	1.6	1.1	17	2.3	1	14.2	1.3	0.9	13.7	1.9	0.8	13.7	2.3	0.3	12.9	1.5	0.4	8.9
0.4	19.8	0.2	0.2	23.7	0.3	0.6	19.8	0.3	0.4	16.8	0.2	0.6	13.8	0.1	0.5	13.3	0.3	0.4	13.6	0	0.8	12.2	0.1	0.6	8.4
0.2	19.9	0.8	1	23.4	0.4	0.5	19.7	0.7	0.3	17.2	0.4	0.3	13.8	0.1	0.3	13.2	0.2	0.3	13.5	0.1	0.3	12	0.5	0.1	8.8
1.9	19.3	1.1	1.2	23.3	1	1.5	19.2	0.8	1	16.9	0.6	0.4	14.1	0.8	1	12.9	0.7	1	13.2	1	0.4	12.6	1.1	0.5	9.5
1.3	19.8	2.6	1.9	24	1.2	1.1	19.3	1.3	1.3	17	1.2	0.9	14.3	1.3	1.7	12.5	1.1	0.8	13.5	1	0.8	12.8	0.9	0.5	9.9
0.9	19.6	0.3	1.1	23.2	0.8	0.5	19.5	0.6	0.7	16.9	0.8	0.4	14.7	0.2	0.4	12.3	0.1	0.6	13.1	0.1	0.3	12.6	0.1	0	9.9
0.8	21.2	4	0.6	26.7	2.3	0.7	21.1	2	0.8	18.2	2	0.2	16.6	2.4	0.6	14.1	2.4	0.5	15	1.3	0.6	13.3	1.2	0.1	11
6.9	23.7	12.1	6.9	31.9	7.5	5.1	23.5	7.3	4.4	21	7.9	3.5	21	6.8	3.1	18	6.1	3.3	17.8	5.6	2.3	16.7	6.5	2.5	15.1
2	30.4	10.6	3	39.4	9.5	1.9	31.3	8.1	2.3	26.8	12.1	2.8	30.3	8.7	1.6	25.2	9.3	1.8	25.3	9.7	1.7	24.7	5.9	0.8	20.2
0.1	33.1	4	0.3	43.1	3.4	0.1	34.6	2.9	0.3	29.3	3.4	0.2	33.5	2.9	0.1	28	2.9	0	28.2	2.6	0.3	26.9	3.2	0	23.3
0.2	34.4	1.7	0.9	43.9	0.9	0.4	34.7	0.9	0.5	29.8	0.8	0.3	34	0.6	0.2	28.4	0.3	0.2	28.4	0	0.3	26.7	0.3	0	23.6
1.7	35.9	3	2.4	44.4	2.6	3	34.3	2.1	1.9	29.9	1.9	3.7	32.2	2.1	1.7	28.8	1.8	1.8	28.4	1.6	1.9	26.3	1.1	2.2	22.5
0.6	36.3	0.4	1	43.9	0.3	0.6	34	0.7	0.4	30.2	0.2	0.6	31.8	0.4	0.8	28.4	0.5	0.6	28.6	0.8	0.5	26.6	0.2	0.5	22.2
0.6	35.8	0.4	0.9	43.4	1.1	1.9	33.3	0.8	0.5	30.4	0.8	1.6	30.9	0.9	1.4	27.9	0.8	1.3	28.1	0.3	0.8	26.2	0.2	1.4	21
0.8	35.8	0.9	1.1	43.2	0.7	1.1	32.9	2	0.7	31.8	0.5	0.8	30.7	0.6	0.6	28	0.6	0.6	28.1	0.8	1.6	25.4	0.3	0.8	20.5
0.6	35.3	0.1	1.8	41.6	0.1	1.2	31.8	0.1	1	30.8	0.3	0.6	30.4	0.2	0.7	27.5	0.4	0.9	27.6	0	0.8	24.7	1.3	1.8	19.9
0.1	35.2	0.1	0.4	41.2	0.1	0.1	31.8	0	0	30.8	0.1	0.2	30.3	0.1	0.2	27.4	0	0	27.3	0.1	0.1	24.7	0.2	0.3	19.8
1.3	35.5	1.7	0.7	42.2	2.4	0.9	33.3	2.4	1.8	31.5	1.8	1.1	31	0.6	1.2	26.8	1	1.2	27.2	1.3	0.9	25	0.7	0.6	19.8
1.7	35	2.1	2.9	41.4	1.6	2.6	32.3	0.6	2.3	29.8	0.9	3.5	28.5	1.1	2.4	25.5	0.7	2.4	25.5	0.6	2.3	23.3	2	1.7	20.2
1.7	33.5	0.3	2.6	39.2	0.4	2.5	30.2	0.5	3.3	27.1	0.6	3.1	26	0.8	2.8	23.5	0.4	2.4	23.6	0.7	1.9	22.1	0.2	0.8	19.6
2.5	31.2	1	3.6	36.7	0.5	2.8	27.8	0.1	1.4	25.8	0.1	2.3	23.8	0.2	2.2	21.5	0.2	2.3	21.5	0.1	1.8	20.4	0.1	2.2	17.5
7.3	25.8	2.6	8.1	31.1	1.5	5.7	23.7	0.7	4.7	21.8	1.1	4.9	19.9	1.1	4.1	18.5	1	4	18.4	0.3	2.8	17.9	0.7	2.5	15.8
3	23	0.1	2.9	28.3	0.1	1.2	22.6	0.1	1.3	20.6	0	1.9	18.1	0.1	1.2	17.3	0.1	1.1	17.5	0	2.4	15.5	0.1	1.5	14.4
1.1	22.1	0	1.9	26.4	0.1	2.1	20.6	0.1	2.3	18.3	0.1	2.4	15.7	0.1	1.7	15.6	0	1.3	16.2	0	1.7	13.8	0.1	1.2	13.3
2	20.1	0	1.4	25	0.2	1.2	19.5	0.1	0.9	17.5	0.1	1.1	14.7	0.1	1.4	14.3	0	1.5	14.7	0	1.1	12.8	0	0.6	12.6
3.2	17.1	0.1	4.4	20.7	0.2	3.1	16.6	0	3.2	14.3	0.2	3.7	11.2	0	3.8	10.5	0.1	3.5	11.2	0	1.8	10.9	0	2.1	10.6
2.8	14.4	0	3.2	17.4	0	2.7	13.9	0	3.7	10.7	0	2.2	9.1	0	1.4	9.2	0	1.7	9.5	0.1	1.5	9.5	0	2.1	8.5
4.9	9.5	0	5.8	11.7	0	2.8	11.1	0	3.6	7.1	0	2.4	6.6	0	2.9	6.3	0	3.3	6.2	0	2.8	6.8	0	2.8	5.6
4.4	5.1	0	4.8	6.9	0	4.5	6.6	0	3.7	3.4	0.1	3.5	3.2	0	3	3.3	0	3.5	2.7	0	3.7	3.1	0	3	2.6
5.1	0	0	6.9	0	0	6.6	0	0	3.4	0	0	3.1	0.1	0	3.1	0.2	0	2.7	0	0	3.1	0	0	2.6	0
	36.3			44.4			34.7			31.8			34			28.8			28.6			26.9			23.6
70.3		89.7	89.6		71.8	71.6		60.2	60.2		61.8	61.7		54.6	54.7		52.9	53.2		48	48.2		42.5	42.6	

21:15 (86.0)(B132) [34] {FA19}			22:00 (86.0)(B133) [2] {FA19}			22:45 (86.0)(B134) [32] {FA19}			23:25 (86.0)(B133) [3] {FA19}			24:05 (86.0)(B134) [33] {FA19}			Total		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
9.5	0	9.5	5.5	0	5.5	5.2	0	5.2	6.7	0	7	3.2	0	3.3	817.1	0	818.6
0.1	0	9.7	0	0	5.5	0	0	5.2	0	0	7	0.1	0	3.4	14.5	0.8	834.8
0.3	0	10	0	0	5.5	0.3	0	5.5	0	0	7	0	0	3.4	20.4	1.3	854.6
0	0.1	10	0	0	5.5	0.1	0.1	5.5	0.3	0	7.3	2.4	0	5.8	29.7	12.4	871.9
0.1	1	9.1	0	0	5.5	0	0.1	5.5	0	0.3	7	0	0	5.7	41.3	33.9	874
0.1	0	9.2	0	0	5.5	0	0	5.5	0	0.3	6.7	0	0	5.7	14.8	9.6	879.1
0.1	0.3	9.1	0	0	5.5	0	0	5.5	0	0	6.7	0	0	5.8	9.6	9.6	879.3
0.1	0.6	8.5	0	0	5.5	0.3	0.2	5.5	0	0	6.7	0	0.2	5.5	26.2	33.6	872.1
0.1	0.1	8.5	0	0	5.5	0	0	5.5	0	0	6.7	0	0.2	5.3	9.7	6.2	877
0.8	1	8.3	0	0	5.5	0	0.2	5.4	0	0.7	6	0	0.8	4.5	106.8	21.1	964.4
0.1	0.3	8	0	0	5.5	0.1	0.1	5.3	0	0.3	5.7	0	0.2	4.3	22.6	18.5	965.7
0.8	0.4	8.4	1.5	0	7	0.4	0.1	5.7	0	2.7	3	0	0.1	4.2	70.1	46.4	987.6
0	0.4	8.1	0	0	7	0.4	0.1	6	0.3	0.3	3	0	0.1	4.2	12.4	13	986.8
0.7	0.9	7.9	0	0.5	6.5	0.7	0.2	6.5	0.3	0	3.3	0.1	0.5	3.8	46.2	112.7	920.9
2	0.3	9.5	0	0.5	6	1.3	0.7	7.1	1	0	4.3	0.4	0.7	3.5	132.7	48.4	1004.7
0.1	0.1	9.4	0.5	0.5	6	0.1	0.3	6.9	0	0	4.3	0	0.1	3.4	25.1	30.3	999.2
0.1	0.1	9.4	0.5	0	6.5	0	0.1	6.8	0	0	4.3	0	0	3.4	29.5	7.7	1021
0.6	0.2	9.7	0	0	6.5	0.5	0.4	7	1	0	5.3	0.2	0	3.6	52.3	25.1	1048.4
0.8	0.3	10.2	0.5	0.5	6.5	0.5	0.5	6.9	0	0	5.3	0.2	0	3.8	89	50.9	1086.4
0.2	0.2	10.2	0	0	6.5	0.1	0.1	6.9	0.3	0	5.7	0.1	0	3.8	29.2	29.9	1085.8
1.6	0.1	11.7	0	0	6.5	0.3	0.1	7.2	0.3	0	6	0.1	0.9	3	70.2	68.7	1087.4
11.6	2.1	21.2	7.5	1.5	12.5	3.7	1.1	9.8	3	0	9	1.2	0.8	3.5	270.2	350.5	1010.7
8.2	1	28.4	11.5	1.5	22.5	4.5	1.3	13	5.7	0.3	14.3	2.9	0.2	6.2	319.8	175.3	1154.6
2.2	0.2	30.4	0.5	0	23	1	0.1	14	1.7	0	16	1.2	0	7.4	96.1	10.7	1238.2
0.7	0.2	30.9	0	1	22	0.1	0.5	13.5	0	0	16	0	0	7.4	32.5	43.5	1227.8
1.9	1.2	31.6	0.5	1.5	21	0.5	0.7	13.3	1.7	0	17.7	0.2	0.5	7.2	72.3	89.9	1209.4
0.1	0.5	31.2	0	0.5	20.5	0.2	0.3	13.1	0.3	1	17	0.1	0.1	7.2	26	28.6	1207
0.3	0.9	30.7	0.5	0.5	20.5	0.7	0.8	13	0.7	0	17.7	0	0.2	7	38.1	63.9	1181.5
0.3	0.8	30.2	0	0	20.5	0.4	0.2	13.3	0	0	17.7	0	0.1	6.9	53.5	27.5	1207.5
0.3	1.5	29	0	2.5	18	0	0.8	12.5	0	1.3	16.3	0	0.6	6.3	20.3	35.3	1192.4
0.1	0.2	28.8	0	0	18	0	0	12.5	0	0	16.3	0	0.2	6.1	5.2	18.1	1179.3
2	0.6	30.2	2	0.5	19.5	0.4	0.5	12.3	0.3	0	16.7	0.3	0.5	5.9	86.8	43.7	1222.5
1.1	3.3	28	0.5	2.5	17.5	0.1	1.2	11.3	0	1.3	15.3	0	0.2	5.7	71.8	169.7	1125.7
0.4	3.1	25.3	0	4	13.5	0.1	1.7	9.7	0	1	14.3	0	0.6	5.1	73	75.8	1123.5
0.1	2.9	22.5	0	0.5	13	0.1	0.7	9	0	3	11.3	0.1	0.5	4.7	31.2	86.5	1068.7
0.4	3.1	19.8	0	3	10	0	1.5	7.5	1	2.7	9.7	0	1.1	3.6	78.1	233.9	912.8
0	1.3	18.5	0	0.5	9.5	0	0.8	6.8	0	1	8.7	0	0.4	3.2	19.5	53.7	878.6
0.1	2	16.6	0	0.5	9	0	1.1	5.7	0	2.3	6.3	0	0.6	2.6	13.2	55	837
0	1.5	15	0	1	8	0	0.3	5.3	0	0.7	5.7	0	0.4	2.2	21.8	58.5	799.7
0	3.3	11.8	0	1.5	6.5	0	1.4	4	0	2.3	3.3	0	0.7	1.5	34.1	103	731.2
0	1.7	10.1	0	0	6.5	0	0.6	3.4	0	0.3	3	0	0.2	1.3	10.8	85.5	656.1
0	3.3	6.8	0.5	2	5	0	1.1	2.3	0	1	2	0	0.6	0.7	7.7	124.6	539.4
0	3.4	3.4	0	2.5	2.5	0	1.5	0.9	0	0	2	0	0.5	0.2	0.8	135.5	405
0	3.4	0	0	2.5	0	0	0.8	0.1	0	2	0	0	0.2	0	0	399.4	7.9
		31.6			23			14			17.7			7.4			1238.2
48	47.9		32	32		22.1	22.3		24.6	24.8		12.8	13		3052.2	3048.2	

Massachusetts Bay Transportation Authority
Route 86
Weekday - Outbound
Fall 2019
(Urban Transportation Associates)

	05:39 (86.0)(B117) [17] {FA19}			06:01 (86.0)(B119) [44] {FA19}			06:23 (86.0)(B121) [2] {FA19}			06:43 (86.0)(B123) [43] {FA19}			06:56 (86.0)(B124) [27] {FA19}			07:08 (86.0)(B117) [16] {FA19}			07:20 (86.0)(B118) [1	
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
1 - 21917 - RESERVOIR BUSWAY	3.3	0	3.7	2.7	0	3.1	3.5	0	3.5	4.4	0	4.8	4.3	0	4.9	3.5	0	4.1	4.8	0
2 - 1027 - CHESTNUT HILL AVE @ ENGLEWOOD	1.2	0	4.9	2.2	0	5.3	3.5	0	7	5	0	9.7	3.7	0.3	8.3	5.2	0.1	9.2	4.5	0
3 - 1029 - CHESTNUT HILL AVE @ COMMONWEA	0.4	0	5.4	1.6	0	6.9	1	0	8	1.1	0.1	10.8	0.8	0	9.1	1.4	0	10.6	1.5	0
4 - 1030 - CHESTNUT HILL AVE @ STRATHMOR	0.8	0	6.1	1.4	0	8.2	1	0	9	0.9	0	11.7	1.2	0	10.3	3.9	0	14.6	4	0.2
5 - 1031 - CHESTNUT HILL AVE @ CHISWICK	1.2	0	7.3	2.9	0	11.1	2	0	11	1.2	0	12.8	1.6	0	11.9	2.5	0.1	17	3.6	0.1
6 - 1032 - CHESTNUT HILL AVE OPP WILTSHI	0.7	0	8	1.1	0	12.2	5.5	0	16.5	0.6	0	13.3	0.7	0	12.6	1.6	0.1	18.6	2.8	0.1
7 - 1033 - CHESTNUT HILL AVE @ WALLINGFO	1.5	0	9.5	1	0	13.1	3	0	19.5	1.1	0	14.5	0.9	0	13.4	2	0.1	20.5	1	0.2
8 - 1034 - CHESTNUT HILL AVE @ UNION ST	0.6	0.1	10.1	1.8	0	14.9	0	0	19.5	1.2	0	15.7	2.1	0	15.5	2.5	0.1	22.9	2.6	0.1
9 - 1026 - CHESTNUT HILL AVE @ VERONICA	0	0.2	9.8	0.7	0.5	15.1	3	0	22.5	1.6	0.1	17.1	1.7	0.5	16.7	3.2	0.4	25.6	3	0.2
10 - 1035 - MARKET ST @ WASHINGTON ST	1.6	0.6	10.9	1.1	0.2	16	2.5	1.5	23.5	3.1	0.2	20	3.1	0.3	19.6	3.4	0.9	28.1	3.2	0.8
11 - 1036 - MARKET ST @ SPARHAWK ST	0.9	0	11.8	1.7	0.3	17.5	2	0	25.5	1.5	0.1	21.4	1.4	0.1	20.8	1.1	0.6	28.6	3.5	0.5
12 - 1038 - MARKET ST @ GARDENA ST	1.8	0.1	13.5	3.4	0	20.8	5.5	0	31	7.3	0	28.7	4.1	0.1	24.7	3.7	0.1	32.3	4.8	0.4
13 - 1039 - MARKET ST @ N BEACON ST	1	0.1	14.4	1.5	0.1	22.3	2	1	32	2.7	0.3	31	2	0.3	26.4	2.8	0.4	34.6	2.7	0.4
14 - 1040 - MARKET ST @ GUEST ST	1.6	0.2	15.9	0.6	0.6	22.3	1.5	0	33.5	1.5	0.3	32.2	0.9	0.3	27.1	1.1	0.5	35.2	0.6	0.9
15 - 1041 - MARKET ST @ CENTOLA ST	0.1	0	15.9	0.1	0.3	22.1	0	0	33.5	0.6	0.1	32.7	0.2	0.1	27.1	0.4	0.1	35.4	0.5	0.5
16 - 1042 - MARKET ST @ LOTHROP ST	0	0	15.9	0	0	22.1	0	0	33.5	0	0	32.7	0	0	27.2	0.4	0	35.9	0.8	0.3
17 - 1043 - WESTERN AVE @ MACKIN ST	0.3	0.6	15.6	2.5	1.9	22.7	6	1.5	38	2	4	30.7	2.1	1.1	28.1	2.2	1.6	36.5	1.5	2.1
18 - 1045 - 450 WESTERN AVE	0.1	0.1	15.6	0	0	22.7	0.5	0	38.5	0.9	0	31.6	0.8	0.1	28.7	1.6	0	38.1	0.6	0.1
19 - 1046 - WESTERN AVE @ LITCHFIELD ST	1.8	0.3	17.1	4.5	0.3	27	2.5	0	41	2.8	0.1	34.3	3.4	0.1	32.1	4.9	0.3	42.8	2.7	0.4
20 - 1049 - WESTERN AVE @ EVERETT ST	3.8	0.3	20.6	3.2	0.6	29.5	2.5	0	43.5	1.9	0.4	35.8	2.3	0.2	34.3	2.3	1.2	43.9	1.8	0.9
21 - 1589 - WESTERN AVE @ RIVERDALE ST	0.6	0.2	21	0.6	0.8	29.4	1	0	44.5	1.3	0.3	36.7	2.3	0.6	36	1.5	0.4	45	2.2	0.5
22 - 2561 - N HARVARD ST @ WESTERN AVE	0.6	0.6	21.1	2	1	30.4	8.5	0.5	52.5	2.8	0.2	39.3	2.4	0.1	38.3	4	0.6	48.4	1.6	0.2
23 - 2564 - N HARVARD ST OPP HARVARD STAD	0.1	1	20.1	0.2	1.4	29.2	0	0	52.5	0.8	0.5	39.6	0.5	0.7	38.1	0.1	0.7	47.9	0.2	1.9
24 - 2565 - 16 ELIOT ST	0.2	2	18.3	0	4	25.2	0.5	6.5	46.5	0.5	5.5	34.6	0.3	4.8	33.6	0.7	7.1	41.4	0.5	5.5
25 - 20762 - HARVARD BUSWAY	0.6	9.7	9.2	1.3	13.6	13	3	22.5	27	5.6	20.6	19.6	3.1	19.8	17	5.6	25.1	21.9	4.1	28
26 - 2567 - QUINCY ST @ KIRKLAND ST	0	0.5	8.7	0.1	2	11	0	0	27	0.4	1.5	18.5	0.7	0.9	16.7	0.7	1.4	21.2	0.4	1.1
27 - 2568 - KIRKLAND ST @ SUMNER RD	0.1	0	8.8	0.1	0	11.1	1.5	0	28.5	0.1	0.3	18.3	0	0.7	16.1	0	0.4	20.8	0.1	0.2
28 - 2569 - KIRKLAND ST @ TROWBRIDGE ST	0.1	0.1	8.8	0.4	0	11.4	0	0	28.5	0.1	0.1	18.3	0.2	0.1	16.1	0.4	0.5	20.8	0	0.5
29 - 2570 - WASHINGTON ST @ BEACON ST	0.1	0.1	8.8	0.2	0	11.6	0.5	0	29	0.5	0.8	18.1	0.6	1.1	15.7	1.6	1.9	20.4	1.1	1.8
30 - 2571 - WASHINGTON ST @ CALVIN ST	0.4	0.1	9.1	1	0.1	12.5	3.5	0	32.5	2.2	0.2	20.1	2.1	0.6	17.3	2.1	0.4	22.1	1.6	0.1
31 - 25711 - WASHINGTON ST @ PERRY ST	0.2	0.1	9.2	0.9	0	13.4	0	1	31.5	1.3	0.2	21.1	0.6	0.2	17.7	0.6	0.2	22.6	1.2	0.2
32 - 25712 - WASHINGTON ST @ PARKER ST	0.4	0.1	9.5	0	0	13.4	0	0	31.5	0.3	0.1	21.4	0.6	0.1	18.1	0.4	0.1	22.9	0.8	0.1
33 - 25713 - WASHINGTON ST @ KINGMAN RD	0.7	0.2	10	0.8	0.7	13.6	4	1	34.5	3.4	1	23.7	2.3	0.8	19.7	2.1	0.6	24.4	2.1	0.4
34 - 2597 - SOMERVILLE AVE @ PROSPECT ST	0	0	10	0.1	0.3	13.3	0	0	34.5	1	0.1	24.7	0.6	0.1	20.3	0.8	0.1	25.2	1.3	0.1
35 - 2773 - WASHINGTON ST @ MERRIAM ST	0.1	0.1	10	0.6	0.1	13.9	0	1	33.5	1.1	0.6	25.2	1.5	0.3	21.4	1.6	0.9	25.9	2.2	0.3
36 - 2774 - WASHINGTON ST @ MCGRATH HWY	0.2	0	10.2	0.7	0.1	14.5	0.5	0	34	1.6	0.1	26.7	1.3	0.4	22.3	1.5	0	27.4	0.8	0.2
37 - 2659 - MCGRATH HWY @ ALSTON ST	0.1	0	10.3	0	0	14.5	0.5	0.5	34	0.2	0.2	26.6	0.4	0.3	22.4	0.1	0.3	27.3	0.4	0.2
38 - 2392 - CROSS ST @ ALSTON ST	0.7	0.2	10.8	2.3	0.5	16.4	1	2.5	32.5	1.4	0.8	27.4	1.3	0.7	23.1	1.6	0.7	29.2	0.5	1.1
39 - 2776 - WASHINGTON ST @ NEW WASHINGTO	0.1	0.1	10.8	0	0.3	16.2	0	0	32.5	0.4	0.7	26.8	0.7	0.1	23.6	0.3	0.1	28.3	0.2	0.8
40 - 2778 - WASHINGTON ST OPP MYRTLE ST	0.4	0.1	11.1	0.4	0.8	15.8	1	0.5	33	1.6	0.9	27.6	1.3	0.7	24.2	2.4	0.2	30.5	0.5	0.2
41 - 2777 - WASHINGTON ST @ INNER BELT RD	0	0.3	10.8	0.1	0.2	15.7	0	0.5	32.5	0.3	0.7	27.2	0	0.6	23.6	0.1	0.9	29.6	0	0.3
42 - 2779 - CAMBRIDGE ST @ CARTER ST	0	0	10.8	0	0	15.7	0	0	32.5	0	1.2	26	0	0.3	23.3	0.1	0.4	29.4	0	2.5
43 - 29001 - SULLIVAN STATION BUSWAY - BER	0	10.5	0.2	0	15.4	0.3	0	32	0.5	0	26	0.1	0	23.2	0.1	0	29.4	0	0	18.8
Maximum			21.1			30.4			52.5			39.6			38.3			48.4		
Total	28.4	28.6		45.8	46.1		73	72.5		68.3	68.3		60.1	60.7		78	79		72.3	73.2

L3] {FA19}	07:32 (86.0)(B135) [56] {FA19}			07:44 (86.0)(B119) [44] {FA19}			07:56 (86.0)(B136) [26] {FA19}			08:08 (86.0)(B120) [10] {FA19}			08:20 (86.0)(B121) [2] {FA19}			08:32 (86.0)(B122) [12] {FA19}			08:44 (86.0)(B123) [38] {FA19}			09:00 (86.0)(B124) [24] {FA19}			09:16 (86.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
5.1	5.9	0	6	6.4	0	6.4	8.4	0	8.5	7	0	7	5	0	5	5.2	0	5.7	8.4	0	8.7	5.7	0	5.8	4.8
9.6	6.4	0.1	12.3	7.7	0	14.1	8.3	0.1	16.8	8.9	0	15.9	5	0	10	5.8	0	11.4	5.8	0	14.7	5	0	10.8	5.7
11.2	3.1	0.1	15.3	3.6	0	17.7	3.8	0	20.6	4.5	0	20.4	3.5	0	13.5	2	0	13.4	2.8	0.1	17.4	2.1	0.1	12.8	2.7
15	3	0.1	18.3	4	0	21.6	4.5	0	25	4.4	0.2	24.6	2.5	0	16	3.2	0.1	16.5	2.5	0	19.9	1.9	0	14.8	2.8
18.5	4.3	0.2	22.4	5.3	0.2	26.7	6	0.6	30.5	4.3	0.2	28.7	4	0	20	3.8	0.2	20.2	3.8	0.2	23.5	2.6	0.2	17.2	3.7
21.2	1.2	0.1	23.5	1.4	0.1	28	1.1	0.1	31.5	1.6	0	30.3	0.5	0	20.5	1.6	0.1	21.7	1.7	0.1	25.1	1.3	0	18.4	1.7
22.1	2.2	0.3	25.4	3	0.2	30.8	2.9	0.2	34.2	1.6	0	31.9	2	0	22.5	1.9	0.2	23.4	1.6	0.2	26.5	1.4	0.1	19.7	1.9
24.6	3.4	0.1	28.7	2.9	0.2	33.5	3.4	0.1	37.5	4	0.1	35.8	3	0	25.5	1.5	0.1	24.8	2.6	0.2	28.8	1.1	0	20.8	1.1
27.5	4.4	0.5	32.6	5	0.9	37.6	3.8	1.5	39.7	3.3	1.4	37.7	4	0	29.5	3.3	1.8	26.3	3.1	1.1	30.9	2.4	0.7	22.4	2.7
29.8	4.9	0.7	36.9	6.3	0.7	43.2	6.2	0.5	45.3	4.2	0.7	41.2	3	0	32.5	5.2	0.4	31	4.6	0.8	34.8	3.5	1.1	24.9	4.5
32.8	5.3	0.9	41.2	4.3	0.4	47	3.9	0.2	49	3.8	0.1	44.9	4	0	36.5	2.8	0.3	33.4	1.8	0.3	36.3	2.3	0.3	26.8	2.6
37.2	4.6	0.2	45.5	3.8	0.1	50.7	3.7	0	52.7	2.9	0.1	47.7	4.5	0.5	40.5	1.3	0	34.8	1.8	0.3	37.8	1.5	0.2	28.2	2.6
39.5	2.3	0.3	47.6	2.4	0.3	52.8	2	0.4	54.2	2.2	1.2	48.7	3.5	0.5	43.5	1.8	0.4	36.1	1.7	0.2	39.3	1.9	0.5	29.6	1.5
39.2	0.6	0.5	47.7	0.5	0.5	52.8	0.7	0.7	54.2	1	1.1	48.6	1	1	43.5	0.9	1.4	35.6	1.2	2.3	38.1	0.8	1.9	28.5	1.5
39.3	0.5	0.6	47.6	0.3	0.3	52.8	0.4	0.5	54.1	0.2	0.3	48.5	0	0.5	43	0.3	0.8	35	0.3	0.7	37.7	0.2	0.5	28.2	0.1
39.8	0.4	0.2	47.8	0.3	0	53	0.1	0.1	54.1	0.1	0	48.6	0	0	43	0.1	0	35.1	0.1	0.3	37.5	0	0.1	28.1	0
39.3	2.7	1.7	48.8	2.5	2.1	53.5	4	2.7	55.3	2.6	2.6	48.6	1	1.5	42.5	3.4	1.8	36.8	1.7	2.8	36.4	1.5	1.6	28.1	1.3
39.8	0.8	0	49.5	0.5	0.1	53.8	0.8	0.2	55.9	1.3	0.1	49.8	1	0.5	43	0.2	0.3	36.7	0.3	0.2	36.5	0.4	0	28.4	0.1
42.2	3.6	0.3	52.8	3.4	0.3	57	2.4	0.2	58.2	4.1	0.7	53.2	2	1	44	2.3	0.5	38.4	2.2	0.6	38.1	1.3	0.5	29.2	1.9
43	2.1	1.6	53.2	3.2	2.8	57.3	2.8	1.5	59.5	1.4	0.3	54.3	1.5	0	45.5	1.9	0.4	39.9	1.4	1	38.5	2.1	0.5	30.8	1.5
44.7	1.8	0.6	54.3	2.3	0.9	58.7	2.2	0.7	61	2.4	0.3	56.4	3.5	1	48	0.8	0.2	40.5	0.9	0.7	38.7	1.1	0.5	31.3	0.8
46.1	2.8	0.8	56.3	2.3	0.7	60.3	2.3	0.4	62.8	1.3	0.4	57.3	3	0	51	1.4	0.3	41.7	2.6	0.4	41	2.2	0.3	33.2	2.2
44.4	0.6	2	54.9	0.9	2.3	59	0.8	2.2	61.4	0.5	1.8	56	0	0	51	0.1	1.6	40.2	0.2	0.7	40.4	0.1	0.8	32.5	0.1
39.5	1	8.9	47	1.4	14	46.4	1.8	13.7	49.5	1.6	16.8	40.8	0	11.5	39.5	0.4	9.8	30.8	0.7	8.3	32.8	0.6	5.5	27.5	0.3
15.5	5.5	30.3	22.3	3.7	26.4	23.7	4.3	31.7	22.2	3.6	23.2	21.2	4.5	26	18	3.2	17	16.9	4.1	16	20.9	2.9	14.8	15.6	2.1
14.8	0.7	2.3	20.6	0.5	3.2	21	0.5	5.7	17	0.8	7.6	14.4	1	5.5	13.5	0.5	3.9	13.5	0.6	4.1	17.4	0.5	4.4	11.7	0.4
14.8	0.2	0.1	20.7	0.1	0	21	0.2	0.1	17	0.2	0	14.6	0	0.5	13	0	0.3	13.2	0.2	0.2	17.4	0.1	0.3	11.5	0
14.2	0.5	0.5	20.8	0.6	0.3	21.3	0.5	0.6	16.9	0.4	0.3	14.7	0	0	13	0.3	0.2	13.3	0.4	0.3	17.6	0.2	0.2	11.5	0.4
13.5	2.1	2.7	20.1	1	2.2	20.1	1.1	1.2	16.8	1.5	0.9	15.3	1	3.5	10.5	1.5	1.3	13.6	1.4	1.3	17.7	0.7	1.6	10.6	1
15.1	2.6	0.6	22.1	1.8	0.4	21.5	2.3	0.4	18.8	2.3	0.8	16.8	2.5	0.5	12.5	1.2	0.6	14.2	1	0.4	18.2	1.1	0.3	11.4	0.7
16.1	1.8	0	23.9	1.4	0	22.9	1	0	19.8	0.7	0	17.5	0	0	12.5	0.6	0	14.8	0.6	0.3	18.6	0.5	0.3	11.6	0.3
16.8	2.5	0.1	26.3	0.7	0.1	23.5	0.4	0.2	20	0.2	0.2	17.5	0.5	1	12	0.3	0.3	14.8	0.4	0.1	18.8	0.1	0.3	11.4	0
18.5	2.7	0.5	28.4	1.4	1.8	23.1	1.3	1.2	20.2	1.9	1.5	17.9	0	0	12	0.8	2.3	13.3	1.3	2.3	17.8	0.5	1.9	10	0.5
19.8	1.2	0.2	29.4	1.2	0.2	24.1	0.8	0.5	20.5	0.2	0.2	17.9	0	0	12	0.6	0.5	13.4	0.4	0.3	17.9	0.2	0.3	9.8	0.8
21.6	2.6	0.6	31.3	1.2	0.6	24.7	1.3	0.1	21.7	1.4	0.5	18.8	0.5	0	12.5	0.9	0.7	13.7	1	0.7	18.1	0.7	0.3	10.2	0.4
22.3	2	0.9	32.4	0.8	0.5	25	0.9	0.6	22	1.2	0	20	0	0	12.5	0.4	0.2	13.9	0.4	0.4	18.2	0.5	0.4	10.3	0.7
22.5	0.4	0.3	32.5	0.1	0.2	24.9	0.2	0.1	22.2	0.9	0.2	20.7	0	0	12.5	0.3	0.3	14	0.2	0.1	18.2	0.2	0.1	10.4	0
21.8	1.5	1.7	32.7	0.7	0.9	25	0.6	0.4	22.3	0.5	0	21.2	0.5	0	13	0.3	0.1	14.2	0.3	0.3	18.2	0.3	0.3	10.5	0.3
21.4	0.8	0.3	32.9	0.8	0.4	25.3	0.5	0.1	22.6	0.4	0.3	21.3	0	0	13	0.3	0.3	14.3	0.4	0.1	18.5	0.2	0.1	10.4	0.3
21.7	0.9	0.4	33.3	0.3	0.2	25.1	1.6	0.5	23.8	0.8	0.5	21.6	0	0	13	0.3	0.1	14.4	0.5	0.6	18.4	0.5	0.5	10.3	0.1
21.4	0.1	1	32.4	0	1	24.2	0.1	1.5	22.4	0.1	1.2	20.5	0	1	12	0	0.6	13.8	0.1	0.3	18.2	0.1	0.1	10.3	0.1
18.8	0	2.6	29.8	0	1.5	22.6	0	2.8	19.6	0	3.4	17.1	0	2	10	0	3.5	10.3	0	4.8	13.5	0	2.1	8.1	0
0	0	29.8	0	0	22.6	0	0	19.6	0	0	17.1	0	0	10	0	0	10.3	0	0	13.1	0.4	0	8.1	0	0
46.1			56.3			60.3			62.8			57.3			51			41.7			41			33.2	
	96	95.7		90	89.6		93.9	93.9		86.3	86.3		68	68		62.7	63.2		67.1	67.2		52.3	51.8		56.2

0)(B117) [15] {FA19}		09:35 (86.0)(B118) [11] {FA19}			09:57 (86.0)(B119) [42] {FA19}			10:20 (86.0)(B029) [56] {FA19}			10:45 (86.0)(B123) [40] {FA19}			11:20 (86.0)(B189) [17] {FA19}			11:55 (86.0)(B137) [10] {FA19}			12:30 (86.0)(B138) [54] {FA19}			13:05 (86.0)(B139) [57] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	5	4.7	0	4.7	5.6	0	5.6	3.8	0	3.9	4.6	0	6	2.8	0	3	4.9	0	4.9	4.5	0	4.6	4.8	0	5
0	10.7	2.6	0	7.4	3.4	0	8.3	3.3	0	7.1	2.9	0.1	9.7	1.9	0	4.9	2.9	0.1	7.7	2.3	0	6.9	3.2	0.1	8.1
0.1	13.3	2.7	0.2	9.9	2	0.1	10.2	1.6	0	8.7	1.3	0.2	10.8	1.8	0	6.7	1.2	0	8.9	2.1	0.4	8.9	1.9	0.2	9.7
0	16.1	0.7	0.1	10.5	1	0	11.2	1.5	0.1	10.2	2.3	0	12.6	1.5	0	8.2	1.3	0	10.2	1.2	0	9.7	1.3	0.1	10.9
0.3	19.5	1.5	0.3	11.8	3.9	0.3	14.8	2.5	0.1	12.6	1.5	0.2	13.9	1.9	0.2	9.9	1.2	0.4	11	2.1	0.5	11.3	1.7	0.3	12.4
0.3	20.9	0.8	0.1	12.5	1.4	0.2	16	1.1	0.2	13.4	2	0.2	15.7	1.9	0.2	11.6	1.7	0.4	12.3	2	0.4	12.9	1.7	0.2	13.9
0.1	22.7	1.1	0	13.6	0.9	0.3	16.6	0.8	0.1	14.1	1.2	0.1	16.9	1	0	12.6	1.6	0.2	13.7	0.7	0	13.6	0.9	0.2	14.6
0	23.8	0.9	0.1	14.5	1.1	0.1	17.6	0.8	0.1	14.8	0.7	0.1	17.5	0.9	0	13.6	0.3	0.2	13.8	0.7	0.1	14.2	0.8	0.1	15.4
0.9	25.5	2.5	0.7	16.3	2.3	1.1	18.7	1.5	0.5	15.9	2.6	0.7	19.4	1.6	0.5	14.6	1.9	0.9	14.8	1.5	0.9	14.8	1.6	1.1	15.9
0.9	29.1	2.7	0.3	18.7	3.1	1.2	20.6	3.9	0.6	19.2	3.4	0.6	22.2	3.8	0.9	17.6	3.9	1.3	17.4	3.9	0.9	17.8	4.5	0.8	19.7
0.1	31.6	1.8	0.3	20.3	2.3	0.3	22.6	2.2	0	21.4	1.9	0.2	23.9	2.4	0.2	19.8	2.3	0.1	19.6	2	0.2	19.6	2.4	0.8	21.2
0.2	34	4.3	0.1	24.5	1.9	0.2	24.3	2.2	0.1	23.5	2.1	0.5	25.5	1.6	0.4	21.1	1.9	0.9	20.6	1.7	0.5	20.8	1.6	0.9	21.9
0.5	35.1	1.8	0.3	26	1.8	0.3	25.8	1.6	0.3	24.9	1.8	0.4	26.9	1.9	0.6	22.4	1.8	0.8	21.6	1.6	0.6	21.9	1.7	0.6	23
1.7	34.9	1	0.8	26.2	1	1	25.7	0.7	0.8	24.8	1	0.6	27.3	1.2	0.5	23.1	1.3	0.4	22.5	1.5	0.6	22.8	1.8	0.6	24.1
0.3	34.7	0.1	0.1	26.2	0.5	0.3	25.9	0.1	0.3	24.6	0.1	0.5	27	0.2	0.1	23.2	0.2	0.2	22.5	0	0.3	22.6	0.1	0.3	23.8
0	34.7	0.5	0.2	26.5	0.2	0	26	0.1	0.2	24.5	0.1	0.1	26.9	0	0	23.2	0.1	0.6	22	0.1	0.1	22.5	0.1	0.2	23.8
2	34	1.6	0.9	27.3	1.1	1.1	26.1	1	1.1	24.5	1	1.2	26.7	1.2	0.8	23.7	1	1.8	21.2	0.6	1.5	21.7	1	3	21.8
0	34.1	0	0	27.3	0.3	0.1	26.3	0.1	0.1	24.6	0.5	0.1	27.1	0.1	0.1	23.7	0.5	0	21.7	0.4	0.1	22	0.6	0.3	22.1
0.5	35.5	2.3	0.5	29.1	1.1	0.3	27.1	1.9	0.9	25.5	1.6	0.6	28	2	0.8	24.9	1.3	0.9	22.1	1.3	0.5	22.8	1.4	0.9	22.6
1.1	35.9	1.6	0.4	30.4	1.5	0.6	28.1	1.5	0.7	26.3	1.5	0.7	28.9	1.7	0.9	25.7	1.5	0.5	23.1	1.9	1.5	23.1	1.5	1	23.1
0.3	36.5	1	0.5	30.8	1.1	0.3	28.9	0.8	0.5	26.6	0.9	0.3	29.5	0.7	0.5	25.9	1.5	0.7	23.9	1.2	0.9	23.4	0.6	0.2	23.6
0.5	38.1	0.8	1.1	30.5	2.4	0.6	30.6	1.6	0.8	27.4	1.8	0.7	30.6	1.7	0.7	26.9	2.6	1.1	25.4	2.4	0.7	25.2	2.2	1	24.8
0.6	37.6	0	0.6	29.9	0.2	0.8	30	0.5	0.9	26.9	0.1	0.6	30.1	0.6	0.5	27	0.5	0.5	25.4	0.3	0.6	24.9	0.6	0.4	25
7.5	30.4	0.4	6.4	23.9	0.5	7.2	23.4	0.5	6.1	21.4	0.8	6.3	24.6	1.5	5.9	22.6	1	5.1	21.3	1	6.4	19.4	1.8	5.7	21.1
15.9	16.5	2.3	12.5	13.7	2.6	12.4	13.8	2.5	10.9	13	3.8	11.3	17.1	4.1	12.9	13.7	4.9	8.9	17.3	5.9	9.9	15.4	6.3	10.1	17.5
4.8	12.1	0.2	4.5	9.5	0.3	3.2	10.9	0.4	2.6	10.9	0.7	3.2	14.6	1.1	2.6	12.2	0.8	1.4	16.7	0.9	1.4	14.9	1.9	1.2	18.2
0.2	11.9	0	0	9.5	0.1	0.1	10.9	0.1	0.1	10.8	0.2	0.1	14.7	0.1	0.2	12.1	0.3	0.1	16.9	0.1	0	15	0.5	0.1	18.6
0.2	12.1	0	0	9.5	0.4	0.2	11	0.3	0.3	10.9	0.4	1.1	14	0.1	0.1	12	0.2	0.4	16.7	0.3	0.1	15.3	0.4	0.6	18.4
1.4	11.7	1.5	0.7	10.3	0.5	1.1	10.5	0.4	0.7	10.6	0.5	1	13.5	0.4	0.9	11.5	0.7	1.6	15.8	0.6	0.9	15	0.6	0.7	18.3
0.9	11.5	1.1	0.2	11.2	0.7	0.7	10.5	0.5	0.6	10.5	0.6	0.8	13.2	0.6	0.2	11.9	1.1	0.6	16.3	0.5	0.6	14.9	1.3	1.2	18.4
0.3	11.5	0.2	0	11.4	0.2	0	10.6	0.2	0	10.7	0.2	0.3	13.1	0.2	0.1	12.1	0.7	0	17	0.1	0.2	14.9	0.2	0.7	17.9
0.1	11.4	0	0	11.4	0	0	10.6	0.1	0.1	10.7	0.1	1	12.2	0.2	0.1	12.2	0	0.1	16.9	0.1	0.1	14.9	0.1	0.2	17.8
1.4	10.5	0.6	0.3	11.7	0.4	1.7	9.3	0.4	1.6	9.4	1	1.5	11.8	0.8	1.2	11.8	1.1	3.2	14.8	0.8	2.6	13.2	1.5	2.6	16.7
0.2	11.1	0.9	0.3	12.4	0.2	0.3	9.1	0.6	0.4	9.6	0.6	0.3	12.1	0.6	0.9	11.5	0.5	1.4	13.9	1.5	0.6	14	1.3	0.7	17.2
0.3	11.2	0.5	0.4	12.5	0.8	0.6	9.3	0.6	0.4	9.8	0.8	0.7	12.1	0.6	0.4	11.8	1.8	0.4	15.3	2.7	0.6	16.1	2.4	0.5	19.1
0.6	11.3	0.8	1.1	12.2	0.6	0.5	9.5	0.6	0.5	9.9	0.6	0.5	12.3	0.6	0.5	11.9	0.3	0.7	14.9	1	0.5	16.6	1.4	0.5	19.9
0.1	11.1	0.5	0.1	12.6	0.1	0.2	9.4	0.2	0.2	9.9	0.3	0.5	12.1	0.2	0.1	12.1	0.6	0.5	15	0.7	0.2	17.1	0.8	0.5	20.2
0.1	11.5	0.8	0.3	13.2	0.2	0.2	9.2	0.2	0.5	9.7	0.5	0.5	12.1	0.2	0.4	11.9	0.2	0.8	14.4	0.5	1.1	16.9	0.1	1.3	19.1
0	11.6	0.4	0.1	13.5	0.1	0	9.6	0.1	0.3	9.5	0.1	0.1	12.1	0.1	0.4	11.6	0.2	0.5	14.1	0.3	2.1	14.8	0.2	0.4	18.9
0.4	11.3	1.1	0.5	14	0.4	0.3	9.7	1.9	0.4	10.9	0.5	0.5	12.1	0.6	1.1	11.2	0.8	0.9	14	0.8	0.9	14.7	0.6	1.4	18.1
0.5	10.9	0.2	0.2	14	0.1	0.2	9.5	0.2	0.1	10.9	0.1	0.4	11.8	0.2	1.2	10.2	0.5	0.6	13.9	0.2	1.5	13.4	0.1	1.4	16.8
2.5	8.5	0	1.7	12.3	0	0.8	8.7	0	0.6	10.4	0	0.5	11.3	0	0.2	9.9	0	1.5	12.4	0	0.3	13	0.1	0.6	16.2
8.5	0	0	12.3	0	0	8.7	0	0	10.4	0	0	10	1.3	0	9.9	0	0	12.4	0	0	12.9	0.4	0	16.1	0.1
	38.1			30.8			30.6			27.4			30.6			27			25.4			25.2			25
56.3		48.5	49.2		48.3	47.6		44.9	45.2		48.7	49.3		46.6	47.2		53.1	53.1		54	54.2		59.6	59.8	

Trip (RouteVar)(Block) [Observations]

13:25 (86.0)(B141) [65] {FA19}			13:45 (86.0)(B142) [12] {FA19}			14:05 (86.0)(B143) [37] {FA19}			14:20 (86.0)(B144) [42] {FA19}			14:50 (86.0)(B145) [22] {FA19}			15:10 (86.0)(B146) [8] {FA19}			15:28 (86.0)(B141) [62] {FA19}			15:50 (86.0)(B140) [21] {FA19}			16:07 (86.0)(B147) [1	
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off
3.8	0	3.9	4.6	0	4.6	4.9	0	4.9	6	0	6.1	9.3	0	9.3	5.8	0	6.1	8.3	0	8.3	10.2	0	10.2	7.8	0
2.4	0	6.4	1.6	0	6.2	2	0.1	6.8	1.7	0.1	7.7	2.7	0	12	3	0	9.1	2.5	0	10.8	3	0	13.2	2	0
1	0.1	7.2	1	0.4	6.8	1.2	0.6	7.5	0.9	0.2	8.4	1.6	0.1	13.5	1.4	0.3	10.3	1.6	0.2	12.3	1.3	0.2	14.4	0.7	0
0.8	0	8	1.2	0	7.9	1.1	0	8.6	2.2	0	10.5	1	0.1	14.3	1	0.1	11.1	1.5	0.1	13.7	0.8	0.1	15.1	1.4	0.2
1.2	0.3	9	0.8	0.7	8.1	1.3	0.3	9.6	1.3	0.2	11.6	1.1	0.5	15	0.4	0.5	11	0.6	0.6	13.8	0.8	0.6	15.3	1.5	0.6
1.1	0.1	10	0.7	0.2	8.6	1.3	0.2	10.7	1.2	0	12.8	2.2	0.6	16.6	0.6	0.4	11.3	1.3	0.5	14.5	1.1	0.6	15.8	1.3	0.3
0.3	0	10.2	0.6	0	9.2	0.7	0.1	11.3	0.4	0	13.2	0.9	0	17.5	1.3	0	12.5	0.5	0	14.9	0.4	0.4	15.8	0.3	0.1
0.6	0	10.8	0.8	0	9.9	0.2	0.1	11.5	0.3	0.2	13.3	0.8	0.2	18.1	1.6	0.1	14	0.5	0.2	15.2	0.2	0.3	15.8	0.2	0
1	0.8	11	0.9	0.8	10	1.2	0.9	11.8	1.4	0.5	14.1	2.5	1.6	19	1.9	1	14.9	3	1.1	17.2	1.8	1.2	16.4	1.4	1.7
3	0.6	13.4	3.2	0.7	12.5	3.1	0.6	14.3	2.6	0.9	15.8	5.5	2	22.6	8.5	1.5	21.9	10.2	1.2	26.1	6	1.1	21.3	3.7	1.1
1.2	0.3	14.3	1	0.4	13.1	1.9	0.2	15.9	1	0.2	16.7	2.5	0.2	25	2.5	0.1	24.3	1.4	0.4	27.2	2.8	0.3	23.8	2.2	0.9
0.9	0.4	14.9	0.5	0.3	13.3	0.9	0.6	16.2	0.7	0.4	17	1.8	0.9	25.9	1	1.1	24.1	1	1.9	26.3	0.9	2.2	22.5	1	0.5
1	0.5	15.4	0.6	0.3	13.7	1.4	0.4	17.2	0.5	0.3	17.2	1.9	1.3	26.5	2.1	0.8	25.5	3.4	2	27.8	2.4	1.3	23.6	1.4	0.3
1.1	0.4	16.1	1.2	1	13.8	1.7	0.4	18.5	2.8	0.3	19.7	5	0.6	30.9	4.6	1	29.1	5.9	0.9	32.8	5	0.3	28.3	4.2	0.3
0	0.1	16.1	0	0.1	13.8	0	0.2	18.3	0.2	0.1	19.8	3.2	0.9	33.2	0.5	0	29.6	0.2	0.2	32.7	0.2	0.6	27.9	0.1	0.1
0.1	0.2	15.9	0.1	0.2	13.7	0	0.2	18.1	0	0.2	19.6	0.5	0.4	33.3	0.1	0.4	29.4	0.2	0.1	32.7	0.4	0.1	28.2	0.3	0.4
1	1.4	15.5	0.8	1.4	13	1	1.1	18	1.5	0.9	20.2	2.8	3.7	32.4	1.5	1.3	29.6	1.6	2.3	32	3.3	1.3	30.2	1.8	1
0.3	0.1	15.7	0.7	0.3	13.3	0.6	0.1	18.5	0.6	0	20.8	1	0.3	33.1	0.9	0.3	30.3	0.7	0.2	32.5	0.8	0.2	30.8	0.5	0
0.8	0.4	16	3.2	0.2	16.3	0.8	0.6	18.6	1	2.8	19.1	0.8	1.8	32.1	2.3	1.3	31.3	0.9	3.4	29.9	1.2	1.8	30.2	0.9	1.2
1.4	0.5	16.9	1.4	0.7	17.1	2.1	0.8	19.9	1.9	0.6	20.4	5.9	1.9	36.1	4.4	2.5	33.1	3	2.1	30.8	5.4	1.3	34.3	3.1	0.8
0.5	0.5	17	0.5	0.4	17.2	0.7	0.4	20.1	0.5	0.4	20.4	0.8	1	36	0.9	0.6	33.4	1	1.9	29.9	1.1	1.1	34.3	1.9	0.4
1.1	0.6	17.4	1.5	0.7	18	2.1	0.4	21.8	1.6	0.6	21.4	2.2	0.7	37.5	2.9	1.5	34.8	2.6	0.8	31.7	2.7	1	36	2.1	1
0.5	0.3	17.6	1	0.6	18.4	0.3	0.1	21.9	1.4	0.1	22.7	1.3	0.5	38.2	1.4	0.6	35.5	2.6	0.2	34.1	3	0.6	38.5	3.3	0.1
0.9	3.8	14.7	1.5	3.5	16.4	1.5	4.8	18.6	0.6	4.1	19.2	2	2.8	37.4	4.6	7.1	33	1.8	4.7	31.2	2.4	5	35.8	1.6	3.9
4.6	7.5	11.8	4.4	9.2	11.7	6	8.5	16.1	5.3	9.9	14.6	11.8	19.2	29.9	9.4	13.1	29.3	9	14.8	25.5	11.2	15.8	31.3	11.5	11.6
1.3	0.8	12.3	0.9	0.8	11.8	1.6	1	16.7	1.5	1.7	14.4	4.6	0.9	33.6	2.5	0.3	31.5	2	0.6	26.9	4.5	0.8	35	2.7	1.9
0.1	0.1	12.2	0.5	0.3	12	0.2	0.1	16.9	0.2	0	14.6	0.3	0.3	33.7	0	0	31.5	0.5	0.1	27.3	0.7	0.2	35.5	0.3	0
0.5	0.3	12.4	0.8	0.3	12.6	0.8	0.6	17.1	0.6	0.2	15	1.4	0.1	35	0.8	0	32.3	0.8	0.3	27.8	0.6	0.4	35.8	0.4	0.1
0.2	0.5	12.2	0.4	0.5	12.5	1.6	0.7	17.9	0.6	0.6	15	1.8	1.8	34.9	2.3	0.8	33.8	1.3	1	28.1	1.7	2	35.5	1.6	2
0.6	0.5	12.2	1.3	0.3	13.4	0.4	0.4	18	0.5	0.8	14.6	1	1.6	34.3	1.3	0.9	34.1	0.8	1	27.9	0.5	1.7	34.3	0.8	1.3
0.2	0.2	12.1	0	0.3	13.2	0.2	0.1	18.1	0.1	0.1	14.6	0.1	0.4	34	0	0.4	33.8	0	0.5	27.4	0.1	0.6	33.9	0.4	0.1
0.2	0.4	11.8	1	0.4	13.8	4.6	0.1	22.6	1.4	0	15.9	0.6	0.1	34.5	0.4	0.3	33.9	1.1	0.2	28.4	0.3	0.2	34	0.1	0.8
1	1.8	11	0.8	1.7	12.8	2.3	3	21.9	1.7	2.3	15.3	2.3	4.5	32.3	0.4	4.3	30	1	2.9	26.4	1.8	4.1	31.7	1.8	2.9
1	0.2	11.8	1.3	0.2	13.9	1.1	0.4	22.6	1.5	0.4	16.5	3.1	0.9	34.6	1.3	0.9	30.4	1.1	0.5	27.1	1	1	31.7	1.6	0.7
1.2	0.5	12.4	1	0.4	14.5	2	0.6	24	0.7	0.5	16.6	2.9	0.6	36.9	1	0.6	30.8	1.6	0.5	28.2	1.9	0.9	32.7	1.4	0.7
0.5	0.3	12.6	0.4	0.3	14.7	0.8	1.9	22.9	0.8	0.7	16.7	2	0.6	38.3	1.3	0.5	31.5	1.3	0.5	29	1.4	1.4	32.7	2.5	0.7
0.3	0.2	12.8	0.3	0.3	14.7	0.7	0.4	23.2	0.4	0.5	16.6	0.8	0.2	38.9	0.3	0.5	31.3	0.7	0.4	29.4	0.9	0.1	33.5	1.7	0.8
0.1	1	12	0.3	1	13.9	0.2	1.9	21.4	0.2	1.1	15.6	0.2	2.4	36.6	0	1.6	29.6	0.3	1.8	27.8	0.2	2.5	31.3	0	2
0.1	0.3	11.8	0.4	0.3	14	0.3	1.1	20.8	0.2	0.5	15.7	0.5	1.7	35.5	0	0.8	28.9	0.2	0.7	27.3	0.1	1	30.5	0.2	1.4
0.3	0.6	11.4	0.9	1.7	13.3	0.7	1.7	19.8	0.2	1.2	14.5	0.3	1.4	34.4	0.4	1.1	28.1	0.5	1	26.8	0.5	2.4	28.6	0.2	1.1
0.2	0.3	11.3	0.4	0.9	12.8	0.3	0.7	19.5	0.2	0.5	14.2	0	1.1	33.3	0.1	1.3	27	0.3	1.2	25.8	0	0.9	27.7	0.4	0.6
0	0.3	11	0	0.1	12.7	0.1	0.5	19.1	0	0.3	14	0.1	0.6	32.8	0	0.9	26.1	0	0.6	25.2	0	0.7	25.8	0.1	1
0	11	0	0	12.7	0	0	19.1	0	0	14	0	0	32.8	0	0	26.1	0	0	25.2	0	0	26.1	0	0	27.8
		17.6			18.4			24			22.7			38.9			35.5			34.1			38.5		
38.4	38.2		44.5	44.6		55.9	56		48.4	48.4		93.1	93.3		76.7	76.9		78.8	78.8		84.6	84.4		72.4	72.4

ł0] {FA19}	16:25 (86.0)(B127) [9] {FA19}			16:43 (86.0)(B128) [51] {FA19}			17:01 (86.0)(B129) [12] {FA19}			17:19 (86.0)(B109) [55] {FA19}			17:37 (86.0)(B130) [19] {FA19}			17:55 (86.0)(B148) [17] {FA19}			18:13 (86.0)(B131) [40] {FA19}			18:28 (86.0)(B125) [16] {FA19}			18:41 (86.
Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On
7.8	9.4	0	9.4	12.7	0	12.7	13.3	0	13.3	12.5	0	12.5	14.8	0	14.8	13.2	0	13.4	12.3	0	13.7	10.5	0	10.5	6.3
9.8	2.4	0	11.9	2.1	0.1	14.8	3.7	0.1	16.9	4.3	0.2	16.6	2.7	0.1	15.4	3.2	0	16.6	3	0.3	16.6	3.1	0.1	13.6	2.9
10.5	1	0.4	12.4	1.6	0.4	16	1.4	0.2	18.2	1.1	0.6	17.5	1.1	0.3	16.2	1.1	0.6	17.1	1.2	0.4	18.2	1.9	0.2	15.3	0.8
11.7	2.8	0.4	14.8	1.9	0.3	17.6	1.7	0.2	19.7	4.1	0.3	21.3	1.2	1.3	16.1	1.6	0.2	18.5	1.7	0.4	19.5	0.9	0.4	15.8	1.2
12.6	1.1	1.1	14.8	0.9	0.9	17.5	1.3	1.6	19.4	1.2	0.8	21.6	0.9	0.9	16.1	1.9	1.2	19.1	1.3	1.5	19.4	0.9	1.6	15.1	0.7
13.6	0.4	0.3	14.9	0.8	0.7	17.6	1.2	0.5	20.1	1.1	0.8	22	0.7	0.6	16.2	0.6	0.6	19.2	0.7	1	19.1	0.3	0.4	14.9	0.4
13.8	0.2	0.2	14.9	0.2	0.2	17.6	0.5	0.3	20.3	0.4	0.3	22.1	0.3	0.8	15.7	0.2	0.5	18.9	0.5	0.6	19	0.4	0.4	14.9	0.3
14	0.4	0.2	15.1	0.7	1	17.3	0.6	0.5	20.3	0.8	0.6	22.3	0.4	0.5	15.6	0.9	1	18.9	0.7	0.6	19.1	0.6	0.5	14.9	0.4
13.7	1.8	0.3	16.6	1.2	0.8	17.6	1.1	1	20.4	1.3	1	22.6	1.4	0.8	16.1	1.1	0.6	19.4	1.4	0.5	19.9	0.6	0.5	15.1	0.8
16.3	3.8	1.4	18.9	4.5	1	21.1	3.7	0.8	23.3	5.3	1.2	26.7	4.2	1.1	19.3	4	1.8	21.6	4.9	1.5	23.3	2.3	2.1	15.3	1.7
17.6	1.4	1.3	19	1.3	0.9	21.5	1.1	0.5	23.8	1.6	1.9	26.3	0.7	0.8	19.1	1.3	0.9	22	1.5	0.6	24.3	0.8	0.4	15.7	0.7
18.1	2.1	0.7	20.4	0.6	1.3	20.9	1.6	1	24.4	1.3	1.9	25.7	0.3	1.5	17.9	0.4	1.8	20.6	1	1.5	23.8	1.4	1.2	15.9	0.4
19.2	1.6	1.1	20.9	2.3	1	22.2	1.8	1.5	24.8	1.5	1.9	25.3	0.3	1.2	17	1.2	1.1	20.6	1	0.7	24.2	0.3	0.5	15.7	0.9
23.1	5.9	0.7	26.1	6.1	0.8	27.5	11.2	1	34.9	7.2	0.6	31.9	2.8	0.6	19.2	4.9	0.6	24.9	5.2	0.7	28.7	3.9	0.6	18.9	2.1
23.1	0.2	0.1	26.2	0.3	0.1	27.6	0.9	0.7	35.2	0.5	0.5	31.9	0	0.5	18.7	0.2	0.7	24.4	0	0.5	28.2	0.1	0.6	18.4	0
23	0	0.2	26	0.1	0.2	27.5	0	0.1	35.1	0.3	0.4	31.8	0.2	0.7	18.2	0.1	0.4	24.1	0.1	0.2	28.1	0.1	0	18.5	0
23.8	1.3	1.4	25.9	1.4	1.9	27	2.3	1.7	35.7	2.5	1.9	32.3	1.2	1.1	18.2	1.2	0.8	24.5	1.1	1	28.1	0.8	0.9	18.4	0.5
24.3	1.2	0.1	27	1.5	1	27.5	2.1	0.8	36.9	2	0.5	33.9	1.1	0.6	18.6	2	0.5	26.1	0.9	0.3	28.7	1.2	0.1	19.4	0.3
24	1.3	1.8	26.6	0.9	0.9	27.6	0.8	1.3	36.4	1.9	0.9	34.8	1.4	0.7	19.3	1.2	0.6	26.7	0.6	1.2	28.1	0.3	1.3	18.5	0.6
26.3	4.2	1.2	29.6	3.6	1.3	29.9	2.9	2.1	37.3	3.3	1.1	37	1.6	1.4	19.5	3.2	0.9	28.9	2.5	0.8	29.8	1.4	0.6	19.3	0.9
27.8	1.7	0.2	31	3	0.4	32.5	1.8	0.5	38.5	1.2	0.9	37.3	0.5	0.5	19.5	1.6	0.5	30.1	0.8	1.1	29.6	0.8	1.4	18.7	0.8
28.9	2.7	0.6	33.1	3.5	0.6	35.3	6.8	0.3	44.9	3.9	1.2	40.1	2.3	0.7	21.1	2.9	0.5	32.5	2.1	1.2	30.5	2.6	0.6	20.7	1.8
32.1	4.8	0.6	37.3	3.2	0.3	38.3	2.7	0.8	46.8	2	0.4	41.6	1.7	0.2	22.6	1.9	0.3	34.1	1.3	0.2	31.6	0.9	0.3	21.3	0.6
29.8	3.1	5.9	34.6	1.9	4.7	35.5	2.2	6.8	42.2	2.5	7.1	37.1	1.8	4.8	19.6	1	4.2	30.9	1	5.3	27.3	1.2	3.7	18.8	0.4
29.7	12.7	13.7	33.6	18.3	16.4	37.4	16.3	14.8	43.8	16.3	17.5	35.9	9.5	7.9	22.9	13.1	14.1	29.9	11.1	11.2	27.2	10.3	8.4	20.7	6.4
30.5	7	0.7	39.9	7.2	1.4	43.4	6.4	1.3	48.9	4.2	0.9	39.2	1.7	0.7	23.9	2.4	0.9	31.4	2.7	0.7	29.2	1.9	0.3	22.3	2.2
30.8	0.9	0	40.8	0.9	0.2	44.2	0.4	0.2	49.2	0.7	0.2	39.7	0.4	0.2	24.2	0.4	0.2	31.5	0.3	0	29.5	0.4	0.1	22.6	0.1
31.1	0.3	0.3	40.8	1	0.5	44.7	0.7	0.2	49.7	0.6	0.7	39.6	0.3	0.4	24	0.6	0.5	31.6	0.3	0.2	29.2	0.2	0.4	22.4	0.1
30.7	3	2	41.8	2.1	1.7	45.1	2.4	1.3	50.8	3.2	2.2	40.6	1.4	1.9	23.6	1.1	2.9	29.9	1.1	2.3	28.4	1.5	1.6	22.4	0.6
30.2	1.1	1	41.9	1.1	1.9	44.3	1.7	2.3	50.2	1	2.7	39	0.8	2.9	21.5	1.1	2.5	28.4	0.5	2.5	26.3	0.6	2.3	20.7	0.2
30.5	0.7	0.8	41.8	0.9	0.9	44.3	0.2	0.7	49.7	0.4	1.1	38.3	0.2	1	20.7	0.1	0.8	27.6	0.2	0.7	25.8	0.1	0.5	20.3	0
29.8	0.3	0.7	41.4	0.5	0.7	44	0.5	0.5	49.7	0.3	0.4	38.3	0.3	0.5	20.4	0.1	0.8	26.9	0	0.7	25.2	0.1	0.3	20	0
28.7	0.7	7.1	35	1.7	5.5	40.3	1	6.9	43.8	0.8	5.7	33.3	0.4	3.3	17.6	0.3	5	22.2	0.6	5.2	20.6	0.4	4.8	15.6	0.2
29.6	1.1	0.9	35.2	1.5	2.5	39.3	1.3	1.7	43.3	0.9	1.2	33.1	0.3	0.6	17.3	1.1	1.2	22.2	0.9	0.9	20.5	0.3	0.9	15.1	0.6
30.3	1	1.1	35.1	1.3	1.2	39.4	0.8	1.1	43.1	1.3	1.3	33	0.8	0.6	17.5	0.6	0.9	21.8	1	0.7	20.9	0.3	1.1	14.3	0.3
32.1	1.4	2.2	34.3	0.9	1.2	39.2	0.6	1.4	42.3	0.8	0.8	33	0.7	0.9	17.3	0.4	0.6	21.6	0.5	0.9	20.5	0.5	0.6	14.2	0.4
33	1.3	0.4	35.2	0.7	0.4	39.5	1.3	0.5	43	0.6	0.2	33.3	0.1	0.5	16.9	0.3	0.2	21.6	0.1	0.4	20.1	0.2	0.2	14.2	0.2
31	0.2	3	32.4	0.3	3.5	36.5	0.2	4.6	38.6	0.3	4.4	29.2	0.1	1.7	15.9	0.1	3.3	18.4	0.2	3	17.3	0.1	2.6	11.6	0.2
29.8	0.7	1.4	31.7	0.4	1.4	35.4	0.1	1.7	37	0.1	1.5	27.9	0.1	0.5	14.9	0.1	0.5	18	0.2	1.2	16.4	0.3	0.9	10.9	0
28.9	0	2	29.7	0.4	2	33.7	0.3	1.9	35.3	0.2	1.3	26.8	0	0.8	14.2	0.2	1.2	17.1	0	1.1	15.3	0	1.2	9.8	0.1
28.7	0	1.1	28.6	0.1	1.2	32.6	0.1	0.9	34.5	0	1.4	25.4	0	1.1	13.1	0	2.2	14.9	0.1	1.3	14	0.1	0.6	9.3	0.1
27.8	0	2.1	26.4	0	0.7	31.9	0.1	1.4	33.2	0	0.4	25	0	0.8	12.3	0	0.9	13.9	0	0.7	13.3	0.1	0.4	8.9	0
0	0	26.4	0	0	31.6	0.3	0	33.2	0	0	24.9	0.1	0	12.3	0.1	0	13.9	0	0	12.9	0.4	0	8.9	0	0
33			41.9			45.1			50.8			41.6			24.2			34.1			31.6			22.6	
	87.2	87.1		95.6	95.7		101.1	100.9		95.5	95.8		60.7	60.3		72.9	72.9		66.6	68.7		54.7	54.5		37.2

0)(B126) [32] {FA19}		18:54 (86.0)(B127) [9] {FA19}			19:06 (86.0)(B128) [49] {FA19}			19:18 (86.0)(B129) [12] {FA19}			19:37 (86.0)(B130) [19] {FA19}			20:00 (86.0)(B131) [40] {FA19}			20:27 (86.0)(B126) [31] {FA19}			20:55 (86.0)(B129) [13] {FA19}			21:25 (86.0)(B130) [19] {FA19}		
Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
0	6.5	4.2	0	4.2	6.6	0	6.6	5.6	0	5.6	3.7	0	3.7	3.9	0	3.9	5.1	0	5.1	4.3	0	4.3	4.7	0	4.7
0.1	9.3	1.2	0	5.4	1.3	0	7.8	1.6	0	7.2	2.3	0	6	1.9	0	5.8	2	0.1	7	1.3	0	5.6	1.6	0	6.4
0.2	9.9	0.6	0.6	5.4	1.1	0.2	8.7	0.9	0.2	7.9	0.9	0.2	6.8	1.1	0.1	6.8	0.7	0.2	7.6	0.4	0.1	5.9	0.2	0.2	6.4
0.4	10.6	0.9	0.1	6.2	0.9	0.2	9.4	0.8	0.2	8.6	0.9	0.1	7.6	0.6	0.2	7.1	1.2	0.1	8.6	0.5	0.1	6.3	0.6	0.2	6.8
0.9	10.4	0.4	0.7	6	0.7	0.9	9.2	0.5	0.6	8.5	0.7	0.3	8.1	0.9	0.2	7.8	0.8	0.2	9.3	0.3	0	6.6	0.8	0.1	7.5
0.4	10.4	0.3	1.2	5.1	0.4	0.5	9.1	0.3	0.5	8.3	0.2	0.2	8.1	0.2	0.3	7.7	0.2	0.5	9	1.1	0.6	7.1	0.4	0.4	7.5
0.3	10.4	0	0.1	5	0.4	0.2	9.2	0.2	0.3	8.3	0.3	0.1	8.4	0.2	0.1	7.8	0.4	0.2	9.3	0.2	0.1	7.2	0.1	0.1	7.5
0.1	10.7	0.3	0.2	5.1	0.4	0.2	9.4	0.1	0.2	8.2	0.2	0.2	8.4	0.2	0.2	7.8	0.3	0.2	9.4	0.1	0.1	7.2	0.6	0	8.1
0.5	11	0.3	0.1	5.3	0.5	0.4	9.5	0.3	0.4	8	0.2	0.4	8.2	0.3	0.3	7.7	0.3	0.1	9.5	0.3	0.1	7.4	0.1	0.1	8.2
0.9	12	2.2	0.3	7.2	2.1	0.3	11.2	2.5	0.3	10.3	2.3	0.6	9.9	2.3	0.5	9.6	2.2	0.7	11	0.6	0.2	7.8	3.3	0.4	11
0.7	12	1.1	0	8.3	0.6	0.6	11.2	0.2	0.3	10.2	1	0.1	10.8	0.3	0.2	9.6	0.9	0.3	11.5	0.7	0.5	8	0.2	0.5	10.7
0.9	11.5	0.8	0.2	8.9	0.7	0.6	11.4	0.7	0.4	10.4	0.5	0.8	10.5	0.3	0.7	9.3	0.3	0.7	11.2	0.2	0.4	7.8	0.1	0.3	10.5
0.4	12.1	0.8	0.9	8.8	0.5	0.5	11.4	0	0.6	9.8	0.5	0.2	10.9	0.6	0.3	9.6	1	0.6	11.6	0.8	0.2	8.5	0.6	0.7	10.4
0.2	13.9	1.9	0.2	10.4	1.8	0.3	12.8	1.2	0.3	10.8	1	0.3	11.6	1.2	0.6	10.5	1	0.3	12.3	1.1	0.2	9.5	1	0.1	11.3
0.2	13.7	0.3	0	10.8	0	0.1	12.8	0	0	10.8	0	0.1	11.5	0	0.1	10.4	0	0.1	12.2	0	0.1	9.4	0	0	11.3
0	13.7	0	0.1	10.7	0	0.4	12.4	0	0.3	10.4	0	0.1	11.4	0	0.1	10.3	0	0.2	12	0	0.2	9.2	0	0	11.3
0.6	13.6	0.4	0.6	10.6	0.3	1	11.7	0.8	1.3	9.8	0.4	0.6	11.2	0.4	0.9	9.9	0.2	0.6	11.6	0.2	0.5	8.8	0.2	0.5	11
0.2	13.7	0.8	0.1	11.2	0.3	0.1	11.9	0.1	0.1	9.8	0.2	0.3	11.1	0.1	0	9.9	0.1	0.1	11.5	0.2	0	9.1	0.4	0	11.4
0.7	13.3	0.6	0.4	11.3	0.9	0.5	12.3	0.2	0	10	0.3	0.1	11.3	0.8	0.2	10.6	0.3	0.2	11.6	0.2	0.4	8.9	1.1	0.2	12.2
0.3	13.9	0.8	0	12.1	0.9	0.6	12.6	0.4	0.3	10.2	1.1	0.8	11.5	1	0.4	11.1	1.2	0.2	12.6	1.4	0.1	10.2	1.7	0.5	13.4
0.4	14.3	0.6	0.1	12.6	0.4	0.7	12.3	0.3	0.6	9.9	0.8	0.6	11.7	0.8	0.4	11.6	0.5	0.4	12.7	0.8	0.2	10.9	0.8	0.3	13.9
0.2	15.9	1.6	0.2	13.9	1.3	0.3	13.3	1.8	0.5	11.3	2	0.3	13.5	1.5	0.5	12.5	2	0.3	14.5	0.8	0.3	11.4	0.7	0.2	14.5
0.2	16.3	0.2	0.1	14	0.5	0.1	13.7	0.1	0.2	11.2	0.4	0	13.9	0.5	0.1	12.9	1	0	15.4	0.8	0.2	12	0.6	0	15.1
2.9	13.8	2.3	2.2	14.1	0.5	2.7	11.5	0.2	2	9.3	0.3	1.6	12.6	0.5	1.4	12.1	0.7	2.4	13.8	0.5	1.6	10.8	1.2	1	15.3
5.8	14.4	7.7	5	16.8	6.4	4.4	13.5	9.3	3.8	14.8	8.6	4.4	16.8	8	4	16.2	9.5	4.5	18.8	11.4	3.8	18.4	14.7	6.6	23.5
0.5	16.1	3.6	0.6	19.8	2.3	0.3	15.5	1.6	0.4	16	2.6	0.4	19.1	3.6	0.2	19.5	2	0.1	20.6	0.5	0	18.9	1.3	0.3	24.4
0.1	16.2	0.1	0	19.9	0.2	0	15.7	0.2	0.1	16.1	0.3	0.1	19.2	0.1	0	19.6	0.1	0	20.7	0.1	0	19	0.1	0.1	24.5
0.1	16.2	0.3	0.2	20	0.1	0.1	15.7	0.3	0.4	16	0.2	0.2	19.2	0.4	0.3	19.7	0.2	0.2	20.6	0.1	0.1	19	0.2	0	24.7
1.3	15.4	0.9	2	18.9	0.7	1.3	15.1	0.6	1.9	14.7	0.3	1.3	18.3	0.7	1.5	18.9	0.5	1.9	19.3	0.4	1.1	18.3	0.2	1	23.9
1.5	14.1	0.1	1.7	17.3	0.3	1.7	13.7	0.3	1.3	13.6	0.6	1.7	17.2	0.4	1.6	17.7	1.1	1.3	19.1	0.7	1.4	17.6	0.3	1.8	22.4
0.3	13.9	0	0.3	17	0.2	0.6	13.3	0	0.5	13.1	0.2	0.5	16.9	0.1	0.6	17.2	0	1.1	18	0	0.6	17	0.1	0.7	21.7
0.1	13.8	0.1	0.2	16.9	0.2	0.1	13.3	0	0	13.1	0	0.2	16.7	0	0.4	16.8	0	0.2	17.8	0	0.2	16.8	0	0.2	21.6
2.6	11.3	0.1	2.7	14.3	0.7	2.3	11.6	0.7	1.8	12	0.5	3.2	14.1	0.4	2.8	14.5	0.4	2.9	15.3	1.1	1.9	15.9	1.6	1.9	21.2
0.7	11.3	0.1	1.1	13.3	0.2	0.6	11.2	0.3	0.7	11.7	1	0.6	14.4	0.8	0.8	14.5	0.5	0.6	15.2	0.7	0.5	16.2	0	0.5	20.7
0.3	11.3	0.3	0.9	12.8	0.6	0.6	11.1	0.3	0.9	11.1	0.8	0.6	14.6	0.5	0.3	14.8	0.8	0.8	15.2	0.8	0.2	16.8	1.2	0.7	21.1
0.4	11.3	0.2	0.3	12.7	0.5	0.4	11.2	0.3	0.6	10.8	0.5	0.4	14.7	0.3	0.8	14.2	0.5	0.5	15.1	0.1	0.2	16.7	0.1	1.2	20
0.2	11.3	0	0.6	12.1	0.2	0.2	11.2	0	0.1	10.7	0.3	0.4	14.6	0.5	0.2	14.5	0.3	0.4	14.9	0.2	0	16.8	0.1	0.4	19.7
2.5	8.9	0	2.4	9.7	0.1	2	9.3	0.2	1.5	9.3	0.6	1.7	13.5	0.1	2.3	12.3	0.1	2	13	0.1	2.9	14	0	3.4	16.3
0.3	8.6	0	0.1	9.6	0	0.5	8.9	0	0.8	8.6	0.1	0.9	12.6	0.1	0.6	11.8	0.1	0.9	12.3	0.2	0.6	13.5	0	0.6	15.7
0.6	8.1	0	1	8.6	0.1	0.5	8.4	0.1	0.2	8.5	0	0.9	11.7	0	0.9	11	0	0.8	11.5	0.1	0.6	13	0.1	0.7	15.1
0.4	7.8	0	0.6	8	0	0.7	7.8	0.1	0.8	7.8	0	0.5	11.2	0	0.8	10.2	0	0.5	11	0	0.3	12.7	0	2.4	12.7
0.3	7.5	0	0.7	7.3	0	0.3	7.4	0	0.3	7.5	0	0.2	11	0	0.3	9.9	0	1	10	0	0.2	12.5	0	0.1	12.6
7.5	0	0	7.3	0	0	7.4	0	0	7.4	0.1	0	11	0	0	9.7	0.3	0	10	0	0	12.5	0	0	12.6	0
	16.3			20			15.7			16.1			19.2			19.7			20.7			19			24.7
37.2		36.1	36.1		35.9	35.4		33.1	33.1		36.8	37.2		35.6	35.9		38.5	38.4		33.3	33.3		41	41	

22:05 (86.0)(B132) [35] {FA19}			22:45 (86.0)(B133) [3] {FA19}			23:25 (86.0)(B134) [34] {FA19}			24:05 (86.0)(B133) [3] {FA19}			24:40 (86.0)(B134) [33] {FA19}			Total		
On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
6.7	0	6.7	2.7	0	3.3	3.3	0	3.3	3	0	3	0.6	0	0.6	339.1	0	348
2.7	0	9.3	1.7	0	5	0.7	0	4	1.3	0	4.3	0.2	0	0.7	174.5	2.2	519
0.9	0.1	10.1	0	0	5	0.1	0.1	4	0	0	4.3	0	0	0.7	79.3	9	591.5
1	0.1	11	0	0	5	0.1	0.1	4	0	0	4.3	0.2	0	1	88.6	6.8	671.9
0.5	0.2	11.3	0	0.3	4.7	0.1	0	4.1	0	0	4.3	0	0	1	94	22.9	743.8
0.3	0.3	11.3	1.3	0	6	0	0	4.1	0	0	4.3	0	0	1	59.4	15.6	787.5
0	0	11.3	0	0.3	5.7	0	0	4.1	0	0	4.3	0	0	1	47.4	8.2	826.7
0.1	0.1	11.3	0	0	5.7	0	0.1	4	0	0.7	3.7	0	0	1	53	10.2	869.9
0.1	0.6	10.8	0.3	0.3	5.7	0	0.1	3.9	0	0.3	3.3	0	0	1	89.2	35.9	922.2
1.5	0.5	11.9	0.3	0	6	2.7	0	6.6	2	0	5.3	0.1	0.1	1	193.9	42.3	1074.5
0.3	0.2	11.9	1	0	7	0.2	0.1	6.7	0	0	5.3	0	0.2	0.8	93.6	20.3	1147.1
0.2	1.5	10.6	0.3	0.3	7	0.2	0.8	6.1	0	0.3	5	0.1	0.1	0.9	96.8	33.1	1211.3
1.5	0.9	11.1	0.3	0.7	6.7	0.7	0.7	6.1	1	1.3	4.7	0	0.1	0.8	81.9	35.1	1258.9
4.6	0.4	15.3	0.3	1	6	0.4	0	6.5	0	0	4.7	0	0	0.9	121.8	33.9	1346.7
0.1	0.4	15.1	0	0.3	5.7	0	0.1	6.4	0	0	4.7	0	0	0.9	12.5	15.2	1344.2
0	0.2	14.9	0	0	5.7	0	0.1	6.4	0	0	4.7	0	0	0.9	6.1	8.5	1341.6
0.3	1.1	14.1	0.3	0	6	0.4	0.7	6	0	0	4.7	0.1	0	1	77.4	76.5	1342.7
0.2	0.3	14	0	0	6	0.1	0	6.1	0	0	4.7	0	0	1.1	33.3	9.1	1366.4
0.4	0.3	14.1	0	0	6	0.1	0.4	5.8	0	0	4.7	0	0	1.1	84.5	37.1	1413.7
1.4	0.7	14.9	0.7	0	6.7	1.1	0.1	6.9	0.3	0	5	0.5	0	1.6	113.1	43.7	1483.1
0.7	0.4	15.1	0.7	0	7.3	0.2	0.2	6.9	2	0	7	0.1	0	1.7	61.9	28.4	1516.5
1.3	0.1	16.4	1	0	8.3	1.9	0.1	8.7	0.7	0	7.7	0.4	0	2	121.9	29.7	1608.8
0.7	0	17.1	0	0	8.3	0.1	0	8.7	0	0	7.7	0.1	0	2.1	46.9	30.2	1625
1.3	0.8	17.6	2	0	10.3	2.2	1.3	9.6	0.3	0	8	0.2	0.1	2.1	62.2	282.7	1404.5
11.5	4.9	24.1	9.7	2.3	17.7	5.6	1.5	13.7	5	3.3	9.7	1.4	0.2	3.2	385.6	697.6	1094.9
1.2	0.4	25	2.3	0	20	1.4	0	15.1	1	0	10.7	0.1	0	3.3	94.9	87.9	1101.9
0.1	0	25.1	0.3	0	20.3	0	0	15.1	0	0	10.7	0	0	3.3	13.2	6.6	1108.8
0.1	0.1	25.1	0	0	20.3	0.1	0.1	15.2	0	0.3	10.3	0	0	3.3	19.4	14.3	1113.5
1.6	0.9	25.7	0	1.3	19	0.3	0.7	14.7	0	0	10.3	0.1	0.1	3.3	55.3	71.5	1098
0.4	1.3	24.8	0.7	1	18.7	0.1	0.5	14.3	0	0.3	10	0	0.2	3.2	55.1	55.2	1097.6
0.2	0.3	24.7	0	0.3	18.3	0	0.3	14	0	1	9	0	0.4	2.7	18.4	20.8	1095.3
0	0.2	24.5	0	0.3	18	0	0.2	13.8	0	0	9	0	0	2.7	20.3	13.9	1101.4
0.4	2.3	22.7	0	5	13	0.1	0.8	13.1	0	1	8	0	0.2	2.5	57.6	134.7	1024.3
1.3	0.4	23.6	0.3	0.3	13	0	0.5	12.7	0	1.7	6.3	0	0.1	2.4	41.6	32.2	1034.4
2.1	0.3	25.4	0.3	0.3	13	0.3	0.1	12.8	0	0	6.3	0	0	2.5	56.4	30.4	1060
0.4	0.9	24.9	0.3	0.7	12.7	0.3	3.5	9.7	0	1.3	5	0	0.1	2.3	40.1	36	1064.4
0.1	0.6	24.5	0	0	12.7	0.1	0.4	9.4	0	0	5	0	0.5	1.8	20.1	15.4	1068.9
0.2	2.7	22	0.7	2	11.3	0.1	1.6	7.8	0	0.7	4.3	0	0.7	1.2	21.9	85.2	1008.3
0.3	1.1	21.1	0	0.7	10.7	0	0.6	7.2	0	1.7	2.7	0	0.1	1.1	11.7	34	984.5
0	1.1	20.1	0	0	10.7	0.1	0.7	6.6	0	0	2.7	0	0.1	1.1	25	44.4	964.6
0	0.8	19.4	0	0	10.7	0.1	0.4	6.3	0	0	2.7	0	0	1.1	5.3	41.8	928.1
0	0.8	18.5	0	0	10.7	0	0.1	6.2	0	0	2.7	0	0	1.1	0.7	52.5	874.5
0	18.5	0	0	10.3	0.3	0	6.1	0.1	0	2.7	0	0	1	0.1	0	870	5.2
		25.7			20.3			15.2			10.7			3.3			1625
46.7	46.8		27.5	27.7		23.2	23.1		16.6	16.6		4.2	4.3		3174.9	3181	

Build with Mitigation Traffic Volumes Description

Under the 2025 and 2030 Build Conditions (without Mitigation), the Project trip distribution between Cattle Drive and East Drive did not consider the effects of one intersection being signalized and the other one not being signalized. Therefore, traffic was distributed with the majority of left-turning traffic exiting the Site using Cattle Drive to turn onto Western Avenue, since Cattle Drive provides a more direct route. However, with a signal at East Drive under the 2025 and 2030 Build with Mitigation Conditions, it is expected that a majority of left-turning traffic exiting the Site will use East Drive instead to take advantage of the protected movement a signal provides to minor street traffic turning left from a minor approach onto a major approach. (It should be noted that under the 2030 Conditions without Mitigation, it is already assumed that a portion of the Site generated left-turning traffic will likely use Science Drive and Stadium Road to turn left onto Western Avenue via the traffic signal at Stadium Road.)

In addition, the installation of a traffic signal at East Drive / Kresge Way could impact traffic entering the Harvard Business School. Under Existing conditions, vehicles can enter the Harvard Business School campus from Western Avenue via Kresge Way or Batten Way. However, internal to the Harvard Business School campus there is no connection between the different areas that these roadways serve. Based on conversations with Harvard Business School, if a traffic signal were to be installed at the intersection of Western Avenue at East Drive / Kresge Way, modifications would be considered within the Harvard Business School campus to allow internal connections between the different areas served by Kresge Way and Batten Way. This would allow vehicles to use either roadway to access the Harvard Business School campus instead of being limited to one roadway or the other. The benefit of this internal connection would be that vehicles entering Harvard Business School from Cattle Drive and I-90 and destined for the Batten Way area would no longer be forced to turn left from Cattle Drive onto Western Avenue and then right from Western Avenue onto Batten Way. It is likely that some drivers who do this movement would take advantage of the signal at Western Avenue at East Drive / Kresge Way by taking East Drive and traveling straight through the intersection from East Drive onto Kresge Way. The 2025 and 2030 Build with Mitigation Conditions also account for this shift in Harvard Business School traffic.

BUILD WITH MITIGATION SITE DISTRIBUTION CALCULATIONS

2025 Build Condition (Phase A)
Site Trip Distribution

		Build without Mitigation										Build with Mitigation									
		RESIDENTIAL		HOTEL		OFFICE / R&D		RETAIL / RESTAURANT		PASS BY		RESIDENTIAL		HOTEL		OFFICE / R&D		RETAIL / RESTAURANT		PASS BY	
INTERSECTION	MOVEMENT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT
12:: Western Ave at Kresge Way / East Dr / Genzyme Driveway																					
Western Ave	EB L																				
	EB T		12%		10%		10%		10%	-20%			7%		6%		6%		6%	-20%	
	EB R	7%		6%		6%		6%		20%		7%		6%		6%		6%		20%	
Western Ave	WB L	24%		14%		14%		14%		30%		24%		14%		14%		14%		30%	
	WB T	8%		5%		5%		5%		-30%		8%		5%		5%		5%		-30%	
	WB R																				
East Dr / Genzyme Driveway	NB L		8%		7%		7%		7%		30%		20%		18%		18%		18%		30%
	NB T																				
	NB R		35%		29%		29%		29%		20%		40%		33%		33%		33%		20%
13:: Western Ave at Batten Way/ Hague St																					
Western Ave	EB L																				
	EB T	37%		32%		32%		32%				37%		32%		32%		32%			
	EB R																				
Western Ave	WB L																				
	WB T		40%		36%		36%		36%				40%		36%		36%		36%		
	WB R																				
Hague St	NB L																				
	NB T																				
	NB R																				
Batten Way	SB L																				
	SB T																				
	SB R																				
15:: Western Ave at Stadium Road																					
Western Ave	EB T	37%		32%		32%		32%				37%		32%		32%		32%			
	EB R																				
Western Ave	WB L																				
	WB T		40%		36%		36%		36%				40%		36%		36%		36%		
Stadium Road	NB L																				
	NB R																				
17:: Western Ave at Cattle Dr																					
Western Ave	EB T	7%		6%		6%		6%		-30%		7%		6%		6%		6%		-30%	
	EB R	30%		26%		26%		26%		30%		30%		26%		26%		26%		30%	
Western Ave	WB L	8%		5%		5%		5%		20%		8%		5%		5%		5%		20%	
	WB T		8%		7%		7%		7%	-20%			20%		18%		18%		18%	-20%	
Cattle Drive	NB L		32%		29%		29%		29%		20%		20%		18%		18%		18%		20%
	NB R		12%		10%		10%		10%		30%		7%		6%		6%		6%		30%
18:: Cattle Dr at DEF Drive																					
DEF Drive	WB L		13%		25%		25%		25%				13%		25%		25%		25%		
	WB R		44%		39%		39%		39%				27%		24%		24%		24%		
Cattle Drive	NB T																				
	NB R	31%		49%		49%		49%				31%		49%		49%		49%			
Cattle Drive	SB L	38%		31%		31%		31%				38%		31%		31%		31%			
	SB T																				

BUILD WITH MITIGATION SITE DISTRIBUTION CALCULATIONS

2030 Build Condition (Full Build)
Site Trip Distribution

		Build without Mitigation										Build with Mitigation									
		RESIDENTIAL		HOTEL		OFFICE / R&D		RETAIL / RESTAURANT		PASS BY		RESIDENTIAL		HOTEL		OFFICE / R&D		RETAIL / RESTAURANT		PASS BY	
INTERSECTION	MOVEMENT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT	ENTER	EXIT
12:: Western Ave at Kresge Way / East Dr / Genzyme Driveway																					
Western Ave	EB L																				
	EB T		12%		10%		10%		10%	-20%			7%		6%		6%		6%	-20%	
	EB R	5%		5%		5%		5%		20%		5%		5%		5%		5%		20%	
Western Ave	WB L	24%		14%		14%		14%		30%		24%		14%		14%		14%		30%	
	WB T	8%		5%		5%		5%		-30%		8%		5%		5%		5%		-30%	
	WB R																				
East Dr / Genzyme Driveway	NB L		6%		7%		7%		7%		30%		20%		18%		18%		18%		30%
	NB T																				
	NB R		35%		29%		29%		29%		20%		40%		33%		33%		33%		20%
13:: Western Ave at Batten Way																					
Western Ave	EB L																				
	EB T	31%		27%		27%		27%				31%		27%		27%		27%			
Western Ave	WB T		27%		24%		24%		24%				27%		24%		24%		24%		
	WB R																				
Batten Way	SB L																				
	SB R																				
15:: Western Ave at Stadium Road																					
Western Ave	EB T	31%		27%		27%		27%				31%		27%		27%		27%			
	EB R	6%		5%		5%		5%				6%		5%		5%		5%			
Western Ave	WB L																				
	WB T		27%		24%		24%		24%				27%		24%		24%		24%		
Stadium Road	NB L		13%		12%		12%		12%				13%		12%		12%		12%		
	NB R																				
17:: Western Ave at Cattle Dr																					
Western Ave	EB T	5%		5%		5%		5%		-30%		5%		5%		5%		5%		-30%	
	EB R	26%		22%		22%		22%		30%		26%		22%		22%		22%		30%	
Western Ave	WB L	8%		5%		5%		5%		20%		8%		5%		5%		5%		20%	
	WB T		6%		7%		7%		7%	-20%			20%		18%		18%		18%	-20%	
Cattle Drive	NB L		21%		17%		17%		17%		20%		7%		6%		6%		6%		20%
	NB R		12%		10%		10%		10%		30%		7%		6%		6%		6%		30%
18:: Cattle Dr at DEF Drive																					
DEF Drive	WB L		7%		13%		13%		13%				7%		13%		13%		13%		
	WB R		23%		19%		19%		19%				14%		12%		12%		12%		
Cattle Drive	NB T	15%		24%		24%		24%				15%		24%		24%		24%			
	NB R	16%		25%		25%		25%				16%		25%		25%		25%			
Cattle Drive	SB L	20%		16%		16%		16%				20%		16%		16%		16%			
	SB T		6%		12%		12%		12%				6%		12%		12%		12%		

BUILD WITH MITIGATION VOLUME REDISTRIBUTION CALCULATIONS

Location: Allston, MA

		2025 Conditions								2030 Conditions							
		2025 BUILD VOLUMES - WITHOUT MITIGATION		CHANGE IN SITE DISTRIBUTION		CHANGE IN HBS TRIPS		2025 BUILD VOLUMES - WITH MITIGATION		2030 BUILD VOLUMES - WITHOUT MITIGATION		CHANGE IN SITE DISTRIBUTION		CHANGE IN HBS TRIPS		2030 BUILD VOLUMES - WITH MITIGATION	
INTERSECTION	MOVEMENT	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:: Western Ave at Kresge Way / East Dr / Genzyme Driveway																	
Western Ave	EB L	70	25			-15	-5	55	20	70	25			-15	-5	55	20
	EB T	375	610	-5	-10			370	600	400	670	-7	-20			395	650
	EB R	40	25					40	25	50	30					50	30
Western Ave	WB L	70	45					70	45	105	65					105	65
	WB T	575	575			-38	-31	535	545	590	590			-38	-31	550	560
	WB R	120	55			38	31	160	85	120	55			38	31	160	85
East Dr / Genzyme Driveway	NB L	20	35	10	26			30	60	25	60	22	57			50	115
	NB T	15	5			72	23	85	30	15	5			72	23	85	30
	NB R	45	115	5	10			50	125	75	195	7	20			80	215
13:: Western Ave at Batten Way/ Hague St																	
Western Ave	EB L	75	25					75	25	75	25					75	25
	EB T	430	560					430	560	505	580					505	580
	EB R	5	3					5	3								
Western Ave	WB L	30	20					30	20								
	WB T	615	665					615	665	575	670					575	670
	WB R	190	75			-95	-49	95	25	195	75			-95	-49	100	25
Hague St	NB L	5	10					5	10								
	NB T	5	1					5	1								
	NB R	40	30					40	30								
Batten Way	SB L	40	110					40	110	40	110					40	110
	SB T	1						1									
	SB R	20	65					20	65	20	65					20	65
15:: Western Ave at Stadium Road																	
Western Ave	EB T	505	540					505	540	565	575					565	575
	EB R	20	5					20	5	45	20					45	20
Western Ave	WB L	60	10					60	10	15	10					15	10
	WB T	580	730					580	730	580	725					580	725
Stadium Road	NB L	10	25					10	25	60	140					60	140
	NB R	5	50					5	50	15	30					15	30
17:: Western Ave at Cattle Dr																	
Western Ave	EB T	440	610					440	610	435	610					435	610
	EB R	70	90					70	90	110	80					110	80
Western Ave	WB L	20	20					20	20	60	45					60	45
	WB T	620	600	10	26	-38	-31	595	595	615	615	22	57	-38	-31	600	635
Cattle Dr	NB L	215	160	-10	-26	-57	-18	145	115	150	135	-22	-57	-57	-18	75	60
	NB R	50	45	-5	-10	-15	-5	30	30	90	105	-7	-20	-15	-5	65	80
18:: Cattle Dr at DEF Drive																	
DEF Drive	WB L	30	65					30	65	25	70					25	70
	WB R	40	105	-15	-36			25	65	35	100	-14	-36			20	60
Cattle Drive	NB T	225	100			-72	-23	150	80	330	155			-72	-23	255	130
	NB R	120	65			72	23	195	85	120	60			72	23	195	85
Cattle Drive	SB L	65	40					65	40	70	35					70	35
	SB T	25	70					25	70	45	120					45	120

**May not balance due to rounding*