MIT Kendall Square

Cambridge, Massachusetts

Technical Appendix

PREPARED FOR

/ Massachusetts Institute of Technology (MIT)

PREPARED BY

99 High Street
Boston, MA 02110
617.728.7777

June 22, 2015

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MIT Kendal Square

Transportation Impact Study
Technical Appendix

- EZ Ride References
- Field Observations
- Kendall Square Station Counts
- Analysis Calculation Backup
- TCRP Report
- Hub and Spoke Report

Bicycle Analysis

- Charles River Basin Report

Scoping Letter

CITY OF CAMBRIDGE

Traffic, Parking and Transportation

344 Broadway

Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Joseph Barr, Director
Brad Gerratt, Deputy Director

Phone: (617) 349-4700
Fax: (617) 349-4747

April 9, 2015

Michael Owu
Massachusetts Institute of Technology Investment Management Company (MITIMCo)
238 Main Street, Suite 200
Cambridge, MA 02142

Susan Sloan-Rossiter
Vanasse Hangen Brustlin, Inc.
99 High Street, 10th Floor
Boston, MA 02110-2354

RE: MIT Kendall Square Redevelopment, Cambridge, MA
Request for Transportation Impact Study (TIS) Scoping Determination

Dear Michael and Susan:

The Cambridge Traffic, Parking, and Transportation Department (TP&T) received the March 2, 2015 request for a Transportation Impact Study (TIS) scope for the proposed Massachusetts Institute of Technology (MIT) Kendall Square Redevelopment Project, consisting of approximately 1.6 million square feet including, 964,600 sf of commercial space (office, R&D, and ground floor retail), 270,000 sf residential space (240-300 units), and up to 359,000 sf academic space. Based on staff review, the TIS scope for this Project shall be as follows:

- The TIS shall comply with the Cambridge TIS Guidelines. Please provide four hard copies of the full TIS and one CD-ROM with all electronic files.

- **Existing and Proposed Conditions.** To fully understand the proposed development Project in context with MIT's total academic and non-academic properties, the TIS shall present in tables and maps MIT's existing conditions and proposed changes related to: MIT's properties and buildings by land use (academic, office, R&D, retail, residential, commercial, and leased space); parking facilities and utilization; and, population (full and part-time faculty, staff, employees, residents, day-time, night-time, off-campus and on-campus students).

- The TIS shall be consistent with MIT's most recent Town Gown report, and MIT's Parking Facilities Inventory and Institutional Zoning Parking Requirements and Allocation Plan. The TIS should include, but not be limited to, the following information:
    - MIT's property boundaries and square footage by land use.
    - Current and Projected population (i.e. existing and net new employees, students, residents).
    - Existing and proposed parking supply and demand by use (number of spaces, parking ratios, utilization, and proposed changes).
    - Provide existing and proposed site plans, buildings, parking facilities, vehicle (both motor vehicle and bicycle) and pedestrian entrances, and loading facilities for the proposed MIT Kendall Square Redevelopment Project area.

- All information on existing and proposed conditions shall be provided to TP&T in Excel tables including: parcel map-lot number, existing building(s) square footage, building percent occupancy, current tenants, number of employees, number of housing units, total parking spaces, parking users and peak utilization. Provide maps that further explain and illustrate information within the tables.
- Provide 1:40 scale maps showing street and sidewalk widths, pavement markings, traffic control devices and curb regulations for all roadways within or adjacent to the study area.
- Curb regulations and utilization of Main Street between Ames Street and Wadsworth Street, and Ames Street between Main Street and Memorial Drive, which are primary access streets that need to be inventoried in detail.
- Provide 1:20 scale site plans for all proposed development Project parcels, showing existing and proposed conditions.

- The proposed Project has many changes related to eliminating, relocating and creating buildings and parking spaces for various land uses. The amount of new square feet versus net new square feet must be clear in the TIS. The TIS shall provide maps, graphics, charts and tables to clearly show and explain the proposed Project and the changes from existing conditions. For example, the TIS shall provide bar graphs showing MIT's existing and future proposed square feet and parking spaces by land use for the entire MIT campus and for the East Campus study area.
  - The TIS should clearly indicate if the proposed Project will be 1.6 million new square feet, or net new square feet (i.e., will any existing buildings be removed). The information is also important for any proposed trip credits (i.e. vehicle trips for existing buildings that will be eliminated, versus buildings that will be removed but causing no change in existing trips). A table showing existing, future and net changes in square feet by land use for each parcel, block and building shall be provided.
  - The March 2, 2015 Scoping request letter and Figures refer to buildings by Blocks and by Parcels which causes some difficulty in comparing what is existing and what is proposed. It appears that in some cases, only a portion of existing buildings will be taken out of service. In some cases a building is proposed to remove but redeveloped elsewhere. The TIS shall use a clear, uniform convention to describe the existing and proposed conditions, including maps and tables. Show on maps each building square footage. Provide companion tables for each map. Figure 1 provides a useful map showing parking facility locations, number of spaces and users. A similar Figure shall be provided showing square feet, user/tenant, and percent occupancy for each building.

- The Project proposes to replace the existing 172,350 sf Eastgate graduate housing building with a 290,000 sf graduate housing building on Parcel O. Document the existing number of units, auto ownership and parking location(s) for the Eastgate residential building. Demonstrate the rationale for how many parking spaces (automobile and bicycle) are proposed for the new graduate housing building. Show and describe where the parking will be located.

- **Study Area Intersections.** Collect AM and PM peak hour traffic, pedestrian and bicycle turning movement counts (TMC's) at the study intersections below. You may use counts conducted in May 2013, which was prior to the Longfellow Bridge reconstruction Project, and when MIT was still in session. The TIS shall document any major development projects that have occurred since the May 2013 counts were taken. The traffic count dates shall be noted on the TIS traffic network Figures. As proposed in the Scoping request letter, a 0.5% per year growth factor is acceptable. Provide a table listing every intersection or street, dates of counts, adjustment factors used and what the adjustment factors were based on.

  1. O'Brien Highway at Third Street
  2. Cambridge Street at Third Street
  3. Cambridge Street at First Street
  4. O'Brien Highway at Cambridge Street / East Street

5. O'Brien Highway at Land Boulevard / Gilmore Bridge
6. Binney Street / Galileo Galilei Way / Fulkerson Street
7. Binney Street at Third Street
8. Binney Street at First Street
9. Land Boulevard at Binney Street
10. Hampshire Street at Cardinal Medeiros Avenue
11. Broadway at Portland Street
12. Broadway at Hampshire Street
13. Broadway at Galileo Galilei Way
14. Broadway at Ames Street
15. Third Street at Broad Canal Way
16. Third Street at Broadway
17. Vassar Street at Main Street
18. Main Street at Ames Street
19. Main Street at Hayward Street
20. Main Street at Wadsworth Street
21. Broad Canal Way at Main Street
22. Main Street at Memorial Drive / Longfellow Bridge
23. Ames Street at Amherst Street
24. Amherst Street at Wadsworth Street
25. Memorial Drive at Ames Street
26. Memorial Drive at Wadsworth Street

- **ATR Counts.** Provide minimum 48-hour automatic traffic recorder (ATR) counts collected in the Kendall Square area. Because Longfellow Bridge is under construction, counts taken prior to the construction may be used, as needed and approved by TP&T. Collect and graph daily and peak hour counts taken in Kendall Square as far back in time as available, and summarize the findings. ATR counts collected during any construction activities shall be clearly documented. ATR counts may include, but should not be limited to, the Kendall Square Urban Renewal Plan traffic monitoring reports, Cambridge Research Park's annual traffic monitoring reports, Alexandria Binney Street Project and baseline monitoring reports.

- **Site Access/Egress.** The TIS shall show on a map and explain the Project's proposed site access and egress locations for vehicles, pedestrians, bicyclists and loading activities. Describe the rationale for all access/egress points.
    - The March 2, 2015 Scoping request letter proposed Parcel L (North of Main) parking access and egress to be via Broadway only. It also proposed a change to the access/egress for the existing One Broadway parking garage. The TIS shall clearly show existing and proposed access/egress locations, and explain the rationale, and pros and cons of alternative access/egress locations for Parcel L.
    - Provide a table of vehicle trip ins and outs by hour for the One Broadway garage.
    - Show on maps the location of the proposed parking facilities south of Main Street, including the reasons for the proposed garage access and egress locations.

- **Trip Generation.** You may use the Institute of Transportation Engineering (ITE) trip generation rates and National Household Travel Survey average vehicle occupancy rates as proposed in the Scoping request letter for your trip generation analysis.
    - The TIS shall include trip generation for each land use shown separately in tables and in trip generation Figures.
    - The scope request letter proposed between 240-300 residential units. Please submit the TIS based on a final/discrete number of units, or use the higher number for trip generation.

- **Mode Splits.** The mode share assumptions for the trip generation shall be as follows;

	Drive Alone	Rideshare	Transit	Bike	Walk	Work at Home/Other
Office/R&D	33%	8%	42%	10%	7%	0%
Residential	32%	5%	30%	10%	25%	3%
Retail	25%	6%	30%	8%	29%	2%
Academic	21%	6%	41%	14%	15%	3%

Sources: R&D/Office, Residential and Retail uses are based on enhanced TDM measures from the 2012 Cambridge Kendall Square Central Square (K2C2) Planning Study. Academic mode share are based on 2014 MIT's Town Gown report.

- TP&T notes that the assumed 33% drive alone mode share for Office/R&D is based on enhanced TDM measures. TP&T therefore anticipated the TIS will describe the enhanced TDM measures proposed by the Project to achieve the mode share.

- The March 2, 2015 Scope request letter provided observed trip rates from an existing parking garage (East Garage) and proposed using the trip rates for evaluating the traffic impacts from transferring 200 MIT parking spaces to the new proposed SOMA garage. The TIS should provide more detailed information about the 200 parking spaces, including where exactly they are located today, what buildings they serve, and why they need to be relocated to a new location. Raw count data from the garage should be provided in the TIS appendix, and electronically to TP&T in Excel format. Trip rates are provided in the Scoping letter based on trips per total parking spaces, but would be more useful if the rates were based on trips per square feet. The observed trip rates shall also be compared to ITE trip rates.

- **Trip Credits**. Trip credits for buildings to be removed are only permitted if the TIS demonstrates that the buildings are currently occupied. Indicate building square footage, existing tenants and percent occupancy of each building for which the TIS seeks trip credits.

- **Trip Distribution.** As recommended in the Scoping request letter, the TIS may assign trips to the study area based on the City of Cambridge Kendall Square Central Square (K2C2) planning study, for employee, residential and retail uses. The TIS may base the academic use trip distribution on the 2014 MIT Town Gown report.
    - Table 13 (Places of Work for Cambridge Residents) in the Scope request letter shall be verified and/or updated with the latest Census Transportation Planning Products (CTPP) five year data access tool.
    - The TIS shall graphically present the arrival and departure trip distribution assumptions for each land use graphically on maps on a "zoomed-out" view (i.e. Northbound, Southbound, Eastbound, and Westbound trips) that shows the City of Cambridge and adjacent cities and towns. Trip Distribution maps shall also show a street level/study area map view.
    - The Scope request letter did not include AM and PM peak hour traffic network Figures for vehicle, pedestrian and bicycle trips. Figures shall be approved by TP&T prior to submitting the TIS.

- **Traffic Analysis Scenarios.** The Traffic Analysis Scenarios shall include the following:
    - <u>Existing Transportation Conditions.</u>
    - <u>Build Conditions.</u> Existing plus Project trips. The Build Condition shall assume the Third Street to Main Street connection, Longfellow Bridge reconstruction Project, Main Street reconstruction, and Binney Street reconstruction Projects.
    - <u>Future (2020) Conditions.</u> The Future Condition shall include a 0.5% background growth rate for five-years, plus any development Projects under construction, permitted, or proposed as verified with TP&T, but shall include the following:
        - Courthouse Redevelopment Project

- Alexandria Binney Street Development (Alexandria)
- First and Bent Street Project (i.e. 159 First Street, 150 Second Street)
- 88 Ames Street Residences
- Cambridge Research Park (unbuilt portion).
- North Point
- First Street PUD
- 249 Third Street Residential Project
- 181 Massachusetts Avenue (Novartis)
- 300 Massachusetts Avenue (Forest City)
- 650 Main Street (MIT)

- The 2020 Future Condition shall assume the First Street punch-through connection to O'Brien Highway
- The TIS shall indicate the Project's expected build-out phasing. If the Project is not expected to be completed in a five-year time horizon, the TIS could provide a phased traffic impact analysis based on an anticipated Project phasing, and a final build-out scenario.
- The TIS appendix shall document Existing, Build and Future roadway assumptions, including plans, sources and assumed schedules/timelines.

- **Traffic Analysis.** The TIS traffic capacity analysis shall be based on the TIS Guidelines, and the following information:
  - Provide maps that graphically show Vehicle LOS and Pedestrian LOS for all study area intersection for AM and PM peak hours (Existing, Build and Future Conditions). Provide one map for AM and one map for PM peak hour, showing LOS for all conditions.
  - Provide maps that graphically show vehicle delay (in seconds) for all study area intersections for AM and PM peak hours.
    - Vehicle delay maps shall show the impacts that the Project will have on net change in delay (seconds). A color coded system, such as, Green for 10 or less seconds of added delay, Yellow for 11-19 seconds of added delay, and Red for 20 or greater seconds of added delay may be used, or another similar graphical map approved by TP&T. This color coding system needs to reflect the full range of expected vehicle delay, rather than being concentrated at one end of the spectrum. Intersection delay maps should also be provided for the Future Condition to take into account all other area development Projects. Graphical maps should be approved by TP&T prior to submittal in the TIS. The TIS should include companion tables with the information in the graphics.
  - Vehicle queue analysis tables in the TIS should be matched with maps that illustrate queue lengths for Existing Condition (Green), Building Condition (Yellow) and Future Condition (Red). Show queues lengths in feet for all intersection approaches.
  - The TIS should document if the queues are observed or modeled by the computer software.
  - Capacity analysis tables in the TIS must not indicate ">80 seconds." The total number of seconds must be provided.
  - The study area intersections shall be listed in a table that shows existing vehicle delay in seconds, and net change in delay for the Build and Future conditions. The use of simple LOS letter grades alone will not be considered acceptable.

- **Transit Analysis.** The Red Line subway operations (i.e. capacity, reliability) is a growing regional issue due to the aging system and increased use and reliance. The 2015 winter snow storms and breakdown of the system demonstrated how critically important the Red Line is to the economic health of the region and for the ability for Kendall Square to accommodate additional development growth. The MIT/Kendall Square station had 15,433 average weekday boarding's, which is the eighth highest in the system (MBTA 2014 Blue Book). Because the proposed Project will generate a large number of new transit trips, the TIS must provide special attention to the impacts it will have on the transit system. In performing this analysis, TP&T

encourages MIT to take advantage of the considerable expertise in transit planning that is available from internal faculty and staff resources. These experts may be able to help develop innovative solutions for the challenges that face the Red Line and the MBTA overall.

- The TIS shall document what transit options are available in the study area, frequency of service, how long service is provided on weekdays and weekends, transit capacity, reliability, comfort and convenience.
- Summarize and graphically illustrate all public and private transit services in Kendall Square.
- Analyze the utilization of the transit services.
- The TIS capacity analysis should not assume that the Red Line trains all run on-time and as scheduled. Capacity analysis must account for the average Red Line on-time performance based on MBTA scorecards and performance review over the past year. For example, if MBTA was running on average, one less train during peak hours, the available capacity of the Red Line must be adjusted accordingly. Document all data and assumptions.
- The TIS shall provide a peak hour demand variation analysis for the Red Line at the Kendall Square Station for the AM and PM peak hours for the inbound and outbound trains based on the Transit Capacity and Quality of Service Manual, Third Edition, Pages 3-17.
- The TIS should document the Peak Hour Factor for the Red Line during the AM and PM peak hours. The analysis can be done by assuming 1.4 x the highest hourly volume per minute (1/4 of the hourly volume multiplied by 1.4 for the entire 15-minute period).
- The TIS shall discuss what the Project's impacts on the Red Line will be. Can the Red Line accommodate more riders during the peak hour and during the peak of the peak? What improvements are necessary to accommodate new Red Line riders (note that the suggested improvements could include items that may be beyond the ability of this Project to fund completely, but which this Project could partially fund)?
- How much bus capacity is available and how much is needed to accommodate the Project's bus transit trips? How many buses would be needed during the peak hours if there were no Red Line trains running?
- TP&T would like VHB to conduct a study of actual observed average wait times for passengers to board an inbound or outbound Red Line train during the AM and PM peak hours. How often are trains full, and how many people are unable to board a train because it is full and must wait for another train or a train after that one (pass-bys)? A study should include observing the inbound and outbound platforms during AM and PM peak hours, and recording train arrival times and number of people unable to board because the train was full. For inbound trains going to either Braintree or Mattapan, some people will not board a train because the train's destination is not where the people are going. The observers must use best effort to estimate the number of people trying to get on a train and is unable because the train is full, versus people choosing to wait until a train with a different destination arrives. The study should take place on a normal weekday when classes are in session.
- The TIS shall show how MIT will accommodate bus, trolley, and loading actives associated with MIT on land that MIT owns.
- The TIS shall show in detail how the proposed Project will impact or be integrated with the MBTA Red Line head house on Main Street, as well as potential improvements to the secondary (east) entrance.
- The TIS shall show how bicycle and transit access will be integrated.

- **Automobile Parking.** The existing and proposed parking analysis shall include the following information:
  - The zoning minimum and maximum parking required for the Project.
  - Provide an inventory of existing parking, current users, and peak utilization.
  - Explain and show on maps how the existing parking facilities are managed and enforced (i.e. access gates, stickers/permits, open surface lots, etc.).
  - Document the expected number of employees and employee density for the proposed office/R&D buildings.

- Demonstrate how the proposed development parking program matches both the existing parking needs and Project's automobile mode share.
- Explain why the proposed parking ratios are appropriate for the Project, given the Project's location at the Red Line Kendall Square station. The TIS should not just assume that the Project needs the maximum zoning parking ratios, such as 0.9 spaces/1,000 sf for Office use without justifying the need for that parking ratio.
- Explain why the Project needs 899 parking spaces as shown in Table 4 in the Scoping request letter.
- Every proposed new parking space must be justified based on actual observed parking demands.
- Justify why 583 existing parking spaces need to be replaced. Provide a clear plan showing the location of the existing parking spaces, current users and peak utilization.
- Explain the rationale for replacing the 114 existing parking spaces at Parcel G, including who the existing users are and peak utilization of the spaces.
- Explain why the Project needs to relocate 200 Academic parking spaces. Show exactly where those spaces are today and explain why they need to be relocated.
- Provide a shared parking analysis for uses that have peak parking demands at different times of day such as, office and residential uses. Provide a table showing peak parking demands by land use for daytime and nighttime.
- Figure 1 in the March 2, 2015 Scoping request letter shall include peak and daily parking utilization by hour of the parking facilities.
- Discuss how the proposed site parking spaces will be managed (e.g. who will have access, parking fees, and shared parking). How will parking garages that will serve academic and non-academic uses be managed and monitored?

- **Bicycle Facilities**. Bicycle parking for the Project shall be provided based on the City of Cambridge Bicycle zoning regulations. The TIS shall provide the following information:
  - An inventory and maps showing existing bicycle facilities in Kendall Square (i.e. bicycle lanes, bicycle parking facilities).
  - TP&T conducted bicycle parking studies in Kendall Square in May 2011, 2013 and 2014. Using the same study area and methodology, the TIS shall provide a bicycle parking study for Kendall Square in May 2015, on a day with good weather when classes are in session. TP&T will provide the study area, methodology and tables to use. Based on the study, the TIS shall describe existing bicycle parking locations, utilization and needs (i.e. locations with bikes parked to structures other than bicycle racks, such as trees, poles, etc.).
  - Document existing Hubway Stations and utilization in the study area. Hubway utilization shall include information such as, percentage of available Hubway bikes and docks by hour on a typical day.
  - The TIS shall provide 1:10 scale plans of the proposed Project's short- and long-term bicycle parking spaces.
  - The TIS shall indicate and illustrate the exact bicycle racks proposed (i.e. specification cut sheets).
  - A bicycle station could potentially serve the proposed development Project's bike parking zoning requirements and the general public bicycle parking needs (i.e. Project's retail customers). The TIS shall discuss pros and cons of incorporating a bicycle station with one of the proposed buildings, or on other nearby land owned by MIT.
  - Show and describe access between bicycle parking and the Red Line Kendall Square subway station.
  - The TIS should include an analysis of pedestrian crossing from Ames Street to the Dr. Paul Dudley White Bicycle Path and the MIT boathouse.
  - A two-way cycle track will be constructed on Ames Street between Broadway and Main Street. The City's expectation is that the cycle track will continue down Ames Street and connect to the Dr. Paul Dudley White Bicycle Path creating an important bicycle connection between the Project, Kendall Square and larger regional bicycle network. The TIS shall provide 1:40 scale plans of Ames Street, between Broadway and the Paul Dudley White Bicycle Path showing curb to curb and

sidewalk dimensions, and curb regulations. Provide an inventory of parking spaces, on Ames Street, between Main Street and Memorial Drive, and conduct a parking utilization and turn-over study for a typical weekday and Saturday. The inventory and plans shall be provided to TP&T in editable formats such as, AutoCAD, Excel and Synchro files. The TIS should provide any proposed cycle track plans, between Main Street and Memorial Drive, including any proposed pedestrian/bicycle crossing improvements of Memorial Drive at Ames Street, and access to the MIT boathouse.

- The TIS should show on plans the Paul Dudley White bicycle path and document its conditions as reported in DCR and MassDOT's May 2013 Charles Basin Pedestrian and Bicycle Connectivity Study. The TIS should summarize the report and discuss how the proposed Project is consistent with the recommendations.

- The TIS shall include crash data for the three most recent years available at all study area intersections. Include crash rates for each intersection and indicate how it compares to District 4 crash rate averages for signalized and unsignalized intersections. Show bicycle and pedestrian crash data separately.

- Describe the Project's proposed trash removal and loading operations, truck routes, and number of trucks per day.

- The TIS shall discuss any proposed traffic mitigation, including non-residential and residential enhanced Transportation Demand Management (TDM) measures. The TIS shall indicate if the Project will require a Parking and Transportation Demand Management Plan (PTDM plan) per City Ordinance 10.18.

If you have any questions, feel free to contact Adam Shulman at 617-349-4745.

Sincerely,

Joseph Barr
Director

cc: Adam Shulman, TPT
Susanne Rasmussen, CDD

Response to Request for Supplemental Filing –
May 20, 2015

CITY OF CAMBRIDGE

Traffic, Parking and Transportation

344 Broadway

Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Joseph Barr, Director
Brad Gerratt, Deputy Director

Phone: (617) 349-4700
Fax: (617) 349-4747

May 20, 2015

Michael Owu
Massachusetts Institute of Technology Investment Management Company (MITIMCo)
238 Main Street, Suite 200
Cambridge, MA 02142

Susan Sloan-Rossiter
Vanasse Hangen Brustlin, Inc.
99 High Street, 10th Floor
Boston, MA 02110-2354

RE: MIT Kendall Square Redevelopment, Cambridge, MA
Response to Request for Supplemental Filing

Dear Michael and Susan:

The Cambridge Traffic, Parking, and Transportation Department (TP&T) has reviewed VHB's May 1, 2015 memo regarding a request for filing a supplemental document to support your traffic analysis, separate from a Traffic Impact Study (TIS). TP&T is pleased to be working with MIT on this critical project which will add significantly to the vitality of Kendall Square. While we understand that some of the items we have requested will require additional work to prepare, we believe that certain items—particularly the graphical presentation of the Level of Service results—will help to provide a timely review of the document and ultimately create a more complete and accurate study. .

To assist you in moving your analysis and document forward, we are providing you with the following responses and clarifications on the specific scope items in VHB's May 1, 2015 memo; if an item is not mentioned then we are in agreement with your proposed plan for addressing that item:

Item 1: Hourly parking utilization may be provided for parking facilities on MIT's east campus as indicated in the scope and VHB's memo. To document MIT's overall parking utilization, the TIS should, if possible, provide information based on total spaces available, leased, parking permits issued, and other data sources, including MIT's 2014 Parking Inventory.

Item 2: We understand that the Main Street reconstruction is impacting curb utilization. General observations and/or past planning discussions with the City (such as during the redesign of Main Street) on the curb use plan may be provided to indicate the demands, challenges, and plans for curb use,

Item 3: TP&T believes it will be most useful if the TIS provides the data on the curb use of Ames Street between Main Street and Memorial Drive in the report, rather than in a supplemental document.

Item 5: As discussed during our meeting on May 19, 2015, please prepare analyses for 2015 existing conditions, full build for 2015 and full build for 2020.

Item 6, 7, & 8: The graphical presentation of the data requested in Item 6 should be included in the TIS, not in a supplemental document, while the information requested in Item 7 & 8 can be included in a supplemental document to be submitted after the TIS is submitted.

Item 15: This request is simply seeking to determine whether the MBTA Red Line head house is impacted or proposed to be integrated with a building as part of this project, not suggesting that a design for such a change should be developed if it is not already proposed. Such a proposal may become the topic of future mitigation discussions, but at this point TP&T is simply seeking clarification on any currently proposed improvements.

Item 18: If the exact bicycle rack(s) proposed for the project is not known, the TIS may indicate that. Our expectation is that the final bike rack(s) proposed will meet city standards and zoning requirements. It is important that bike parking layout plans in the TIS demonstrate that sufficient space is available for bicycle parking to meet city zoning layout, even if a detailed layout is not available at this stage of project development.

Item 19: This information can be submitted as part of a supporting document, although any information on the topic of a bicycle station that can be provided in the TIS would be helpful.

Item 22: As stated in the scope, the TIS should provide any proposed cycle track plans between Main Street and Memorial Drive, including any proposed pedestrian/bicycle crossing improvements of Memorial Drive at Ames Street, and access to the MIT boathouse. If no plans exist, the TIS should indicate that; we are not expecting new plans to be developed for this submittal, although this may become the topic of mitigation discussions.

Thank you again for working with me and my staff on this Project. If you have any questions, please feel free to contact Adam Shulman at 617-349-4745. I looks forward to continuing to work collaboratively with MITIMCO on this project.

Very truly yours,

Joseph E. Barr
Director

cc: Adam Shulman

Response to TIS Submission – July 10, 2015

CITY OF CAMBRIDGE

Traffic, Parking and Transportation

344 Broadway

Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Joseph E. Barr, Director
Brad Gerratt, Assistant Director for Parking Management

Phone: (617) 349-4700
Fax: (617) 349-4747

July 10, 2015

Michael Owu
Massachusetts Institute of Technology Investment Management Company (MITIMCo)
238 Main Street, Suite 200
Cambridge, MA 02142

Susan Sloan-Rossiter
Vanasse Hangen Brustlin, Inc.
99 High Street, 10th Floor
Boston, MA 02110-2354

RE: MIT Kendall Square Redevelopment, Cambridge, MA

Dear Michael and Susan:

On June 22, 2015, the Cambridge Traffic, Parking and Transportation Department (TP&T) received the Transportation Impact Study (TIS) for the MIT Kendall Square Redevelopment Project. After staff review, there are some corrections or clarifications that need to be made before we certify the TIS. Some of these have already been discussed with you and simply require the refiling of the TIS that reflects the agreed upon changes. Please make the changes and resubmit 3 updated copies of the TIS and electronic files for our review.

1. Page 144 states that trips associated with the proposed 200 relocated MIT parking spaces were included in the Future Condition vehicle level of service analysis. Because the 200 parking spaces in the SoMa Garage will cause a redistribution of vehicle trips into the PUD area they should also be included in the Build Condition analysis.
2. Page 171 states no changes in pedestrian level of service (PLOS) are projected under build or future conditions. However the TIS shows changes in PLOS under those conditions. Please correct or clarify the sentence to indicate that the changes are not due to the MIT Project.
3. As we have discussed, errors were found in the PLOS tables on pages 172-174 in the TIS. Please correct and update the TIS, including the Planning Board Criteria Summary Sheets.
4. There was no shared parking analysis provided in the TIS for uses that have peak parking demands at different times of day, as required in the TIS Scope. Please provide a shared parking analysis or explain why no analysis is needed.
5. It is not accurate on page 67 to state that the parking turnover study indicates that Ames Street between Main Street and Memorial Drive has limited capacity for on-street parking during the typical weekday. Delete the comment or include a more accurate comment that out of 84 on-street spaces the maximum use was 72 spaces and 12 unused spaces (at 10 AM on Wednesday May 6, 2015).

6. On page 142, it is not accurate to say that the 485 parking spaces are effectively full when the data shows that the average occupancy is 86%, and one lot has a peak occupancy of 43%. Please eliminate the sentence.
7. Page 145, Table 9.a.10, indicates there will be no parking for the MIT Museum, however, Figure 3.a.3 shows 8 vehicles associated with the Museum entering the SoMa Garage. Please explain or correct.
8. The TIS did not clearly indicate the Project's net new square as required in the Scope. Please provide this information in a table (potentially based on the Project overview descriptions on page 2-6. (Note, Building 6 does not appear to be 882,936 GSF as shown in Table A in the TIS and Table B is not clear regarding which buildings, or portions thereof, will be removed and which will be re-used).
9. Fig. E.3 is inconsistent with Figure G.13 which shows the on-grade loading dock access to Building 2. Please correct or clarify.
10. As we discussed, Fig. 1.d.2 shows a Weekend Shuttle, but there is no information about it on page 77-78. Please include information about the shuttle on those pages.
11. Page 154 indicates that on May 12, 2015 there was an average of 47 passengers per train getting left behind on the platform, however, the data in the Appendix for the PM peak outbound train shows a total of 242 people being left behind from 10 trains, or an average of 24 passengers per train. Please clarify. (Note that as documented in the TIS, It is also worth noting here that there were signal problems earlier in the day).
12. Page 142-143 in the TIS indicates that the existing Eastgate Graduate Housing with 201 residential units, has a peak parking demand of 38 spaces (Table 9.a.7). This equals 0.2 space/unit. It is not clear in the TIS why the proposed 470 unit graduate housing building will have only 49 spaces in the SoMa garage as shown in Table 9.a given the existing parking demand.
13. Page 152 indicates that the results of the Red Line train loads field observations are in the Appendix. At a minimum, a summary of the results should be provided in the TIS.
14. A few errors or typos were identified and provided to VHB separately. Because the TIS is being updated those corrections should be included in the updated TIS.

If you have any questions, feel free to contact Adam Shulman at 617-349-4745.

Sincerely,

Joseph Barr
Director

cc: Adam Shulman, TPT
Susanne Rasmussen, CDD

On-Site Parking Utilization Data

On-Site Parking Utilization Data (April 15, 2015)

	Block A								Block B								Block C							
	MIT Kendall Square Lot				Cambridge Trust				Hayward Lot				Hayward Commercial Lot				Hayward Annex				Wadsworth Street Lot			
Hour	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied
7:00 AM	44	16	60	27%	12	2	14	14%	148	41	189	22%	16	3	19	16%	43	6	49	12%	61	9	70	13%
8:00 AM	37	23	60	38%	11	3	14	21%	108	81	189	43%	13	6	19	32%	37	12	49	24%	47	23	70	33%
9:00 AM	23	37	60	62%	9	5	14	36%	53	136	189	72%	12	7	19	37%	31	18	49	37%	31	39	70	56%
10:00 AM	9	51	60	85%	8	6	14	43%	16	173	189	92%	8	11	19	58%	3	46	49	94%	27	43	70	61%
11:00 AM	7	53	60	88%	9	5	14	36%	8	181	189	96%	12	7	19	37%	2	47	49	96%	26	44	70	63%
12:00 PM	5	55	60	92%	9	5	14	36%	11	178	189	94%	8	11	19	58%	0	49	49	100%	25	45	70	64%
1:00 PM	7	53	60	88%	11	3	14	21%	17	172	189	91%	6	13	19	68%	1	48	49	98%	27	43	70	61%
2:00 PM	8	52	60	87%	9	5	14	36%	12	177	189	94%	8	11	19	58%	5	44	49	90%	30	40	70	57%
3:00 PM	10	50	60	83%	9	5	14	36%	22	167	189	88%	9	10	19	53%	4	45	49	92%	31	39	70	56%
4:00 PM	17	43	60	72%	10	4	14	29%	36	153	189	81%	7	12	19	63%	12	37	49	76%	31	39	70	56%
5:00 PM	25	35	60	58%	10	4	14	29%	45	144	189	76%	10	9	19	47%	19	30	49	61%	41	29	70	41%
6:00 PM	43	17	60	28%	12	2	14	14%	26	163	189	86%	10	9	19	47%	33	16	49	33%	48	22	70	31%

	Block D								Block E				Block F				Block G							
	Sloan Surface Lot				East Campus Garage				Ford Lot				Amherst Street Lot				One Broadway Surface Lot				One Broadway Garage			
Hour	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied	Available	Occupied	Total	% Occupied
7:00 AM	18	31	49	63%	276	143	419	34%	1	21	22	95%	54	6	60	10%	105	9	114	8%	281	35	316	11%
8:00 AM	20	29	49	59%	211	208	419	50%	12	10	22	45%	48	12	60	20%	100	14	114	12%	262	54	316	17%
9:00 AM	22	27	49	55%	125	294	419	70%	12	10	22	45%	40	20	60	33%	85	29	114	25%	218	98	316	31%
10:00 AM	17	32	49	65%	75	344	419	82%	12	10	22	45%	32	28	60	47%	53	61	114	54%	175	141	316	45%
11:00 AM	12	37	49	76%	51	368	419	88%	11	11	22	50%	15	45	60	75%	42	72	114	63%	146	170	316	54%
12:00 PM	19	30	49	61%	55	364	419	87%	5	17	22	77%	19	41	60	68%	28	86	114	75%	210	106	316	34%
1:00 PM	13	36	49	73%	61	358	419	85%	12	10	22	45%	15	45	60	75%	27	87	114	76%	150	166	316	53%
2:00 PM	11	38	49	78%	82	337	419	80%	13	9	22	41%	16	44	60	73%	35	79	114	69%	154	162	316	51%
3:00 PM	20	29	49	59%	119	300	419	72%	3	19	22	86%	19	41	60	68%	31	83	114	73%	151	165	316	52%
4:00 PM	13	36	49	73%	184	235	419	56%	3	19	22	86%	19	41	60	68%	39	75	114	66%	160	156	316	49%
5:00 PM	15	34	49	69%	251	168	419	40%	3	19	22	86%	24	36	60	60%	45	69	114	61%	188	128	316	41%
6:00 PM	16	33	49	67%	304	115	419	27%	5	17	22	77%	21	39	60	65%	68	46	114	40%	214	102	316	32%

MIT PARKING FACILITIES

2014-2015 INVENTORY

Prepared by:
MIT Parking and Transportation
MIT Office of Campus Planning
MIT Department of Facilities

February 2015

Introduction

The MIT Parking Facilities Report, published annually by the MIT Parking and Transportation Office, the MIT Office of Campus Planning and the MIT Department of Facilities, presents the inventory of academic parking spaces maintained or leased by the Institute.

The parking counts contained in this report are accurate as of October 31, 2014.

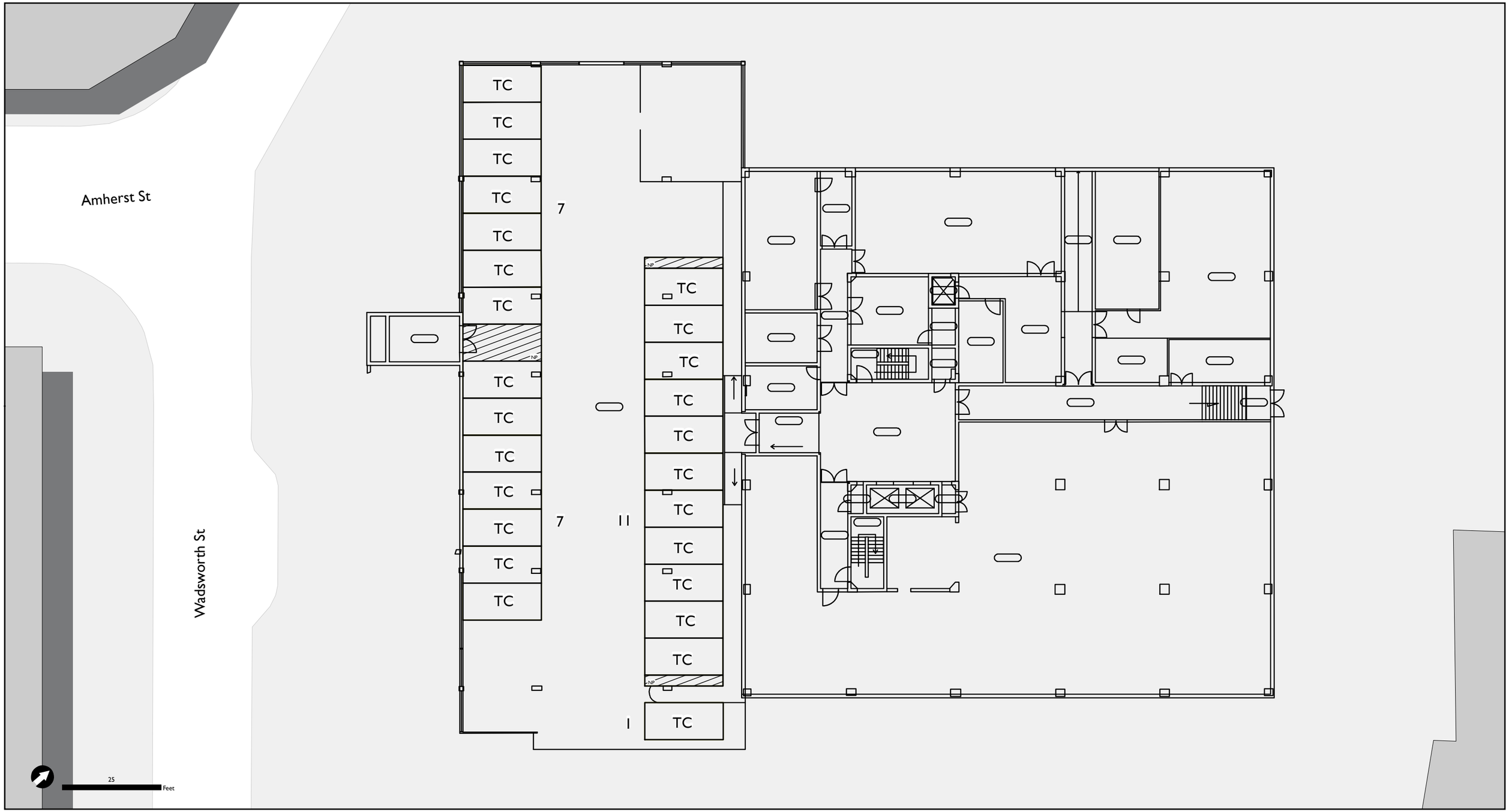
MIT Parking Facility Inventory					As of: 10/31/2014
Lot #	Facility Name	Address	Total Spaces In Use	Spaces Temporarily	Total Spaces
1	West Garage	125 Vassar Street	372		372
2	Albany Garage	20 Albany Street	409	12	421
3	Hermann Garage	170 Main Street	0	26	26
4	East Campus Garage	100 Main Street	419	7	426
5	Hayward Lot Annex	50 Hayward Street	49		49
6	Stata Garage	32 Vassar Street	688		688
6D	Stata Lot	32 Vassar Street	13		13
7	Plasma Fusion Lot	167 Albany Street	18	5	23
8	Nuclear Reactor Lot	116 Albany Street	27		27
9	Ford Lot	370 Main Street	22		22
10	350 Brookline Street	350 Brookline Street	37		37
11	W91 Lot	565 Memorial Drive	59		59
12	Kendall Square Lot	13 Charlotte's Way	60		60
13	Amherst St Lot	21 Amherst Street	60		60
14	44/46 Lots	25,51,59 Vassar Street	19	15	34
15	N52 Lot	22 Windsor Street	6		6
16	West Annex Lot	169 Vassar Street	38		38
17	Main Lot	60 Vassar Street	11	9	20
18	Kresge Lot	Danforth Street	93		93
19	N10 Lot	66 Albany Street	140	17	157
20	65 Waverly Street Lot	65 Waverly Street	38	23	61
21	W98 Lots	600 Memorial Drive	65		65
22	Hayward Street Lot	21 Hayward Street	189	1	190
23	Sloan Lot	170 Main Street	49		49
24	NW86 Lot	70 Pacific Street	74	1	75
24A	NW86 Garage	70 Pacific Street	132		132
25	West Lot	243 Vassar Street	134		134
26	Dormitories	Various Addresses	31		31
27	Student Center	76 Massachusetts Avenue	4		4
28	President's House	111 Memorial Drive	8		8
29	East Campus	3 Ames Street	5		5
30	W31 Lot	96 Vassar Street	3		3
31	NW35 Lot	235 Albany Street	8		8
32	Westgate Lot	319 Vassar Street	317		317
33	Westgate Low Rise	290 Vassar Street	60		60
34	Amherst & Danforth	Amherst & Danforth	46		46
35	158 Massachusetts Avenue	158 Massachusetts Avenue	51		51
36	Cross Street	Cross Street	11		11
37	W92 Garage	Audrey Street	59		59
38	W92 Lots	Amesbury Street	18		18
39	Koch Lot/TCC	219 Vassar Street	19		19
40	Amherst Alley	Amherst Alley	27		27
41	Visitor Lot	139 Massachusetts Avenue	54		54
43	68 Koch	31 Ames Street	2		2
Leased	Tech Sq	NE47 & NE49	123		123
Leased	Tech Sq	Biophysics	38		38
Leased	11 Cambridge Center	Digital Learning	6		6
Leased	141 Portland	edx	32		32
Leased	1 Main	Resource Development	18		18
Leased	1 Charles Park	Sloan	37		37
Leased	185 Albany	PFSC	20		20
Leased	1 Broadway	Sloan	1		1
Leased	3 Cambridge Center	OSP	1		1
Leased	DSL	Franklin St	2		2
Leased	2 Charles Park	MIT Press	21		21
			4243	116	4359

RESERVED SPACE CODES						
	AB	AMBULANCE BAY	EV	ELECTRIC VEHICLE CHARGING	OCP	OFF-CAMPUS PERMIT
	AF	ALTERNATE FUEL VEHICLE	F	FACULTY	OCR	OFF-CAMPUS RESERVED
	AL	AGE LAB	F1	HOUSE MASTER	OM	ON-CALL DOCTOR
	AV	AUDIO VISUAL	FP	FORD PARKING	PF	PLASMA FUSION
	C	COMPACT	FV	FACILITIES	PH	PRESIDENT'S HOUSE
	CD	CAMPUS DINING	H	HOUSE MANAGER	R	RESERVED
	CG	COGNITIVE LAB	HP	HANDICAP	RC	RECYCLING
	CL	CAR POOL	HV	HANDICAP - VAN ACCESSIBLE	ROTC	RESERVED OFFICER TRAINING CORP
	CP	CAMPUS POLICE	IS&T	INFO. SERVICES TECH	SR	SAFE RIDE
	CR	CLINICAL RESEARCH	L1	LOADING - 15 MIN.	SV	SERVICE VEHICLES
	CT	COMMERICAL TENANT	L2	LOADING - 20 MIN.	TC	TEMPORARY CONSTRUCTION
	DC	DCM	L3	LOADING - 30 MIN.	TCC	TECH. CHILD CARE - 30 MIN.
	DS	DEAN FOR STUDENT LIFE	MC	MOTORCYCLES	V	VISITOR
	EH	EHS	ML	MAGNET LAB	VL	VAN POOL
	EM	EMS	MM	MIT MUSEUM	VP	SENIOR ADMINISTRATION
	ER	EAST GATE RESIDENTS	MP	MEDICAL PATIENT	Z	ZIP CAR
			MR	MEDICAL RESERVE		

MIT Department of FACILITIES

MIT Parking Inventory 2014-2015

Sources:
Basemap: Facility Information Systems (2014)

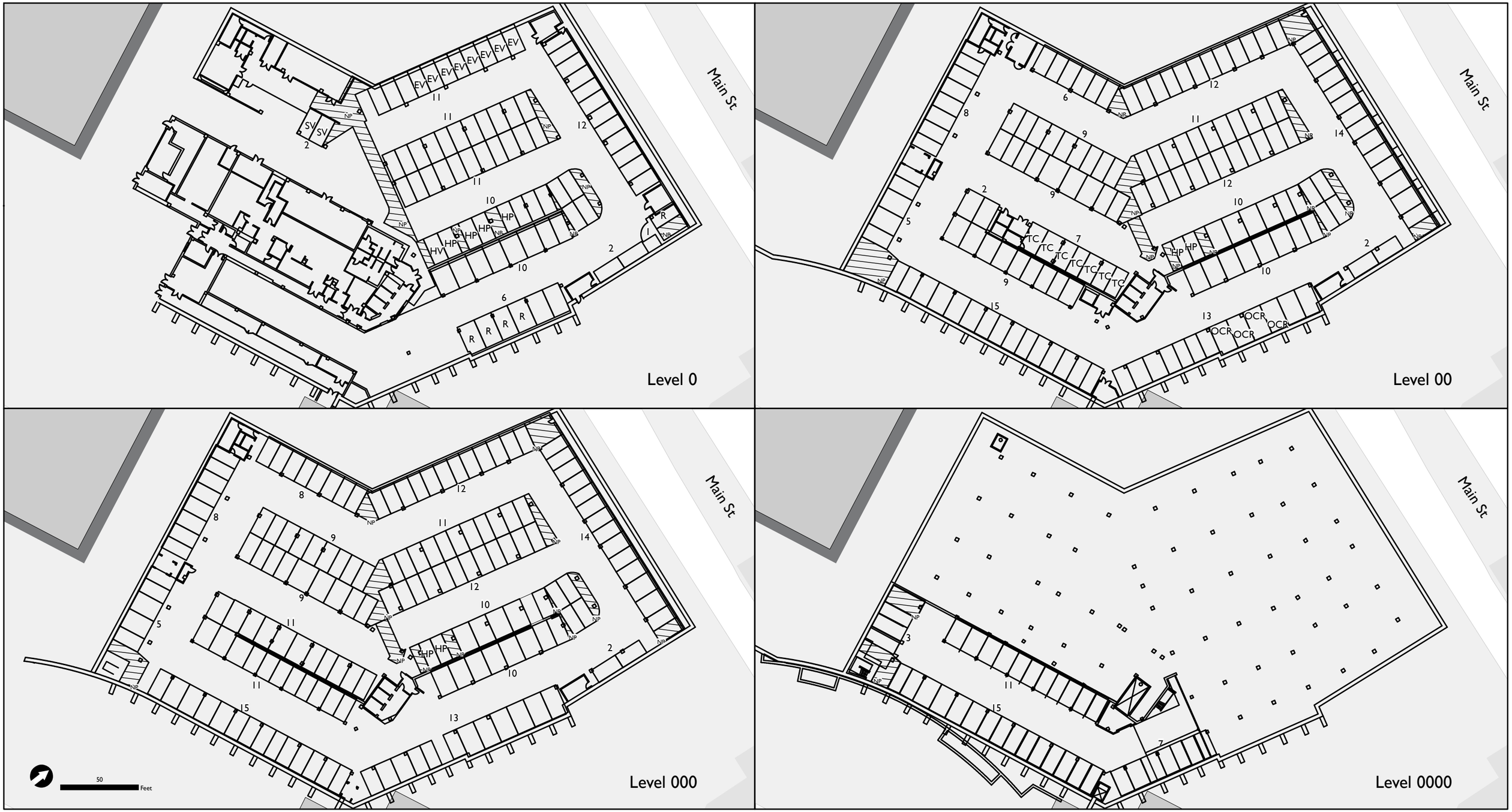


MIT Department of FACILITIES

2014-2015 Parking Inventory: L3

Hermann Garage - 170 Main St - 0 Spaces

Sources:
Basemap: Facility Information Systems (2014)

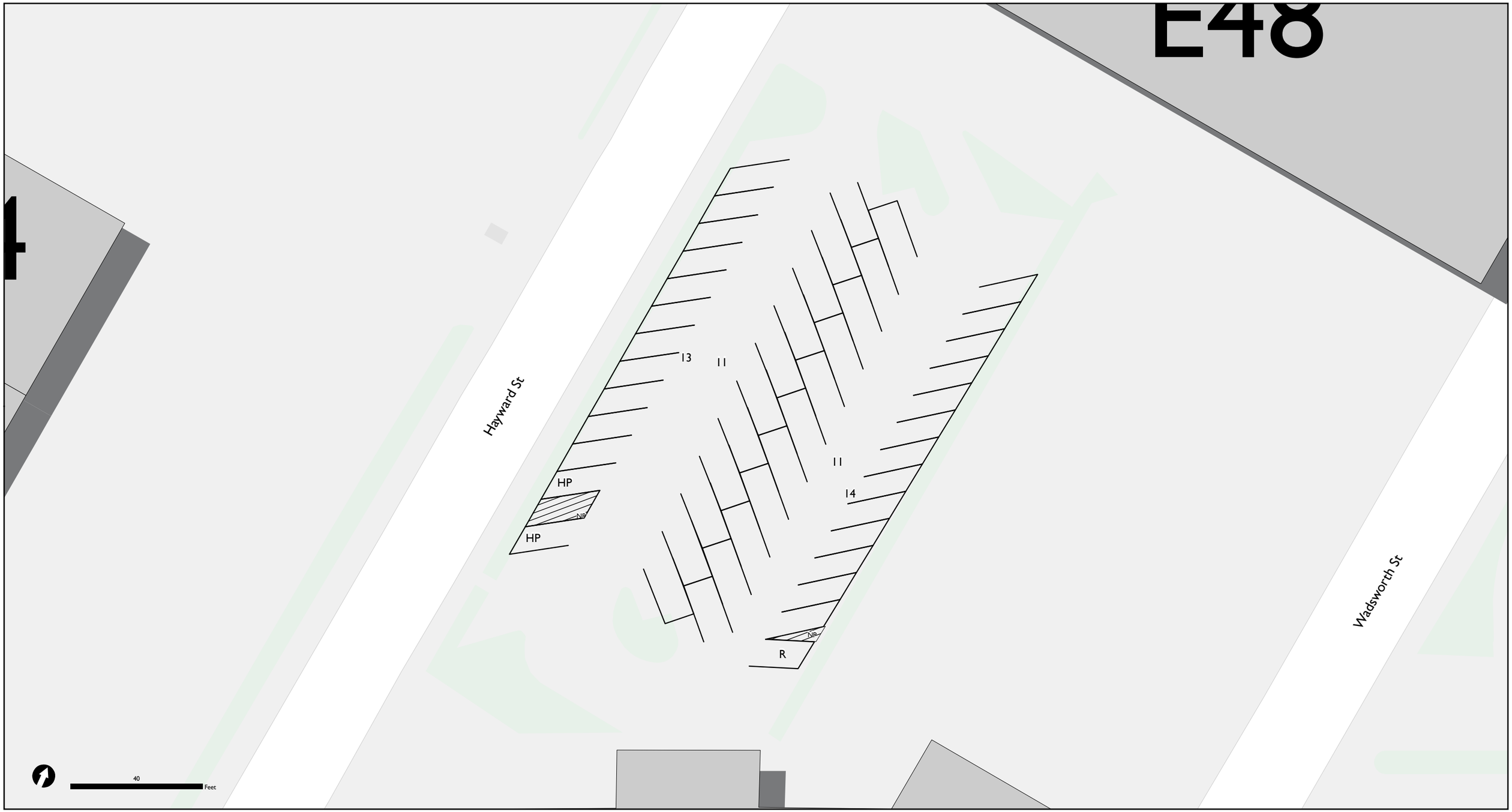


MIT Department of FACILITIES

2014-2015 Parking Inventory: L4

East Campus Garage - 100 Main St - 419 Spaces

Sources:
Basemap: Facility Information Systems (2014)

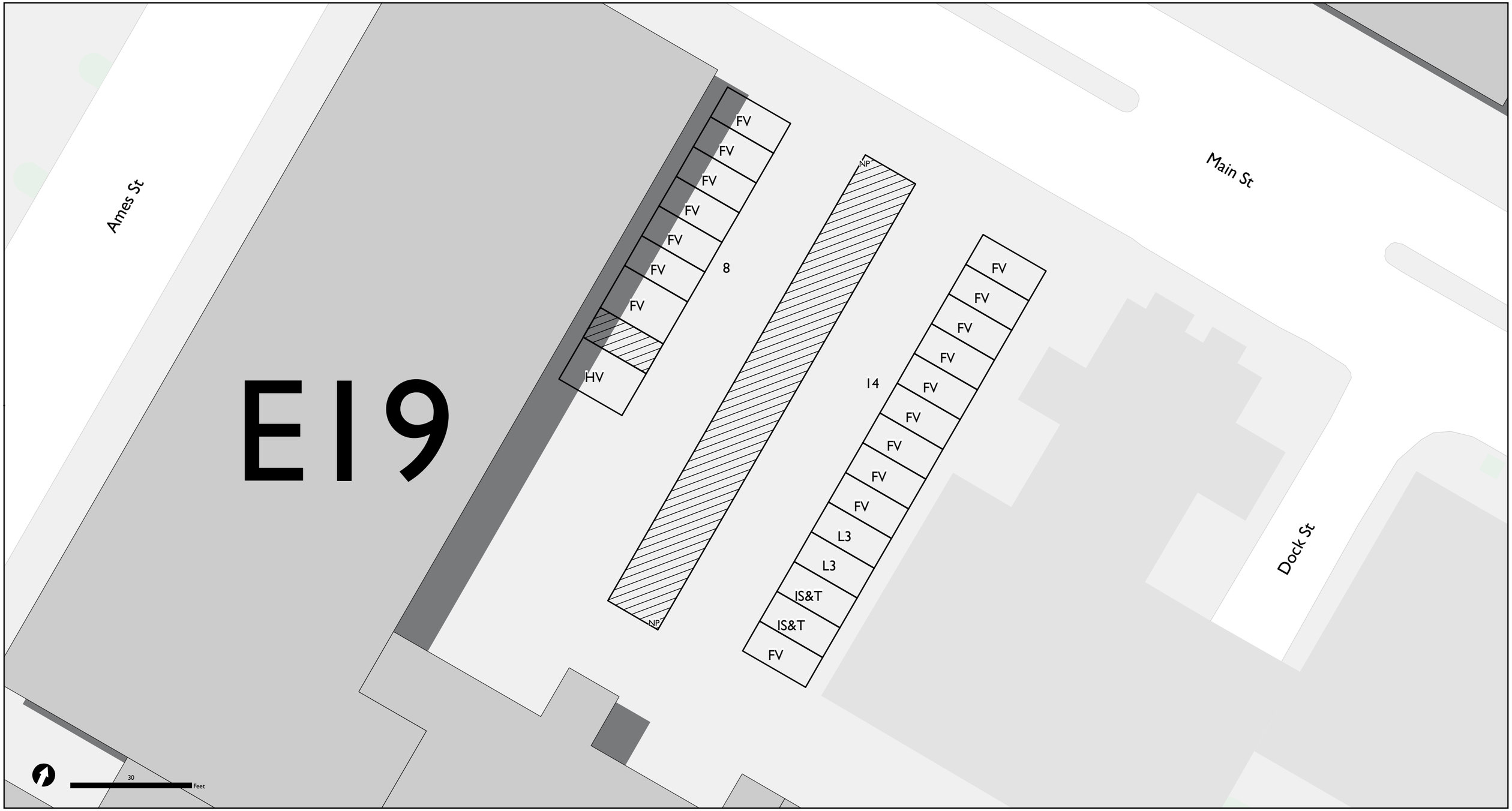


MIT Department of FACILITIES

2014-2015 Parking Inventory: L5

Hayward Lot - Hayward St - 49 Spaces

Sources:
Basemap: Facility Information Systems (2014)

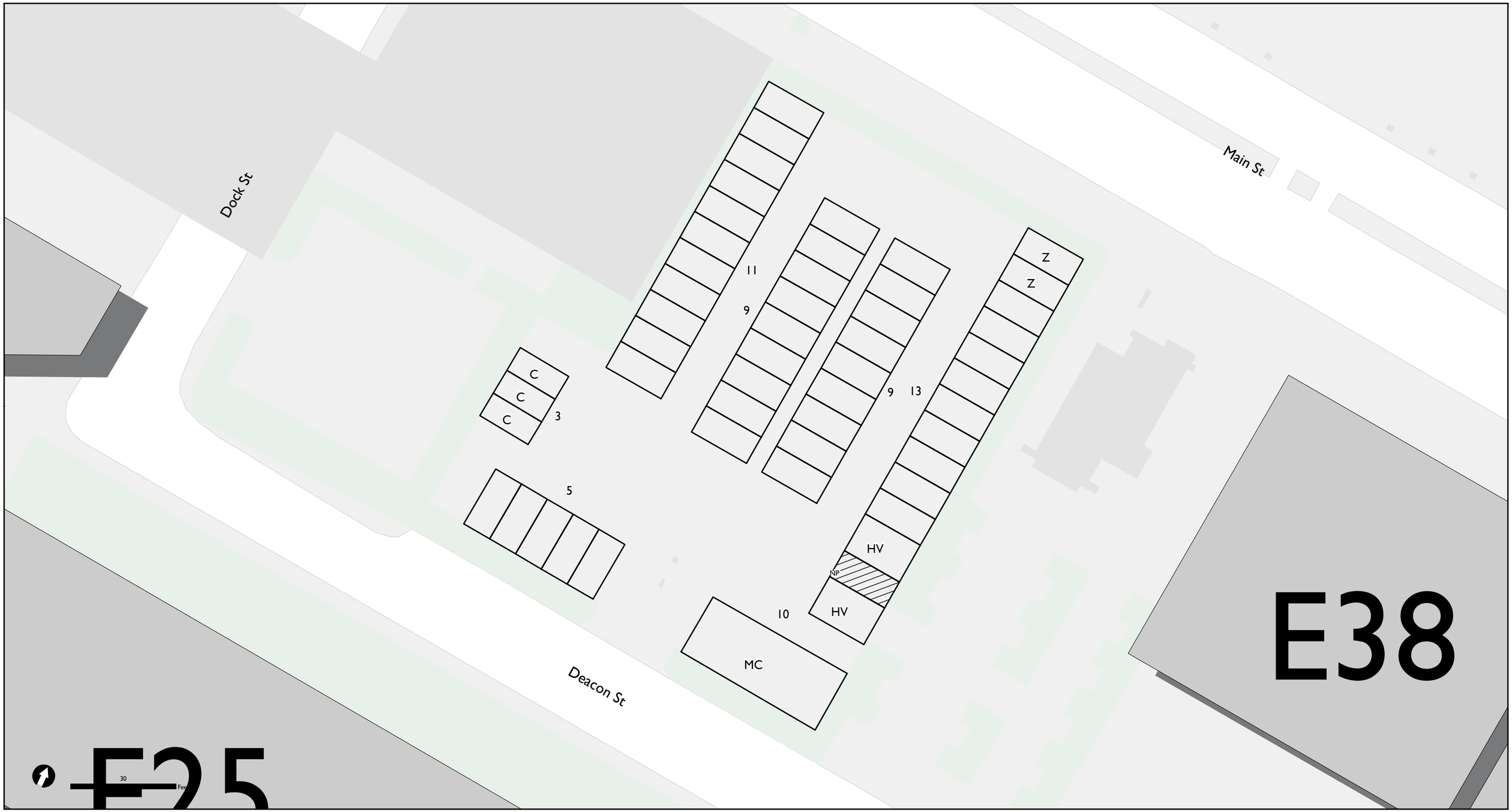


MIT Department of FACILITIES

2014-2015 Parking Inventory: L9

Ford Lot - 370 Main St - 22 Spaces

Sources:
Basemap: Facility Information Systems (2014)

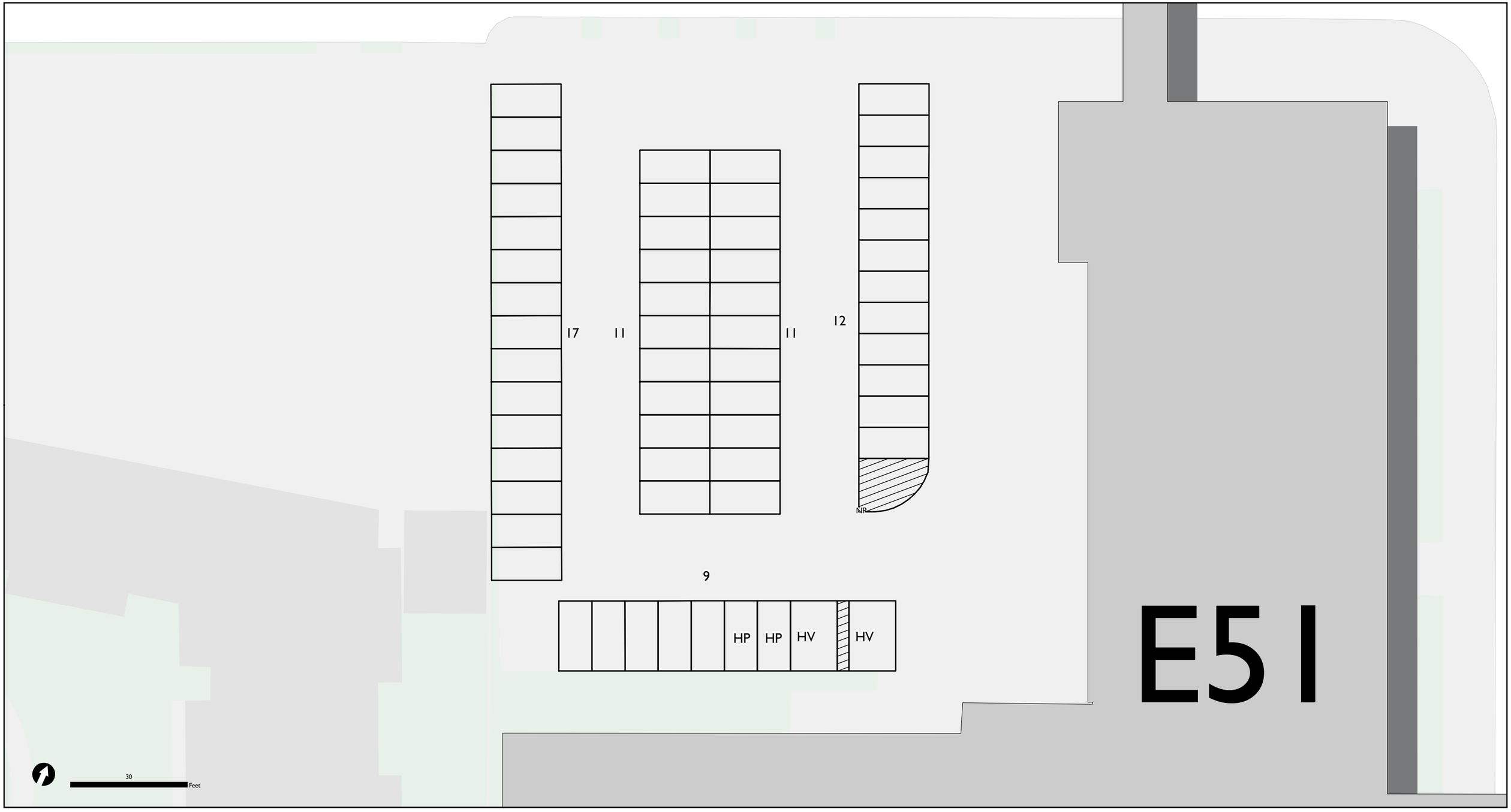


MIT Department of FACILITIES

2014-2015 Parking Inventory: L12

Kendall Sq Lot - 13 Charlotte's Way - 60 Spaces

Sources:
Basemap: Facility Information Systems (2014)

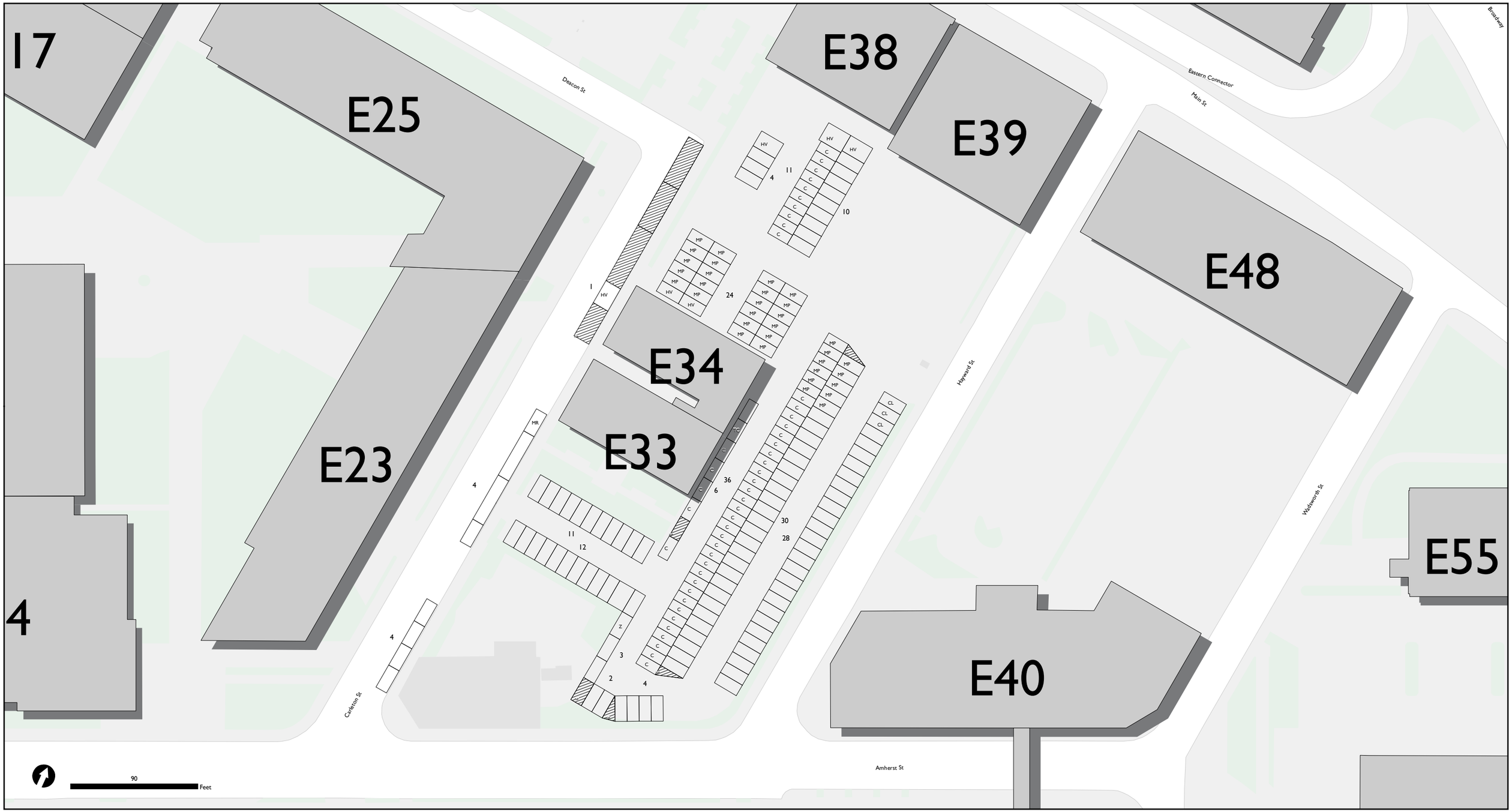


MIT Department of FACILITIES

2014-2015 Parking Inventory: L13

Amherst St Lot - 21 Amherst St - 60 Spaces

Sources:
Basemap: Facility Information Systems (2014)

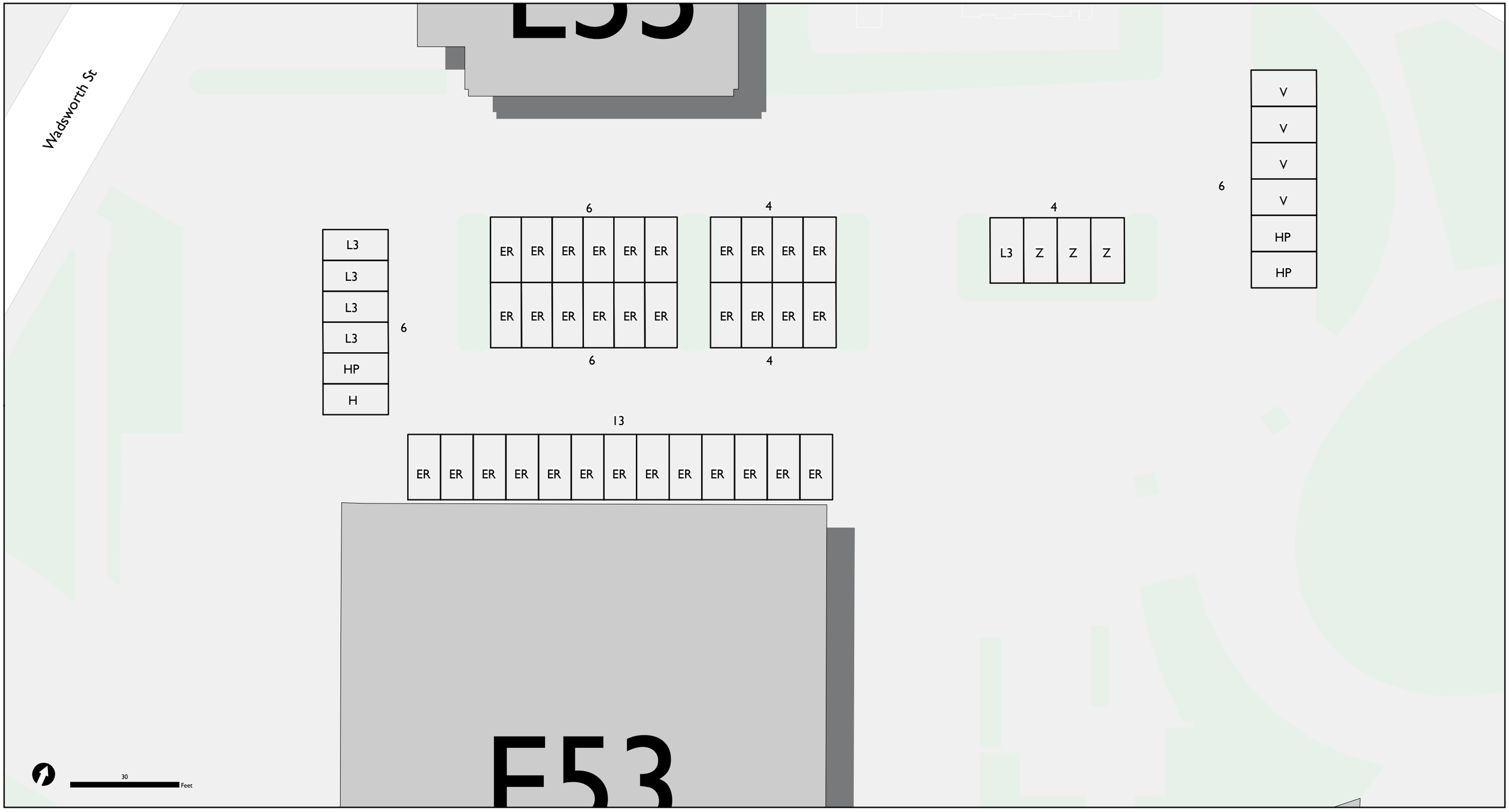


MIT Department of FACILITIES

2014-2015 Parking Inventory: L22

Hayward Lot - 21 Hayward St - 189 Spaces

Sources:
Basemap: Facility Information Systems (2014)



MIT Department of FACILITIES

2014-2015 Parking Inventory: L23

Sloan Lot - 170 Main St - 49 Spaces

Sources:
Basemap: Facility Information Systems (2014)

Ames Street Parking Utilization Data

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Wednesday 5/6/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
No parking	0	-	-	-	-	-	-	-	-	-	-	-	-	DHL Van 856	-	-	-	-	-	-	-	-	-	-
Meter	1	Thermo Dynamics Van 479	Thermo Dynamics Van 479	Thermo Dynamics Van 479	Thermo Dynamics Van 479	Thermo Dynamics Van 479	Thermo Dynamics Van 479		PC 5J1	PC 5J1	PC 5J1	PC KV5	PC KV5	PC KV5	-	PC 795	PC 795	-	-	PC A41	PC A41	PC A41	PC G6V	PC G6V
Meter	2	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC XAL	PC JY5	PC JY5	PC JY5	-	PC 364	PC 364	PC 364	PC 364
Meter	3	PC 2JW	PC 2JW	PC 2JW	PC 2JW	PC 2JW	PC E90	PC E90	PC E90	PC E90	PC E90	PC E90	PC A40	PC A24	PC XK0	PC XK0	PC XK0	-	-	PC F52	PC F52	PC F52	PC F52	-
Meter	4	PC 487	PC 487	-	PC TN4	PC TN4	PC TN4	PC FT9	PC FT9	PC FT9	-	PC ZP8	PC ZP8	PC ZP8	PC FJ9	PC FJ9	PC FJ9	PC FJ9	-	PC 959	PC 95A	PC 95A	-	PC KK2
Meter	5	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	DEI Systems Van 489	PC S43	PC S43	PC S43	PC S43	PC S43	PC S43	-	PC Z86
Meter	6	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	DEI Systems Van 485	PC VX9	PC VX9	PC VX9	PC VX9	-	-	-	PC R33
Meter	7	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	-	Pick-up Truck 801	Pick-up Truck 801	Pick-up Truck 801	-	PC 2P5	PC 2P5	PC 2P5	PC 2P5	-	PC 795	PC 795	PC 795	PC 74T
Meter	8	-	J+M Brown Comp Van 751	J+M Brown Comp Van 751	J+M Brown Comp Van 751	J+M Brown Comp Van 751	J+M Brown Comp Van 751	J+M Brown Comp Van 751	J+M Brown Comp Van 751	-	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	PC LX9	PC LX9	PC LX9	-	-	-	PC 5YM	PC 5YM	PC 143
Loading	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	10	PC S53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MIT Facility Van 368	-	-	-	-
Loading	11	-	-	-	-	Shon's Scientific Pick-up Truck 288	Shon's Scientific Pick-up Truck 288	Shon's Scientific Pick-up Truck 288	Shon's Scientific Pick-up Truck 288	-	J+M Brown Comp Van 751	-	Commercial Van 544	Au Bon Pan Van 130	-	-	PC A30	PC 4ZZ	PC 3JH	-	-	-	-	-
Meter	12	-	-	-	PC RZ9	PC RZ9	PC RZ9	PC RZ9	PC RZ9	PC RZ9	PC V62	PC V62	PC V62	PC V62	PC V62	PC V62	-	PC Y54	PC GP0	-	-	PC J35	PC J35	PC DX6
Meter	13	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 133	PC 133	PC H65	PC H65	PC H65	-	PC 948	-	PC ZS6
Meter	14	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	Boston Air Van 507	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	McPhee Electrical Van 941	-	-	-	PC 489	-
Meter	15	-	-	-	-	PC K12	PC K12	PC 732	PC 732	PC 732	PC 732	PC ZVK	PC ZVK	PC ZVK	PC ZVK	PC 720	PC 720	PC 720	-	PC POP	PC POP	PC POP	-	-
Meter	16	-	-	-	-	PC Y67	PC Y67	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA	PC HC PTA
Meter	17	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	Boston Air Truck 383	PC 219	PC 219	PC 219	PC 219	PC 219	PC BD3	PC BD3	PC BD3	PC BD3
N/A	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Scooter 760	Scooter 760	Scooter 760	Scooter 760
Handicap	18	-	-	-	-	-	PC HC LM3	PC HC LM3	PC HC LM3	PC HC LM3	PC HC LM3	PC HC LM3	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	PC HC OCF	-	-
Handicap	19	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	PC HC 21Q	-	PC HC 45P	PC HC 45P	PC HC 45P	-	-	-	-	-
Loading	20	-	-	-	-	-	-	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	Siemens Van 0Z9	-	-	-	-	-	-	-
Loading	21	-	-	-	-	-	-	-	-	-	-	-	JP Licks Van 697	-	-	-	-	-	-	-	-	-	-	-
Loading	22	-	-	-	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	McPhee Pick-up 072	-	-	PC (Uber? Pick up passenger) AP5	-	-	-	-	-	-	-	FedEx Express 647	-
Meter	23	-	PC Cons? Y87	-	-	Pick-up Truck Commercial 017	Pick-up Truck Commercial 017	Pick-up Truck Commercial 017	Pick-up Truck Commercial 017	PC G90	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	PC GE1	-
Meter	24	-	-	-	-	PC K50	PC K50	PC 180	PC GJ1	PC GJ1	PC GJ1	PC GJ1	PC GJ1	PC GJ1	PC GJ1	PC GJ1	-	-	-	PC 751	PC 751	PC 751	PC 751	PC 751

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Wednesday 5/6/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Meter	25	PC K16	PC K16	PC K16	PC K16	PC VN8	PC VN8	PC VN8	Van 200	Van 200	Van 200	Van 200	Van 200	PC 852	PC 852	PC 852	PC 852	PC 852	PC 852	PC 852	PC 852	PC 852	PC 852	-
Meter	26	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	PC KE3	-	PC 994	PC 994	PC WH8	PC WH8	PC WH8	-	-
Meter	27	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC Commercial Van 482	PC 629	PC 629	PC 629	PC 629	PC 629	PC 629	PC 629	PC 629	-	PC WKC
Meter	28	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	PC HC LDO	-	PC SG3	PC X90	PC X90	PC X90	PC X90	PC X90	PC X90
Loading	29	-	-	-	-	-	-	-	Siemens Van 237	Siemens Van 237	Siemens Van 237	Siemens Van 237	Siemens Van 237	Siemens Van 237	Siemens Van 237	Siemens Van 237	PC 423	-	-	-	-	-	-	-
Loading	30	-	-	-	Casella Dump Truck	-	-	PC Allegheny Contract 825	PC Allegheny Contract 825	-	-	-	Milk Street Café Van 326	-	-	-	-	-	-	-	-	-	-	-
No parking	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	32	EHS 750	EHS 750	EHS 750	-	-	-	PC Pick-up Truck Z11	PC Pick-up Truck Z11	PC Pick-up Truck Z11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	33	EHS ZF1	EHS ZF1	EHS ZF1	-	-	-	PC 398	Pick-up Truck Commercial NER 972	-	-	-	Commercial NER 818	-	-	-	-	-	-	-	-	-	-	-
Loading	34	-	-	-	Shaughnessy and Altern Pick-up Truck 561	Shaughnessy and Altern Pick-up Truck 561	-	-	-	-	-	-	-	Commercial NER 818	Commercial NER 818	-	-	-	-	PC WR2	-	-	-	-
Fire Hydrant	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter	36	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	PC HYC	-	PC 081	-	PC 865	PC 865	-	-	-
Meter	37	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	PC 233	-	-	-	PC WH6	PC WH6	-	-	-
Meter	38	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	PC W46	-	-	PC 258	-	PC 8TD	-	-	-	-
Meter	39	PC D81	PC D81	PC D81	PC D81	PC D81	PC D81	PC D81	PC D81	PC D81	PC D81	PC EN4	PC EN4	PC EN4	-	PC B66	-	-	-	PC Livery 511	PC Livery 511	-	-	-
Meter	40	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	PC HC G10	AL+L Driving Academy PC 997	AL+L Driving Academy PC 997	AL+L Driving Academy PC 997	PC N70	-	PC 331	PC 331	-	-	-
Meter	41	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC KTI Double Parked with PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC HC P40	PC 6YN	PC 6YN	PC 6YN	PC 443	PC 443	-	-	-	-
Permit Parking	42	-	-	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R48	PC R56	PC R56
Permit Parking	43	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	PC ET4	-	-	-	-	-	PC ET3	PC ET3
Permit Parking	44	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	PC WJB	-	PC GC4	PC GC4	PC GC4	-	-	-
Permit Parking	45	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7	PC GC7
Permit Parking	46	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	PC HP1	-	-	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5
Permit Parking	47	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	PC AK9	-	-	-	-	PC 955	PC 955	PC 955
Permit Parking	48	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC R60	PC c90	-	PC SF8	PC SF8	PC SF8
Permit Parking	49	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83	PC Y83
Permit Parking	50A	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587	PC 587

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Wednesday 5/6/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Permit Parking	50B	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469	PC 469
Permit Parking	51A	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80	PC B80
No Parking	51B	-	-	-	-	-	PC Car Drop-off	PC 420	-	MIT Facilities Van 621	MIT Facilities Van 621	-	-	-	-	-	-	-	-	-	-	PC in NS	-	-
Meter	52	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	PC GT8	-	-	-	PC AW6	PC AW6	PC AW6	-	-
Meter	53	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	PC EJ8	-	PC YC9	PC YC9	PC YC9	PC YC9	PC YC9	PC YC9	-	-
Meter	54	-	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	PC HC RR9	-	-	-	-	-	PC YD9
Meter	55	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184 (received ticket)	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	PC HC 184	-	PC 598	PC 598
Meter	56	-	PC ZM6	PC ZM6	PC ZM6	PC ZM6	PC ZM6	PC 452	PC 452	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC ZG7	PC 539	PC 539	PC 151
No parking	57	-	-	-	-	-	-	-	Driveway MIT Facility club catering backed into loading dock	-	-	-	-	MIT Facility Club Catering 128 (loading dock)	-	-	PC B6G Driver in car	-	-	-	-	-	-	-
Meter	58	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	PC HC XZ6	-	PC SG3	PC SG3	PC SG3	-	-	-
Meter	59	-	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB (received ticket)	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB	PC 2AB	-	-	-	-	-	-	-	-
Fire Hydrant	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PC 754 Driver in Car	-	-	-
Meter	61	-	-	PC BL5	PC BL5	PC BL5	PC GZK	PC GZK	PC GZK	PC GZK	PC GN5	PC GN5	PC GN5	PC GN5	PC JP3	PC JP3	-	-	PC V50	PC V50	PC V50	PC V50	PC V50	-
Meter	62	-	Excel HVAC Pick-up 291	Excel HVAC Pick-up 291	Excel HVAC Pick-up 291	Excel HVAC Pick-up 291	Excel HVAC Pick-up 291	PC 2CL	PC 2CL	PC 2CL	PC 2CL	PC Y87	PC Y87	-	Commercial Van 428	-	PC SY1	PC SY1	-	-	-	-	-	-
Meter	63	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	Work pick-up truck with lights 7PJ	-	PC GV5	PC GV5	PC GV5	PC GV5	-	PC E30	PC E30	PC E30	PC E30
Meter	64	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	Pick-up GL4 (cons?)	-	PC EDS	PC EDS	PC EDS	-	PC 971	PC 972	PC 973	-	PC WRB
No parking	65A	-	-	-	-	PC WR8 quick stop car running driver in vehicle	-	-	-	Shred It Truck	PC LV6 driver in vehicle	-	-	-	-	-	-	-	MIT Shuttle PC 2LV	MIT Shuttle and MIT information services 988	-	-	-	-
Meter	65B	-	-	PC 012	PC 012	PC 510	PC 510	PC 510	PC 510	PC 510	PC 510	PC 510	PC 510	Van 984	Van 984	Van 984	-	-	PC 836	PC 836	PC 836	-	-	PC 852
Meter	66	PC R72	-	-	PC CEX	PC CEX	PC CEX	PC CEX	-	PC NC4	PC NC4	PC NC4	PC ZF9	PC ZF9	-	-	PC 220	PC 220	PC 220	PC 220	PC 220	PC 220	-	PC ZT8
Handicap	67	-	-	PC HC OUF	PC HC OUF	PC HC OUF	PC HC OUF	PC HC OUF	PC HC OUF	PC HC OUF	PC HC 488	PC HC 488	PC HC 488	PC HC 488	-	-	-	-	-	-	PC HC 476	-	PC HC GW4	PC HC GW4
Handicap	68	Boston Air Pickup HC 560	Boston Air Pickup HC 560	Boston Air Pickup HC 560	Boston Air Pickup HC 560	Boston Air Pickup HC 560	PC HC ND9	PC HC ND9	PC HC ND9	PC HC ND9	PC HC ND9	PC HC ND9	PC HC ND9	-	-	-	-	-	-	PC HC 765	PC HC 765	PC HC 765	PC HC 765	PC HC 765
Handicap	69	-	-	-	-	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12	PC HC Y12
Meter	70	-	-	PC PMH	PC PMH	PC PMH	PC PMH	PC Z87	PC Z87	Fabrizo Commercial Pick-up Truck 101	PC 6CD	PC 6CD	PC 6CD	PC 6CD	PC 6CD	PC 6CD	-	-	-	-	-	PC 874	PC 874	PC 874
Meter	71	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	PC 682	Harris 528	PC Commercial RAC 850	PC Commercial RAC 850	-	PC VX9	-	PC 846	PC 846
Meter	72	PC FJ9	PC FJ9	PC FJ9	PC FJ9	PC FJ9	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	PC 829	-	-
Meter	73	-	-	-	-	Commercial PC 346	Commercial PC 347	Commercial PC 348	Commercial PC 349	Commercial PC 350	Commercial PC 351	Commercial PC 352	PC 5DD	PC 5DD	PC 5DD	PC 441	PC 441	PC 441	-	PC 450	PC 450	-	-	-

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Wednesday 5/6/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Meter	74	PC TE4	PC TE4	PC TE4	PC TE4	PC TE4	PC TE4	PC 211	PC 211	-	PC L10	PC L10	PC L10	Commercial Van 382	-	PC XJ6	PC XJ6	PC XJ6	PC XJ6	PC 436	PC 436	-	-	-
Meter	75	-	-	PC 8EC	PC 8EC	PC 8EC	-	PC SN6	PC PMH	PC PMH	PC PMH	PC PMH	PC PMH	PC PMH	PC PMH	PC PMH	-	-	PC HC EN4	PC HC EN4	PC HC EN4	PC HC EN4	PC HC EN4	PC HC EN4
Meter	76	-	-	PC 542	PC 542	PC 542	PC 542	PC EN4	PC EN4	PC EN4	PC JN6	PC JN6	PC JN6	PC JN6	PC NWZ	PC NWZ	PC NWZ	PC EK5	PC EK5	PC EK5	PC EK5	-	-	-
Meter	77	Colonial Systems Inc Van 715	-	-	PC ZZ6	PC ZZ6	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	PC JH3	Clover Commercial Van 382	Clover Commercial Van 382	-	PC SZ1	PC ZG6	PC ZG6
Meter	78	-	-	-	-	-	PC 3PO	PC 3PO	PC 004	PC 004	Commercial Pick-up Truck 137	Commercial Pick-up Truck 137	PC LH8	PC LH8	PC LH8	PC LH8	PC LH8	PC LH8	PC LH8	-	-	-	-	-
Meter	79	-	-	-	-	-	PC 24C	PC 24C	PC 975	PC 975	PC 975	PC 975	Schneider Electric Van 829	Schneider Electric Van 829	Schneider Electric Van 829	Schneider Electric Van 829	PC PMH	PC PMH	PC PMH	PC PMH	-	-	-	-

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Saturday 5/9/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
No parking	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter	1	-	-	-	-	PC SJ1	PC SJ1	PC SJ1	PC SJ1	PC SJ1	PC SJ1	PC E57	PC E57	PC YL7	PC YL7	PC 990	PC XOK	PC XOK	PC XOK	PC XOK	-	PC G80	-	PC P90
Meter	2	-	-	-	-	-	PC 099	PC 099	PC 099	PC 099	PC 099	PC 099	PC 099	PC 099	PC 099	PC 099	-	PC HJW	PC HJW	PC HJW	-	-	PC ZD1	PC ZD1
Meter	3	-	-	-	-	SUV PC MG8	SUV PC MG8	SUV PC MG8	PC BTF	PC BTF	PC BTF	PC BTF	-	PC 145	PC 145	PC 145	-	PC WW9	-	-	-	PC 343	-	PC 639
Meter	4	-	-	-	-	PC 358	PC 358	PC 358	PC 358	PC 358	PC 358	PC 5J1	PC 5J1	-	-	-	-	PC EJ9	PC EJ9	PC EJ9	PC 680	-	-	PC YAZ
Meter	5	-	-	-	A+M Fire Protection Van 920	A+M Fire Protection Van 920	A+M Fire Protection Van 920	-	PC 6AE	PC 6AE	PC 6AE	PC 6AE	-	PC 138	PC 138	-	PC 693	PC 693	PC 693	PC 693	PC 693	-	-	-
Meter	6	PC 896	PC 896	PC 896	PC 896	PC 896	PC 896	PC 896	PC 896	PC 896	PC 896	-	PC T80	PC T80	PC T80	PC T80	PC T80	-	-	-	-	-	-	-
Meter	7	-	-	-	-	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT	PC 1CT (ticket)	PC 1CT	PC 1CT	-	-	-	-	PC ZN5
Meter	8	-	-	-	-	-	-	PC 947	PC 947	PC 947	PC VX9	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2	PC HE2
Loading	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PC ZVK	-	-	-	-	-
Loading	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	11	-	-	-	-	-	-	-	-	-	-	PC K10	-	-	-	-	-	-	-	-	PC 650	-	-	-
Meter	12	-	DEI Systems Van 485	-	-	-	-	PC F23	PC F23	PC F23	PC F23	PC SX1	PC SX1	-	-	-	-	-	PC ZB4	PC ZB4	PC 687	-	-	-
Meter	13	-	-	-	-	-	-	PC 41M	PC 41M	-	-	-	-	PC KN3	PC KN3	PC KN3	-	PC 371	PC 371	PC 371	PC 371	-	-	-
Meter	14	-	-	-	-	-	-	-	-	PC ZB6	PC ZB6	PC ZB6	PC CEM	PC CEM	PC CEM	-	PC BZ1	PC BZ1	-	-	-	-	-	-
Meter	15	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	PC 5XX	-	-	PC XZ1	PC XZ1	PC XZ1	PC XZ1	PC XZ1	PC XZ1	-	-	-	PC 932	PC 932	PC 932	PC 932
Meter	16	-	-	-	-	-	-	-	-	-	PC GX4	PC GX4	PC GX4	PC GX4	PC GX4	PC PP5	PC PP5	PC B75	PC B75	PC B75	PC B75	-	-	-
Meter	17	-	-	-	-	-	-	-	-	-	PC RR1	PC RR1	-	PC 087	PC 087	PC 087	PC 087	PC 087	PC 087	PC 087	PC RM2	PC RM2	PC RM2	PC RM2
N/A	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Handicap	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Handicap	19	PC HC 309	PC HC 309	PC HC 309	PC HC 309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Cambrdige Traffic and Parking B58	Cambrdige Traffic and Parking B58	-	-	-	-
Loading	22	PC SG6	PC SG6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter	23	-	-	PC 830	-	-	-	-	-	PC AP1	PC LX5	-	PC L87	PC L87	-	-	-	-	-	-	PC EPT	PC EPT	-	PC CZ3
Meter	24	-	-	PC MK2	-	-	-	PC OPN	PC OPN	PC OPN	PC OPN	-	PC LT4	PC LT4	PC LT4	PC LT4	-	-	PC 669	PC 669	PC 669	PC 669	PC 669	-

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Saturday 5/9/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Meter	25	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL (ticket)	PC HUL	PC HUL	PC HUL	PC HUL	PC HUL	PC 409
Meter	26	-	-	-	-	-	-	-	PC 84V	PC 84V	PC 84V	PC 84V	-	PC 018	PC 018	PC 018	PC 018	PC 018 (ticket)	PC 018	PC 018	PC 018	-	-	PC SG5
Meter	27	-	-	-	-	-	-	PC W30	PC W30	PC W30	-	PC 38N	PC 38N	PC 38N	PC 38N	PC 38N	PC 38N	-	-	PC 028	PC 028	PC 028	PC 028	PC 028
Meter	28	-	-	-	-	PC OXO	PC OXO	PC OXO	PC OXO	PC OXO	PC OXO	PC OXO	-	-	-	-	-	-	-	-	-	PC DT3	PC DT3	PC DT3
Loading	29	Boston Coach Bus 492	-	-	-	-	-	-	-	-	PC 228 driver in vehicle	-	Party center truck 918	Party center truck 918	Party center truck 918	Party center truck 918	-	-	-	-	-	-	Party center truck 918	-
Loading	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No parking	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loading	33	-	-	-	-	-	-	-	-	-	-	-	PC YY1 driver in vehicle	-	-	-	-	-	-	-	-	-	PC SC7 idling	PC SC7 idling
Loading	34	-	-	-	-	-	-	-	-	-	PC 180 Schnider Elevator	-	-	-	-	Whole Foods Catering Van 950	-	-	-	-	-	-	-	-
Fire Hydrant	35	-	-	-	-	-	-	-	-	-	-	-	-	-	PC C33 driver in vehicle	-	-	-	-	-	-	-	-	-
Meter	36	-	-	-	-	-	-	-	-	PC YL8	PC YL8	PC YL8	PC YL8	PC YL8	PC YL8	PC YL8	PC YL8 (ticket)	PC 572	-	PC S50	PC S50	PC S50	PC S50	PC S50
Meter	37	-	-	-	-	-	-	-	-	-	-	PC 330	PC A87	PC AB7	PC R10	PC R10	PC E90	PC E90	PC E90	PC E90	PC E90 (ticket)	PC E90	PC G20	PC G20
Meter	38	-	-	-	-	-	-	-	-	-	PC G53	PC G53	PC G53	PC G53	-	PC W90	PC W90	PC W90	-	-	PC 5H9 (ticket)	PC 5H9	PC 5H9	PC 5H9
Meter	39	-	-	-	-	-	-	-	PC 829	PC 829	PC 75A	PC 75A	PC 75A	PC 75A	PC 75A	PC 75A	PC 75A (ticket)	PC 75A	-	-	PC SSW	PC SSW	PC SSW	PC SSW
Meter	40	-	-	-	-	PC L60	-	-	PC J40	-	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC 80C	PC EC5	PC EC5	PC EC5
Meter	41	-	-	-	-	-	-	-	PC 533	-	PC G38	PC G38	-	PC 1JF	PC 1JF	PC 1JF	PC MIU	PC MIU	PC MIU	PC MIU	PC TOI	PC TOI	PC TOI	PC TOI
Permit Parking	42	-	-	-	-	-	-	-	-	-	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	PC YR5	-	-	-	PC YF6
Permit Parking	43A	-	-	-	-	-	-	-	-	-	-	-	PC 150	PC 150	PC 150	-	-	-	-	-	PC 3KD	PC 3KD	PC 3KD	PC 3KD
Permit Parking	43B	-	-	-	-	-	-	-	-	-	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41	PC S41
Permit Parking	44	-	-	-	-	-	-	-	PC PL6	PC PL6	PC PL6	-	PC WD9	PC WD9	PC WD9	-	-	-	-	-	PC TW1	-	-	-
Permit Parking	45	-	-	-	-	-	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	PC RJ5	-	-	-	-
Permit Parking	46	-	-	-	-	PC GP9	-	PC NX3	PC NX3	PC NX3	PC NX3	PC NX3	PC NX3	PC NX3	PC NX3	PC NX3	-	-	-	PC NV5	PC NV5	PC NV5	-	-
Permit Parking	47	-	-	-	-	PC 698	-	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	PC WWZ	-	-	-	-	PC R85
Permit Parking	48	-	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	PC PX6	-	PC SN6	PC SN6	PC SN6	PC SN6	PC SN6
Permit Parking	49	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	PC 9PP	-	PC VV8

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Saturday 5/9/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Permit Parking	50	-	-	-	-	-	PC WF8	PC WF8	PC WF8	PC WF8	-	-	-	PC ET3	PC ET3	PC ET3	PC ET3	PC ET3	-	PC WP4	PC WP4	PC WP4	PC WP4	PC WP4
Permit Parking	50 & 51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MIT Facilities van double parked	-	-	-	-	-	-	-	-
Permit Parking	51	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	PC 698	-	PC 241	PC 241	PC 241	PC 241	PC 241
Meter	52	-	-	-	-	-	PC NW2	PC NW2	PC NW2	PC NW2	PC NW2	PC NW2	PC NW2	PC NW2	PC NW2	-	-	-	-	PC 291	-	PC 253	PC 253	PC 253
Meter	53	-	-	-	-	-	PC MVO	PC MVO	PC MVO	PC MVO	PC MVO	PC MVO	PC MVO	PC MVO	-	-	-	-	-	PC CTI	PC CTI	PC CTI	PC CTI	-
Meter	54	-	-	-	-	-	PC T89	PC T89	PC T89	PC T89	PC T89	PC T89	PC T89	PC EH7	-	PC DEY	PC DEY	PC DEY	PC DEY	PC 166	PC 166	PC 166	-	-
Meter	55	-	-	-	-	-	-	-	-	-	PC GPI	PC GPI	PC Z54	PC Z54	PC Z54	-	-	-	-	PC 266	PC 266	PC 266	-	-
Meter	56	-	-	-	-	-	-	PC FL7	PC FL7	PC FL7	PC 803	PC 803	PC 803	PC 325	PC 325	PC 325	-	-	-	PC 814	PC 814	PC 814	-	-
No parking	57	-	-	-	-	-	-	-	-	-	Party Center Truck	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter	58	-	-	-	-	-	-	-	PC GV3	PC GV3	-	PC W14	-	-	-	-	-	-	-	-	-	-	-	-
Meter	59	-	-	-	-	-	-	Catering van 755	-	PC H10	PC H10	PC H10	PC H10	PC H10	PC JK7	PC JK7	PC JK7	PC JK7 (ticket)	-	-	-	PC VK1	PC VK1	PC VK1
Fire Hydrant	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter	61	-	-	-	-	-	-	PC Z33	-	-	-	PC WV8	PC WV8	PC WV8	PC WV8	PC WV8	PC WV8	-	-	-	-	PC TJ7	-	-
Meter	62	-	-	-	-	-	-	-	-	-	-	-	-	PC 416	-	-	-	-	-	-	PC T43	PC T43	PC T43	PC T43
Meter	63	-	-	-	-	-	-	-	-	PC XV5	PC 967	PC 967	PC 967	PC 967	-	-	-	-	-	PC 584	PC 584 (ticket)	PC 584	PC 584	PC 584
Meter	64	-	-	-	-	-	-	PC 339	-	PC ZVZ	PC ZVZ	PC ZVZ	PC ZVZ	-	-	-	PC RD5	-	PC WRB	PC WRB	PC WRB	PC WRB	PC WRB	PC WRB
No parking	65A	-	-	-	-	-	-	-	-	-	-	-	MIT Shuttle Bus	-	-	-	-	-	-	-	-	-	-	-
Meter	65B	Commercial Van 179	Commercial Van 180	Commercial Van 181	Commercial Van 182	Commercial Van 183	Commercial Van 184	Commercial Van 185	Commercial Van 186	-	PC TK8	PC TK9	PC 522	PC 522	PC 522	PC 522	PC 522	PC 522 (ticket)	-	-	-	-	-	-
Meter	66	PC Pick-up Truck G27	PC Pick-up Truck G27	PC Pick-up Truck G27	PC Pick-up Truck G27	PC Pick-up Truck G27	PC Pick-up Truck G27	-	PC 749	-	PC PJ8	PC PJ8	PC PJ8	PC PJ8	PC PJ8	PC PJ8	PC PJ8	PC PJ8 (ticket)	PC PJ8	-	-	-	-	-
Handicap	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Handicap	67.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PC HC 288 Parked on ramp & ticket	-	-	-	-	-	-	-
Handicap	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PC 288	-	-	-	-	-	-	-	-
Handicap	69	-	-	-	-	-	-	-	PC HC E30	PC HC E30	PC HC E30	PC HC E30	PC HC E30	PC HC E30	-	-	-	-	-	-	-	-	-	PC 494 Passenger outside car then left
Meter	70	-	-	-	PC MX8	PC MX8	PC P40	PC P40	PC P40	-	-	-	PC 92L	-	-	PC JK1	-	Van CS2 (ticket)	Van CS2	-	-	PC 650	-	-
Meter	71	-	-	-	-	PC WJ7	PC WJ7	-	-	-	PC XB4	PC XB4	PC XB4	-	-	PC 687	PC 687	-	-	-	-	-	-	-
Meter	72	-	-	-	-	PC 3TX	PC 3TX	PC 3TX	PC 3TX	PC 95Z	PC 95Z	PC 95Z	PC 95Z	-	PC 913	PC 913	PC 913 (ticket)	-	-	-	-	-	-	PC 081

Ames Street Parking Turn-Over Study

Observer____SLW_____

Date_____Saturday 5/9/2015_____

Regulation	Space	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM
Meter	73	-	-	-	-	PC OZH	PC OZH	PC 627	PC 627	PC 627	-	PC VX9	PC VX9	PC GX6	PC GX6	-	-	-	-	-	-	-	-	PC YG2
Meter	74	-	-	-	-	-	-	-	-	-	-	PC G66	PC G66	-	-	-	PC HZB	-	-	PC PC6	PC PC6	PC PC6	PC PC6	-
Meter	75	Bay State Air HVAC van 640	Bay State Air HVAC van 640	Bay State Air HVAC van 640	Bay State Air HVAC van 640	-	-	PC OVJ	PC OVJ	PC OVJ	PC OVJ	PC 466	-	-	-	PC GW3	-	-	POC 052	POC 052	POC 052	-	-	-
Meter	76	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC Pick-up Truck TG3	PC 327	PC 327	PC 327	-	PC TSG	PC TSG	PC TSG	PC TSG	PC TSG	PC TSG	-	-	PC AMF
Meter	77	-	-	-	-	PC LN7	-	-	-	-	PC 109	PC 109	PC 109	PC 109	PC 109	PC 109	-	PC E01	PC E01	-	-	PC 303	PC 303	PC MZ5
Meter	78	-	-	-	-	-	PC MZ8	PC MZ8	PC MZ8	-	-	-	PC G20	PC G20	PC G20	-	PC HEG	-	-	-	-	PC MK2	PC MK2	PC MK2
Meter	79	-	-	-	PC 890	PC 890	PC 890	PC 890	PC 890	PC 890	PC 890	-	-	PC 451	PC 451	PC NT9	PC NT9	PC VAJ	PC VAJ	-	-	PC 556	PC 556	PC 556

Kendall Square Bicycle Parking Study Data

Time: Tuesday 5/06/2015 from 10:00am-11:30pm

Kendall Square Bike Analysis
(does NOT include MIT owned property + racks)

5/06/2015
Counted by A. Santiago

Region	Roadway	Reviewed Segment	Block Face	Location Code on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
West Side of Ames South of Main	Main St.	Windsor to Osborn	south	11	0										10
		Osborn to Portland	south		0										5
		Portland to Albany	south		0										13
		Albany to Vassar	south		4	1	2	1	3						5
		Vassar to Ames	south		20	12	24	20							12
		Totals			**24**	**13**	**26**	**21**	**3**	**0**	**0**	**0**	**0**	**0**	**45**
West Side of Ames North of Main	Main St.	Windsor to Portland	north	1	0										
		Portland to Galileo Galilei Way	north		9	9	18	9							19
		Galileo Galilei Way to Ames	north		2				1				1		5
		Totals			**11**	**9**	**18**	**9**	**1**	**0**	**0**	**0**	**1**	**0**	**24**
East Side of Ames South of Main	Main St.	Ames to Dock St.	south	10	1				1						3
		Dock St. to Hayward	south		16	4	16	14					2		7
		Hayward to Wadsworth	south		17	5	20	17							1
		Wadsworth to Bridge	south		0										
	Amherst St.	Ames St. to Carleton	north	13	3				3						10
		Carleton to Hayward	north	14	0										8
		Hayward to Wadsworth	north	17	7				5			2			3
		Ames St. to Wadsworth	south	12	8				8						
	Ames St.	Main St. to Amherset	east	18	22				13		1	7	1		21
			west		7				4			3			20
	Hayward	Main St. to Amherset	east	16	0										
			west		0										
	Wadsworth	Main St. to Amherset	east	9	3				3						
			west		1				1						12
	Carleton St / Dock St. (include ped	Main St. to Amherset	east	15	2				2						
			west		1									1	
		Totals			**88**	**9**	**36**	**31**	**40**	**0**	**1**	**12**	**3**	**1**	**85**

Region	Roadway	Reviewed Segment	Block Face	Location on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
East Side of Ames North of Main	Main St.	Ames to Main St. / Broadway	north	6	20 0	8	30	20							4
		Broadway to Bridge	north	7	34	4	32	29	4					1	8
	Broadway	Galileo Galilei Way to Ames/Ped path	north	19	0										
			south		6	2	4	4	1			1			4
		Ames to 3rd St. / Main St	north	3	3	13	26	3							
			south	4	7	17	34	7							4
	Ames St.	Main St. to Broadway	east	5	2				1			1			5
			west	2	20	1	2	2	7		6	4	1		9
	Main St.	Median / Fountain area	north & south	20	0	1	2								
		Totals			**92**	**46**	**130**	**65**	**13**	**0**	**6**	**6**	**1**	**1**	**34**
East Side of Ames North of Main	3rd St.	Broadway to Potter St.	west	21	0										
		Potter St. to Munroe St.	west		1				1						5
		Munroe St. to Binney St.	west		1				1						
		Broadway to Kendall St.	east		39	13	50	39							6
		Kendall St. to Athenaeum St.	east		0										
		Athenaeum St. to Binney St.	east		2				2						4
		Totals			**43**	**13**	**50**	**39**	**4**	**0**	**0**	**0**	**0**	**0**	
			Grand Total		**258**	**90**	**260**	**165**	**61**	**0**	**7**	**18**	**5**	**2**	**188**

Time: Tuesday 5/06/2015 from 11:30am-12:30pm

Kendall Square Bike Analysis
(does NOT include MIT owned property + racks)

5/06/2015
Counted by A. Santiago

Region	Roadway	Reviewed Segment	Block Face	Location Code on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
West Side of Ames South of Main	Main St.	Windsor to Osborn	south	11	0										10
		Osborn to Portland	south		0										5
		Portland to Albany	south		0										13
		Albany to Vassar	south		6	1	2	1	5						5
		Vassar to Ames	south		20	12	24	20							12
		Totals			**26**	**13**	**26**	**21**	**5**	**0**	**0**	**0**	**0**	**0**	**45**
West Side of Ames North of Main	Main St.	Windsor to Portland	north	1	0										
		Portland to Galileo Galilei Way	north		15	9	18	12	2		1				19
		Galileo Galilei Way to Ames	north		7				3			2	2		5
		Totals			**22**	**9**	**18**	**12**	**5**	**0**	**1**	**2**	**2**	**0**	**24**
East Side of Ames South of Main	Main St.	Ames to Dock St.	south	10	0										3
		Dock St. to Hayward	south		15	4	16	12		1		1	1		7
		Hayward to Wadsworth	south		19	5	20	19							1
		Wadsworth to Bridge	south		0										
	Amherst St.	Ames St. to Carleton	north	13	8				7			1			10
		Carleton to Hayward	north	14	3				2			1			8
		Hayward to Wadsworth	north	17	8				8						3
		Ames St. to Wadsworth	south	12	7				7						
	Ames St.	Main St. to Amherset	east	18	21				12		1	7	1		21
			west		8				4			4			20
	Hayward	Main St. to Amherset	east	16	0										
			west		0										
	Wadsworth	Main St. to Amherset	east	9	3				3						
			west		1				1						12
	Carleton St / Dock St. (include ped	Main St. to Amherset	east	15	4				3	1					
			west		4				3					1	
		Totals			**101**	**9**	**36**	**31**	**50**	**2**	**1**	**14**	**2**	**1**	**85**

Region	Roadway	Reviewed Segment	Block Face	Location on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
East Side of Ames North of Main	Main St.	Ames to Main St. / Broadway	north	6	22 0	8	30	21	1						4
		Broadway to Bridge	north	7	35	4	32	29	4					2	8
	Broadway	Galileo Galilei Way to Ames/Ped path	north	19	3			3							
			south		7	2	4	7							4
		Ames to 3rd St. / Main St	north	3	0	13	26								
			south	4	6	17	34	4	1			1			4
	Ames St.	Main St. to Broadway	east	5	2				1			1			5
			west	2	25	1	2	2	8		8	5	2		9
	Main St.	Median / Fountain area	north & south	20	1	1	2	1							
		Totals			**101**	**46**	**130**	**67**	**15**	**0**	**8**	**7**	**2**	**2**	**34**
East Side of Ames North of Main	3rd St.	Broadway to Potter St.	west	21	0										
		Potter St. to Munroe St.	west		2				2						5
		Munroe St. to Binney St.	west		0										
		Broadway to Kendall St.	east		44	13	50	44							6
		Kendall St. to Athenaeum St.	east		0										
		Athenaeum St. to Binney St.	east		3				3						4
		Totals			**49**	**13**	**50**	**44**	**5**	**0**	**0**	**0**	**0**	**0**	
			Grand Total		**299**	**90**	**260**	**175**	**80**	**2**	**10**	**23**	**6**	**3**	**188**

Time: Tuesday 5/06/2015 from 12:30am-2:15pm

Kendall Square Bike Analysis
(does NOT include MIT owned property + racks)

5/06/2015
Counted by A. Santiago

Region	Roadway	Reviewed Segment	Block Face	Location Code on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
West Side of Ames South of Main	Main St.	Windsor to Osborn	south	11	0										10
		Osborn to Portland	south		0										5
		Portland to Albany	south		0										13
		Albany to Vassar	south		9	1	2	1	7			1			5
		Vassar to Ames	south		24	12	24	24							12
		Totals			**33**	**13**	**26**	**25**	**7**	**0**	**0**	**1**	**0**	**0**	**45**
West Side of Ames North of Main	Main St.	Windsor to Portland	north	1	0										
		Portland to Galileo Galilei Way	north		8	9	18	6	2						19
		Galileo Galilei Way to Ames	north		7				4				3		5
		Totals			**15**	**9**	**18**	**6**	**6**	**0**	**0**	**0**	**3**	**0**	**24**
East Side of Ames South of Main	Main St.	Ames to Dock St.	south	10	1				1						3
		Dock St. to Hayward	south		13	4	16	9	2				2		7
		Hayward to Wadsworth	south		20	5	20	20							1
		Wadsworth to Bridge	south		0										
	Amherst St.	Ames St. to Carleton	north	13	5				5						10
		Carleton to Hayward	north	14	0										8
		Hayward to Wadsworth	north	17	10				9			1			3
		Ames St. to Wadsworth	south	12	11				10				1		
	Ames St.	Main St. to Amherset	east	18	30				17		2	10	1		21
			west		5				2			2		1	20
	Hayward	Main St. to Amherset	east	16	2				2						
			west		0										
	Wadsworth	Main St. to Amherset	east	9	3				3						
			west		1				1						12
	Carleton St / Dock St. (include ped	Main St. to Amherset	east	15	4				2	2					
			west		3				2					1	
		Totals			**108**	**9**	**36**	**29**	**56**	**2**	**2**	**13**	**4**	**2**	**85**

Region	Roadway	Reviewed Segment	Block Face	Location on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
East Side of Ames North of Main	Main St.	Ames to Main St. / Broadway	north	6	23 0	8	30	23							4
		Broadway to Bridge	north	7	34	4	32	27	4					3	8
	Broadway	Galileo Galilei Way to Ames/Ped path	north	19	0										
			south		5	2	4	3	1			1			4
		Ames to 3rd St. / Main St	north	3	3	13	26	3							
			south	4	6	17	34	6							4
	Ames St.	Main St. to Broadway	east	5	3				2			1			5
			west	2	20	1	2	2	7		5	4	2		9
	Main St.	Median / Fountain area	north & south	20	0	1	2								
		Totals			**94**	**46**	**130**	**64**	**14**	**0**	**5**	**6**	**2**	**3**	**34**
East Side of Ames North of Main	3rd St.	Broadway to Potter St.	west	21	0										
		Potter St. to Munroe St.	west		3				3						5
		Munroe St. to Binney St.	west		1				1						
		Broadway to Kendall St.	east		46	13	50	45	1						6
		Kendall St. to Athenaeum St.	east		0										
		Athenaeum St. to Binney St.	east		6				5			1			4
		Totals			**56**	**13**	**50**	**45**	**10**	**0**	**0**	**1**	**0**	**0**	
			Grand Total		**306**	**90**	**260**	**169**	**93**	**2**	**7**	**21**	**9**	**5**	**188**

Time: Tuesday 5/06/2015 from 2:15am-3:45pm

Kendall Square Bike Analysis
(does NOT include MIT owned property + racks)

5/06/2015
Counted by A. Santiago

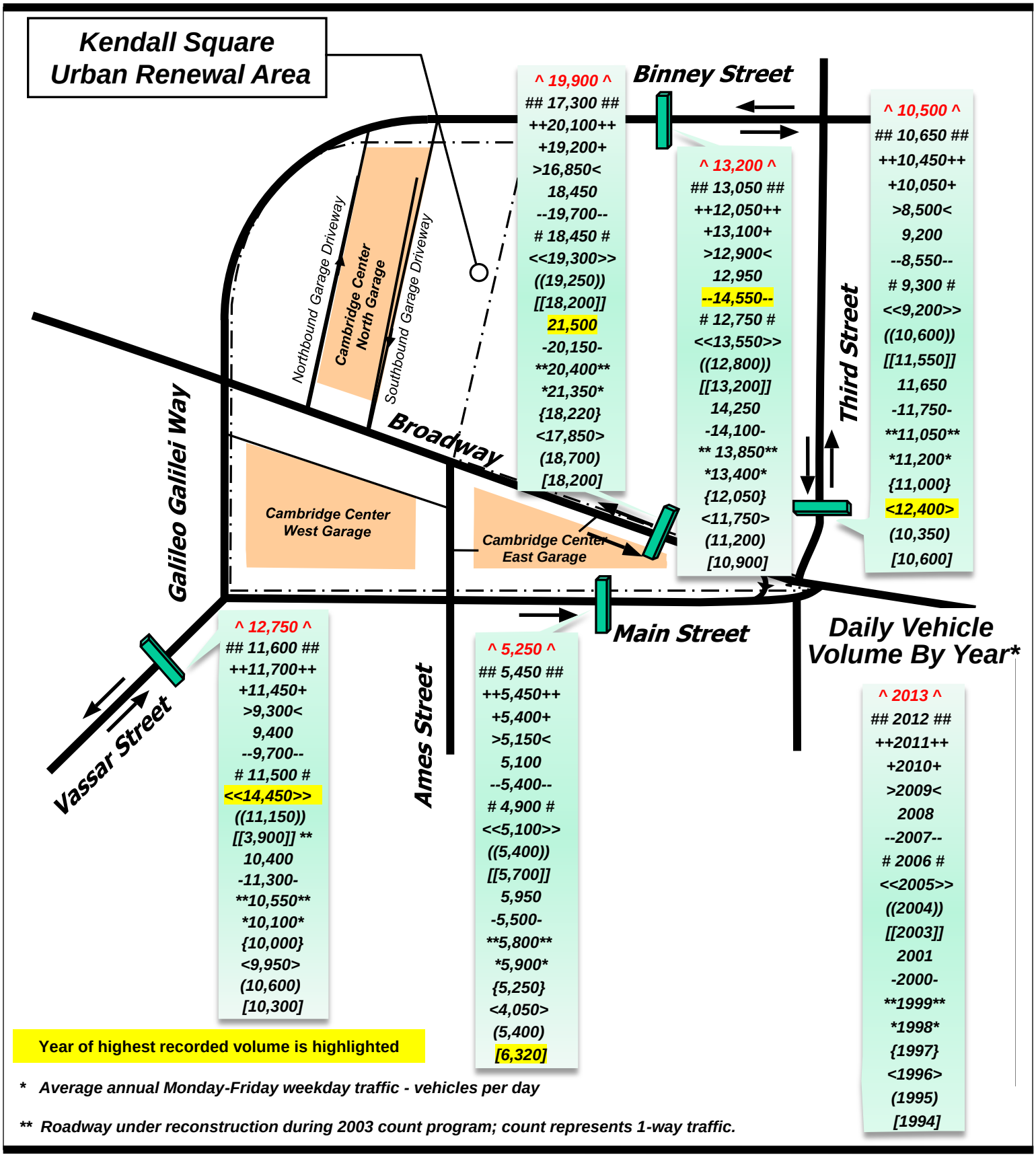
Region	Roadway	Reviewed Segment	Block Face	Location Code on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
West Side of Ames South of Main	Main St.	Windsor to Osborn	south	11	1				1						10
		Osborn to Portland	south		0										5
		Portland to Albany	south		0										13
		Albany to Vassar	south		11	1	2	1	7		1	2			5
		Vassar to Ames	south		26	12	24	24	1			1			12
		Totals			**38**	**13**	**26**	**25**	**9**	**0**	**1**	**3**	**0**	**0**	**45**
West Side of Ames North of Main	Main St.	Windsor to Portland	north	1	0										
		Portland to Galileo Galilei Way	north		7	9	18	7							19
		Galileo Galilei Way to Ames	north		7				3			1	3		5
		Totals			**14**	**9**	**18**	**7**	**3**	**0**	**0**	**1**	**3**	**0**	**24**
East Side of Ames South of Main	Main St.	Ames to Dock St.	south	10	1				1						3
		Dock St. to Hayward	south		14	4	16	10	2			1	1		7
		Hayward to Wadsworth	south		17	5	20	17							1
		Wadsworth to Bridge	south		0										
	Amherst St.	Ames St. to Carleton	north	13	6				5			1			10
		Carleton to Hayward	north	14	0										8
		Hayward to Wadsworth	north	17	13				11			2			3
		Ames St. to Wadsworth	south	12	12				11				1		
	Ames St.	Main St. to Amherset	east	18	29				18		2	8	1		21
			west		8				4			3		1	20
	Hayward	Main St. to Amherset	east	16	1				1						
			west		0										
	Wadsworth	Main St. to Amherset	east	9	3				3						
			west		1				1						12
	Carleton St / Dock St. (include ped	Main St. to Amherset	east	15	2					2					
			west		3			2						1	
		Totals			**110**	**9**	**36**	**29**	**57**	**2**	**2**	**15**	**3**	**2**	**85**

Region	Roadway	Reviewed Segment	Block Face	Location on Map	Total # Bikes	Total # Racks	Total # Spaces	Parked To: Rack	Sign	Fence	Tree	Meter	Lamp Post	Other	# of Metered Spaces
East Side of Ames North of Main	Main St.	Ames to Main St. / Broadway	north	6	27 0	8	30	26				1			4
		Broadway to Bridge	north	7	37	4	32	27	6			1		3	8
	Broadway	Galileo Galilei Way to Ames/Ped path	north	19	0										
			south		5	2	4	4				1			4
		Ames to 3rd St. / Main St	north	3	3	13	26	3							
			south	4	8	17	34	8							4
	Ames St.	Main St. to Broadway	east	5	3				2			1			5
			west	2	22	1	2	2	7		5	5	3		9
	Main St.	Median / Fountain area	north & south	20	0	1	2								
		Totals			**105**	**46**	**130**	**70**	**15**	**0**	**5**	**9**	**3**	**3**	**34**
East Side of Ames North of Main	3rd St.	Broadway to Potter St.	west	21	0										
		Potter St. to Munroe St.	west		7				7						5
		Munroe St. to Binney St.	west		1				1						
		Broadway to Kendall St.	east		45	13	50	44	1						6
		Kendall St. to Athenaeum St.	east		0										
		Athenaeum St. to Binney St.	east		1				1						4
		Totals			**54**	**13**	**50**	**44**	**10**	**0**	**0**	**0**	**0**	**0**	
			Grand Total		**321**	**90**	**260**	**175**	**94**	**2**	**8**	**28**	**9**	**5**	**188**

Traffic Counts

Automatic Traffic Recorder Counts (ATR)

Kendall Square Urban Renewal Plan (KSRUP) ATRs



Schematic Diagram:
Not to Scale

Kendall Square Urban Renewal Area

Average Annual Weekday Traffic Volumes 1994-2013

Cambridge Redevelopment Authority

Figure 2

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	10-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		*	96			*	106				
12:15		*	82			*	99				
12:30		*	16			*	62				
12:45		*	0	0	194	*	76	0	343	0	537
01:00		*	0			*	66				
01:15		*	0			*	90				
01:30		*	0			*	96				
01:45		*	0	0	0	*	110	0	362	0	362
02:00		*	0			*	100				
02:15		*	0			*	109				
02:30		*	0			*	130				
02:45		*	0	0	0	*	107	0	446	0	446
03:00		*	0			*	122				
03:15		*	0			*	132				
03:30		*	0			*	126				
03:45		*	0	0	0	*	92	0	472	0	472
04:00		*	0			*	120				
04:15		*	0			*	108				
04:30		*	0			*	112				
04:45		*	2	0	2	*	107	0	447	0	449
05:00		*	0			*	106				
05:15		*	0			*	127				
05:30		*	0			*	111				
05:45		*	0	0	0	*	108	0	452	0	452
06:00		*	0			*	90				
06:15		*	0			*	100				
06:30		*	0			*	87				
06:45		*	0	0	0	*	64	0	341	0	341
07:00		*	0			*	72				
07:15		*	0			*	55				
07:30		*	0			*	47				
07:45		*	0	0	0	*	46	0	220	0	220
08:00		*	0			*	48				
08:15		*	0			*	38				
08:30		*	0			*	35				
08:45		*	0	0	0	*	37	0	158	0	158
09:00		152	0			108	42				
09:15		126	0			84	28				
09:30		114	0			81	25				
09:45		76	0	468	0	77	24	350	119	818	119
10:00		83	0			71	25				
10:15		72	0			82	22				
10:30		86	0			66	19				
10:45		108	0	349	0	78	22	297	88	646	88
11:00		88	0			80	27				
11:15		83	0			84	17				
11:30		103	0			98	20				
11:45		85	0	359	0	112	20	374	84	733	84
Total		1176	196			1021	3532			2197	3728
Percent		85.7%	14.3%			22.4%	77.6%			37.1%	62.9%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	11-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	0			16	0				
12:15		0	0			18	0				
12:30		0	0			6	0				
12:45		0	0	0	0	15	0	55	0	55	0
01:00		0	0			12	0				
01:15		0	0			10	0				
01:30		0	0			7	0				
01:45		0	0	0	0	4	0	33	0	33	0
02:00		0	0			13	0				
02:15		0	0			6	0				
02:30		0	0			8	0				
02:45		0	0	0	0	6	0	33	0	33	0
03:00		0	0			6	0				
03:15		0	0			3	0				
03:30		0	0			8	0				
03:45		0	0	0	0	7	0	24	0	24	0
04:00		0	0			2	0				
04:15		0	0			1	0				
04:30		0	0			2	0				
04:45		0	0	0	0	0	0	5	0	5	0
05:00		0	0			1	0				
05:15		0	0			3	0				
05:30		0	0			7	0				
05:45		0	0	0	0	4	0	15	0	15	0
06:00		0	0			9	0				
06:15		0	0			5	0				
06:30		0	0			12	0				
06:45		0	0	0	0	10	0	36	0	36	0
07:00		0	0			8	0				
07:15		0	0			14	0				
07:30		0	0			10	0				
07:45		0	0	0	0	14	0	46	0	46	0
08:00		0	0			12	0				
08:15		0	0			8	0				
08:30		0	0			13	0				
08:45		0	0	0	0	14	0	47	0	47	0
09:00		0	0			22	0				
09:15		0	0			19	0				
09:30		0	0			25	0				
09:45		0	0	0	0	22	0	88	0	88	0
10:00		0	0			24	0				
10:15		0	0			21	0				
10:30		0	0			25	0				
10:45		4	0	4	0	20	0	90	0	94	0
11:00		0	0			9	0				
11:15		0	0			0	0				
11:30		0	0			0	0				
11:45		0	0	0	0	0	0	9	0	9	0
Total		4	0			481	0			485	0
Percent		100.0%	0.0%			100.0%	0.0%			100.0%	0.0%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	12-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Sun	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	0			0	0				
12:15		0	0			0	0				
12:30		0	0			0	0				
12:45		0	0	0	0	0	0	0	0	0	0
01:00		0	0			0	0				
01:15		0	0			0	0				
01:30		0	0			0	0				
01:45		0	0	0	0	0	0	0	0	0	0
02:00		0	0			0	0				
02:15		0	0			0	0				
02:30		0	0			0	0				
02:45		0	0	0	0	0	0	0	0	0	0
03:00		0	0			0	0				
03:15		0	0			0	0				
03:30		0	0			0	0				
03:45		0	0	0	0	0	0	0	0	0	0
04:00		0	0			0	0				
04:15		0	0			0	0				
04:30		0	0			0	0				
04:45		0	0	0	0	0	0	0	0	0	0
05:00		0	0			0	0				
05:15		0	0			0	0				
05:30		0	0			0	0				
05:45		0	0	0	0	0	0	0	0	0	0
06:00		0	0			0	0				
06:15		0	0			0	0				
06:30		0	0			0	0				
06:45		0	0	0	0	0	0	0	0	0	0
07:00		0	0			0	0				
07:15		0	0			0	0				
07:30		0	0			0	0				
07:45		0	0	0	0	0	0	0	0	0	0
08:00		0	0			0	0				
08:15		0	0			0	0				
08:30		0	0			0	0				
08:45		0	0	0	0	0	0	0	0	0	0
09:00		0	0			0	0				
09:15		0	0			0	0				
09:30		0	0			0	0				
09:45		0	0	0	0	0	0	0	0	0	0
10:00		0	0			0	0				
10:15		0	0			0	0				
10:30		0	0			0	0				
10:45		0	0	0	0	0	0	0	0	0	0
11:00		0	0			0	0				
11:15		0	0			0	0				
11:30		0	0			0	0				
11:45		0	0	0	0	0	0	0	0	0	0
Total		0	0			0	0			0	0
Percent		0.0%	0.0%			0.0%	0.0%			0.0%	0.0%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	13-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Mon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	80			0	86				
12:15		0	84			0	96				
12:30		0	80			0	87				
12:45		0	90	0	334	0	78	0	347	0	681
01:00		0	63			0	78				
01:15		0	71			0	100				
01:30		0	88			0	79				
01:45		0	84	0	306	0	116	0	373	0	679
02:00		0	66			0	119				
02:15		0	76			0	139				
02:30		0	80			0	146				
02:45		0	83	0	305	0	149	0	553	0	858
03:00		0	57			0	184				
03:15		0	63			0	177				
03:30		0	58			0	182				
03:45		0	80	0	258	0	164	0	707	0	965
04:00		0	67			0	185				
04:15		0	72			0	184				
04:30		0	60			0	210				
04:45		0	72	0	271	0	191	0	770	0	1041
05:00		0	80			0	178				
05:15		0	102			0	231				
05:30		0	114			0	186				
05:45		0	119	0	415	0	188	0	783	0	1198
06:00		1	88			0	152				
06:15		0	62			0	131				
06:30		0	84			0	117				
06:45		0	76	1	310	0	118	0	518	1	828
07:00		2	44			0	79				
07:15		0	50			0	110				
07:30		0	42			0	72				
07:45		1	36	3	172	0	56	0	317	3	489
08:00		0	50			0	65				
08:15		0	24			0	49				
08:30		0	34			0	38				
08:45		0	30	0	138	0	43	0	195	0	333
09:00		0	33			0	38				
09:15		0	27			0	50				
09:30		0	36			0	30				
09:45		0	22	0	118	0	42	0	160	0	278
10:00		0	16			0	28				
10:15		1	25			0	22				
10:30		24	34			31	23				
10:45		82	22	107	97	71	26	102	99	209	196
11:00		81	25			73	30				
11:15		65	14			81	22				
11:30		73	16			90	22				
11:45		84	15	303	70	86	15	330	89	633	159
Total		414	2794			432	4911			846	7705
Percent		12.9%	87.1%			8.1%	91.9%			9.9%	90.1%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	14-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		17	70			18	86				
12:15		23	72			14	92				
12:30		6	86			16	106				
12:45		11	100	57	328	4	83	52	367	109	695
01:00		6	89			4	96				
01:15		12	74			19	109				
01:30		7	90			8	112				
01:45		8	74	33	327	5	122	36	439	69	766
02:00		6	71			7	119				
02:15		4	60			5	136				
02:30		6	74			3	136				
02:45		4	68	20	273	8	138	23	529	43	802
03:00		10	84			7	197				
03:15		2	65			6	171				
03:30		7	70			0	173				
03:45		8	70	27	289	6	175	19	716	46	1005
04:00		5	81			6	210				
04:15		8	78			5	192				
04:30		14	72			8	188				
04:45		22	80	49	311	8	181	27	771	76	1082
05:00		27	90			6	213				
05:15		46	108			8	218				
05:30		90	92			16	196				
05:45		124	98	287	388	23	202	53	829	340	1217
06:00		112	106			30	177				
06:15		128	90			40	153				
06:30		107	102			44	108				
06:45		128	84	475	382	36	106	150	544	625	926
07:00		140	55			86	98				
07:15		138	52			82	106				
07:30		132	42			60	86				
07:45		173	43	583	192	64	72	292	362	875	554
08:00		161	46			108	54				
08:15		164	42			82	73				
08:30		143	48			89	48				
08:45		176	48	644	184	86	35	365	210	1009	394
09:00		153	36			91	43				
09:15		150	38			82	44				
09:30		158	41			90	45				
09:45		112	30	573	145	76	38	339	170	912	315
10:00		104	30			78	44				
10:15		111	23			66	27				
10:30		84	37			64	36				
10:45		92	25	391	115	78	33	286	140	677	255
11:00		80	24			69	38				
11:15		76	10			93	22				
11:30		83	14			84	14				
11:45		87	9	326	57	90	20	336	94	662	151
Total		3465	2991			1978	5171			5443	8162
Percent		53.7%	46.3%			27.7%	72.3%			40.0%	60.0%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	15-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		16	86			36	102				
12:15		8	98			12	88				
12:30		8	82			5	72				
12:45		6	88	38	354	16	96	69	358	107	712
01:00		5	92			10	84				
01:15		7	82			8	84				
01:30		4	73			5	94				
01:45		8	75	24	322	8	118	31	380	55	702
02:00		2	61			7	124				
02:15		8	93			3	146				
02:30		9	71			4	108				
02:45		6	78	25	303	8	145	22	523	47	826
03:00		9	66			8	168				
03:15		4	69			4	204				
03:30		12	68			4	185				
03:45		10	87	35	290	5	191	21	748	56	1038
04:00		10	73			4	192				
04:15		12	82			5	211				
04:30		19	69			4	199				
04:45		32	94	73	318	14	197	27	799	100	1117
05:00		32	87			13	214				
05:15		54	103			12	220				
05:30		84	123			20	202				
05:45		95	112	265	425	22	218	67	854	332	1279
06:00		124	122			30	180				
06:15		112	117			30	158				
06:30		111	80			47	123				
06:45		134	96	481	415	54	87	161	548	642	963
07:00		128	74			70	121				
07:15		128	60			76	104				
07:30		149	58			71	74				
07:45		178	38	583	230	67	58	284	357	867	587
08:00		165	30			90	67				
08:15		160	44			84	54				
08:30		164	41			104	62				
08:45		168	47	657	162	81	56	359	239	1016	401
09:00		158	32			84	65				
09:15		138	40			89	39				
09:30		116	30			74	36				
09:45		110	31	522	133	84	44	331	184	853	317
10:00		114	27			88	40				
10:15		108	31			84	30				
10:30		102	20			71	32				
10:45		84	22	408	100	71	31	314	133	722	233
11:00		94	23			70	40				
11:15		72	18			73	21				
11:30		87	18			84	28				
11:45		94	12	347	71	104	19	331	108	678	179
Total		3458	3123			2017	5231			5475	8354
Percent		52.5%	47.5%			27.8%	72.2%			39.6%	60.4%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	16-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		12	98			25	96				
12:15		11	89			12	98				
12:30		11	68			8	86				
12:45		8	77	42	332	11	87	56	367	98	699
01:00		8	100			16	100				
01:15		7	90			14	94				
01:30		4	100			6	87				
01:45		10	90	29	380	8	112	44	393	73	773
02:00		2	104			8	142				
02:15		4	88			5	132				
02:30		3	66			2	136				
02:45		2	74	11	332	1	144	16	554	27	886
03:00		5	82			6	182				
03:15		5	65			12	178				
03:30		5	63			8	194				
03:45		12	99	27	309	7	178	33	732	60	1041
04:00		6	96			4	208				
04:15		8	91			11	214				
04:30		12	64			10	162				
04:45		24	106	50	357	6	189	31	773	81	1130
05:00		27	94			8	196				
05:15		44	103			14	228				
05:30		91	88			22	196				
05:45		127	94	289	379	20	154	64	774	353	1153
06:00		132	93			34	162				
06:15		108	78			44	144				
06:30		116	78			41	160				
06:45		132	101	488	350	52	128	171	594	659	944
07:00		126	78			72	93				
07:15		146	64			57	102				
07:30		148	64			69	70				
07:45		160	66	580	272	64	66	262	331	842	603
08:00		152	52			78	70				
08:15		185	39			81	59				
08:30		190	42			91	66				
08:45		162	40	689	173	92	56	342	251	1031	424
09:00		165	43			85	38				
09:15		125	44			94	56				
09:30		146	32			86	36				
09:45		110	39	546	158	92	45	357	175	903	333
10:00		106	37			66	48				
10:15		106	22			93	29				
10:30		102	30			86	30				
10:45		106	25	420	114	80	29	325	136	745	250
11:00		97	18			73	26				
11:15		90	24			73	36				
11:30		68	18			82	28				
11:45		96	14	351	74	86	16	314	106	665	180
Total		3522	3230			2015	5186			5537	8416
Percent		52.2%	47.8%			28.0%	72.0%			39.7%	60.3%

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	17-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		7	92			24	102				
12:15		12	98			15	122				
12:30		6	68			16	98				
12:45		8	88	33	346	8	90	63	412	96	758
01:00		6	94			10	92				
01:15		9	68			9	107				
01:30		7	67			6	106				
01:45		11	72	33	301	10	121	35	426	68	727
02:00		4	80			12	146				
02:15		2	85			5	150				
02:30		8	70			9	140				
02:45		6	70	20	305	4	158	30	594	50	899
03:00		10	87			3	160				
03:15		6	85			4	194				
03:30		13	84			8	182				
03:45		6	106	35	362	3	216	18	752	53	1114
04:00		18	108			12	152				
04:15		18	92			6	182				
04:30		23	71			9	166				
04:45		30	101	89	372	9	172	36	672	125	1044
05:00		31	88			12	148				
05:15		54	84			16	182				
05:30		85	90			21	154				
05:45		124	84	294	346	22	143	71	627	365	973
06:00		108	100			26	116				
06:15		132	86			41	118				
06:30		101	72			42	107				
06:45		118	86	459	344	52	96	161	437	620	781
07:00		120	52			55	82				
07:15		123	56			82	107				
07:30		138	46			62	60				
07:45		152	41	533	195	80	59	279	308	812	503
08:00		144	46			80	66				
08:15		168	34			84	74				
08:30		156	46			85	52				
08:45		153	53	621	179	74	48	323	240	944	419
09:00		156	44			74	49				
09:15		150	47			71	46				
09:30		128	30			85	39				
09:45		106	34	540	155	80	34	310	168	850	323
10:00		92	46			90	39				
10:15		96	34			72	36				
10:30		108	18			84	36				
10:45		92	22	388	120	78	25	324	136	712	256
11:00		68	19			70	38				
11:15		68	22			98	32				
11:30		98	21			92	24				
11:45		84	26	318	88	98	26	358	120	676	208
Total		3363	3113			2008	4892			5371	8005
Percent		51.9%	48.1%			29.1%	70.9%			40.2%	59.8%

Accurate Counts
978-664-2565

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

LG038C01

Start	18-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		22	4			25	56				
12:15		10	0			19	47				
12:30		14	6			11	48				
12:45		17	4	63	14	14	56	69	207	132	221
01:00		9	4			16	61				
01:15		12	4			16	82				
01:30		13	12			11	78				
01:45		12	29	46	49	10	68	53	289	99	338
02:00		11	56			17	58				
02:15		8	64			14	68				
02:30		14	68			15	66				
02:45		14	56	47	244	18	60	64	252	111	496
03:00		6	45			12	60				
03:15		8	60			10	60				
03:30		8	50			8	70				
03:45		10	44	32	199	7	63	37	253	69	452
04:00		5	56			3	54				
04:15		5	61			4	55				
04:30		6	54			10	51				
04:45		8	52	24	223	8	52	25	212	49	435
05:00		12	42			3	58				
05:15		21	58			7	46				
05:30		39	54			9	39				
05:45		35	68	107	222	14	54	33	197	140	419
06:00		36	65			11	39				
06:15		32	63			8	60				
06:30		32	70			11	48				
06:45		33	70	133	268	12	52	42	199	175	467
07:00		36	65			25	82				
07:15		14	72			22	46				
07:30		2	67			22	52				
07:45		4	45	56	249	20	40	89	220	145	469
08:00		6	36			28	50				
08:15		2	47			28	46				
08:30		2	33			26	38				
08:45		0	40	10	156	36	39	118	173	128	329
09:00		1	54			36	38				
09:15		4	64			38	30				
09:30		2	34			42	35				
09:45		0	52	7	204	32	30	148	133	155	337
10:00		4	30			42	33				
10:15		1	28			56	44				
10:30		4	32			54	27				
10:45		6	20	15	110	50	35	202	139	217	249
11:00		4	27			40	28				
11:15		4	24			64	30				
11:30		0	17			52	22				
11:45		0	24	8	92	60	35	216	115	224	207
Total		548	2030			1096	2389			1644	4419
Percent		21.3%	78.7%			31.4%	68.6%			27.1%	72.9%

Accurate Counts
978-664-2565

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

LG038C01

Start Time	19-May-13 Sun	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		16	*			15	*				
12:15		14	*			16	*				
12:30		11	*			13	*				
12:45		14	*	55	0	13	*	57	0	112	0
01:00		3	*			14	*				
01:15		10	*			17	*				
01:30		4	*			9	*				
01:45		13	*	30	0	14	*	54	0	84	0
02:00		10	*			14	*				
02:15		11	*			14	*				
02:30		7	*			10	*				
02:45		9	*	37	0	8	*	46	0	83	0
03:00		13	*			8	*				
03:15		4	*			10	*				
03:30		4	*			5	*				
03:45		5	*	26	0	4	*	27	0	53	0
04:00		6	*			3	*				
04:15		5	*			3	*				
04:30		7	*			1	*				
04:45		8	*	26	0	4	*	11	0	37	0
05:00		7	*			12	*				
05:15		1	*			1	*				
05:30		14	*			6	*				
05:45		16	*	38	0	10	*	29	0	67	0
06:00		13	*			12	*				
06:15		12	*			3	*				
06:30		30	*			10	*				
06:45		16	*	71	0	5	*	30	0	101	0
07:00		12	*			11	*				
07:15		10	*			19	*				
07:30		12	*			7	*				
07:45		18	*	52	0	8	*	45	0	97	0
08:00		10	*			16	*				
08:15		20	*			9	*				
08:30		18	*			14	*				
08:45		2	*	50	0	0	*	39	0	89	0
09:00		*	*	*	*	*	*	*	*	*	*
09:15		*	*	*	*	*	*	*	*	*	*
09:30		*	*	*	*	*	*	*	*	*	*
09:45		*	*	*	*	*	*	*	*	*	*
10:00		*	*	*	*	*	*	*	*	*	*
10:15		*	*	*	*	*	*	*	*	*	*
10:30		*	*	*	*	*	*	*	*	*	*
10:45		*	*	*	*	*	*	*	*	*	*
11:00		*	*	*	*	*	*	*	*	*	*
11:15		*	*	*	*	*	*	*	*	*	*
11:30		*	*	*	*	*	*	*	*	*	*
11:45		*	*	*	*	*	*	*	*	*	*
Total		385	0			338	0			723	0
Percent		100.0%	0.0%			100.0%	0.0%			100.0%	0.0%
Grand Total		16335	17477			11386	31312			27721	48789
Percent		48.3%	51.7%			26.7%	73.3%			36.2%	63.8%
ADT		ADT 8,501		AADT 8,501							

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	06-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	*	*	*	*	*	*	*	*	*	*	0	55	0	0	0	28
01:00	*	*	*	*	*	*	*	*	*	*	0	33	0	0	0	16
02:00	*	*	*	*	*	*	*	*	*	*	0	33	0	0	0	16
03:00	*	*	*	*	*	*	*	*	*	*	0	24	0	0	0	12
04:00	*	*	*	*	*	*	*	*	*	*	0	5	0	0	0	2
05:00	*	*	*	*	*	*	*	*	*	*	0	15	0	0	0	8
06:00	*	*	*	*	*	*	*	*	*	*	0	36	0	0	0	18
07:00	*	*	*	*	*	*	*	*	*	*	0	46	0	0	0	23
08:00	*	*	*	*	*	*	*	*	*	*	0	47	0	0	0	24
09:00	*	*	*	*	*	*	*	*	**468**	350	0	88	0	0	**156**	**146**
10:00	*	*	*	*	*	*	*	*	349	297	**4**	**90**	0	0	118	129
11:00	*	*	*	*	*	*	*	*	359	**374**	0	9	0	0	120	128
12:00 PM	*	*	*	*	*	*	*	*	**194**	343	0	0	0	0	**65**	114
01:00	*	*	*	*	*	*	*	*	0	362	0	0	0	0	0	121
02:00	*	*	*	*	*	*	*	*	0	446	0	0	0	0	0	149
03:00	*	*	*	*	*	*	*	*	0	**472**	0	0	0	0	0	**157**
04:00	*	*	*	*	*	*	*	*	2	447	0	0	0	0	1	149
05:00	*	*	*	*	*	*	*	*	0	452	0	0	0	0	0	151
06:00	*	*	*	*	*	*	*	*	0	341	0	0	0	0	0	114
07:00	*	*	*	*	*	*	*	*	0	220	0	0	0	0	0	73
08:00	*	*	*	*	*	*	*	*	0	158	0	0	0	0	0	53
09:00	*	*	*	*	*	*	*	*	0	119	0	0	0	0	0	40
10:00	*	*	*	*	*	*	*	*	0	88	0	0	0	0	0	29
11:00	*	*	*	*	*	*	*	*	0	84	0	0	0	0	0	28
Lane	0	0	0	0	0	0	0	0	1372	4553	4	481	0	0	460	1728
Day	0		0		0		0		5925		485		0		2188	
AM Peak	-	-	-	-	-	-	-	-	09:00	11:00	10:00	10:00	-	-	09:00	09:00
Vol.	-	-	-	-	-	-	-	-	468	374	4	90	-	-	156	146
PM Peak	-	-	-	-	-	-	-	-	12:00	15:00	-	-	-	-	12:00	15:00
Vol.	-	-	-	-	-	-	-	-	194	472	-	-	-	-	65	157

Accurate Counts
978-664-2565

LG038C01

Location : Binney Street
Location : West of Third Street
City/State: Cambridge, MA

Start	13-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	0	0	57	52	38	69	42	56	33	63	63	69	55	**57**	41	52
01:00	0	0	33	36	24	31	29	44	33	35	46	53	30	54	28	36
02:00	0	0	20	23	25	22	11	16	20	30	47	64	37	46	23	29
03:00	0	0	27	19	35	21	27	33	35	18	32	37	26	27	26	22
04:00	0	0	49	27	73	27	50	31	89	36	24	25	26	11	44	22
05:00	0	0	287	53	265	67	289	64	294	71	107	33	38	29	183	45
06:00	1	0	475	150	481	161	488	171	459	161	**133**	42	**71**	30	301	102
07:00	3	0	583	292	583	284	580	262	533	279	56	89	52	45	341	179
08:00	0	0	**644**	**365**	**657**	**359**	**689**	342	**621**	323	10	118	50	39	**382**	221
09:00	0	0	573	339	522	331	546	**357**	540	310	7	148	*	*	365	248
10:00	107	102	391	286	408	314	420	325	388	324	15	202	*	*	288	259
11:00	**303**	**330**	326	336	347	331	351	314	318	**358**	8	**216**	*	*	276	**314**
12:00 PM	334	347	328	367	354	358	332	367	346	412	14	207	*	*	285	343
01:00	306	373	327	439	322	380	**380**	393	301	426	49	**289**	*	*	281	383
02:00	305	553	273	529	303	523	332	554	305	594	244	252	*	*	294	501
03:00	258	707	289	716	290	748	309	732	362	**752**	199	253	*	*	284	651
04:00	271	770	311	771	318	799	357	773	**372**	672	223	212	*	*	309	666
05:00	**415**	**783**	**388**	**829**	**425**	**854**	379	**774**	346	627	222	197	*	*	**362**	**677**
06:00	310	518	382	544	415	548	350	594	344	437	**268**	199	*	*	345	473
07:00	172	317	192	362	230	357	272	331	195	308	249	220	*	*	218	316
08:00	138	195	184	210	162	239	173	251	179	240	156	173	*	*	165	218
09:00	118	160	145	170	133	184	158	175	155	168	204	133	*	*	152	165
10:00	97	99	115	140	100	133	114	136	120	136	110	139	*	*	109	130
11:00	70	89	57	94	71	108	74	106	88	120	92	115	*	*	75	105
Lane	3208	5343	6456	7149	6581	7248	6752	7201	6476	6900	2578	3485	385	338	5177	6157
Day	8551		13605		13829		13953		13376		6063		723		11334	
AM Peak	11:00	11:00	08:00	08:00	08:00	08:00	08:00	09:00	08:00	11:00	06:00	11:00	06:00	00:00	08:00	11:00
Vol.	303	330	644	365	657	359	689	357	621	358	133	216	71	57	382	314
PM Peak	17:00	17:00	17:00	17:00	17:00	17:00	13:00	17:00	16:00	15:00	18:00	13:00	-	-	17:00	17:00
Vol.	415	783	388	829	425	854	380	774	372	752	268	289	-	-	362	677

Comb. Total	8551	13605	13829	13953	19301	6548	723	13522
ADT	ADT 8,501	AADT 8,501						

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	10-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		*	20			*	74				
12:15		*	25			*	82				
12:30		*	14			*	75				
12:45		*	16	0	75	*	92	0	323	0	398
01:00		*	22			*	77				
01:15		*	16			*	75				
01:30		*	16			*	92				
01:45		*	31	0	85	*	85	0	329	0	414
02:00		*	28			*	87				
02:15		*	38			*	100				
02:30		*	23			*	92				
02:45		*	20	0	109	*	100	0	379	0	488
03:00		*	16			*	103				
03:15		*	17			*	76				
03:30		*	20			*	90				
03:45		*	26	0	79	*	103	0	372	0	451
04:00		*	28			*	99				
04:15		*	33			*	94				
04:30		*	36			*	108				
04:45		*	23	0	120	*	88	0	389	0	509
05:00		*	26			*	96				
05:15		*	41			*	107				
05:30		*	34			*	78				
05:45		*	34	0	135	*	90	0	371	0	506
06:00		*	28			*	102				
06:15		*	28			*	82				
06:30		*	26			*	90				
06:45		*	30	0	112	*	82	0	356	0	468
07:00		*	24			*	76				
07:15		*	16			*	68				
07:30		*	24			*	72				
07:45		*	18	0	82	*	56	0	272	0	354
08:00		*	16			*	57				
08:15		*	12			*	56				
08:30		*	17			*	59				
08:45		*	6	0	51	*	62	0	234	0	285
09:00		*	10			*	46				
09:15		*	12			*	45				
09:30		*	10			*	39				
09:45		*	11	0	43	*	46	0	176	0	219
10:00		28	18			58	51				
10:15		20	10			78	34				
10:30		14	6			66	46				
10:45		15	10	77	44	75	54	277	185	354	229
11:00		28	8			88	54				
11:15		21	4			80	41				
11:30		25	6			82	26				
11:45		22	8	96	26	72	36	322	157	418	183
Total		173	961			599	3543			772	4504
Percent		15.3%	84.7%			14.5%	85.5%			14.6%	85.4%

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	11-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		12	2			42	56				
12:15		9	0			31	56				
12:30		8	0			19	44				
12:45		8	1	37	3	32	62	124	218	161	221
01:00		6	0			27	50				
01:15		4	0			22	60				
01:30		2	12			25	54				
01:45		3	4	15	16	25	64	99	228	114	244
02:00		2	8			25	71				
02:15		4	10			27	72				
02:30		3	7			24	55				
02:45		2	13	11	38	24	60	100	258	111	296
03:00		3	8			16	60				
03:15		1	8			8	73				
03:30		0	14			6	57				
03:45		2	4	6	34	3	87	33	277	39	311
04:00		0	8			2	94				
04:15		1	18			7	76				
04:30		1	12			4	44				
04:45		1	14	3	52	6	46	19	260	22	312
05:00		2	14			11	49				
05:15		0	10			9	64				
05:30		1	7			9	71				
05:45		6	17	9	48	13	74	42	258	51	306
06:00		7	10			13	44				
06:15		4	7			18	89				
06:30		5	13			24	76				
06:45		11	18	27	48	19	66	74	275	101	323
07:00		6	9			32	58				
07:15		3	10			18	78				
07:30		0	21			38	77				
07:45		0	8	9	48	36	81	124	294	133	342
08:00		1	18			30	74				
08:15		0	9			46	64				
08:30		0	8			34	88				
08:45		0	10	1	45	36	87	146	313	147	358
09:00		0	13			30	66				
09:15		0	16			42	52				
09:30		0	13			46	54				
09:45		0	15	0	57	53	37	171	209	171	266
10:00		0	14			46	44				
10:15		0	15			62	34				
10:30		0	7			60	40				
10:45		2	13	2	49	52	46	220	164	222	213
11:00		0	10			58	60				
11:15		1	8			58	48				
11:30		2	10			41	42				
11:45		2	7	5	35	54	44	211	194	216	229
Total		125	473			1363	2948			1488	3421
Percent		20.9%	79.1%			31.6%	68.4%			30.3%	69.7%

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	12-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Sun	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	10			32	36				
12:15		11	8			36	48				
12:30		14	5			35	53				
12:45		6	3	33	26	26	57	129	194	162	220
01:00		5	5			30	62				
01:15		4	1			30	51				
01:30		2	6			27	67				
01:45		3	7	14	19	20	65	107	245	121	264
02:00		2	5			32	40				
02:15		2	14			30	59				
02:30		2	6			34	62				
02:45		5	7	11	32	24	50	120	211	131	243
03:00		1	6			14	66				
03:15		0	6			4	64				
03:30		2	10			6	50				
03:45		0	10	3	32	4	53	28	233	31	265
04:00		0	7			9	51				
04:15		0	10			9	59				
04:30		1	10			6	54				
04:45		3	6	4	33	1	47	25	211	29	244
05:00		1	7			10	48				
05:15		2	6			3	53				
05:30		3	10			8	58				
05:45		0	10	6	33	5	42	26	201	32	234
06:00		2	10			8	41				
06:15		3	12			7	34				
06:30		2	12			9	41				
06:45		4	2	11	36	13	38	37	154	48	190
07:00		5	12			8	40				
07:15		2	8			11	35				
07:30		2	4			14	38				
07:45		3	9	12	33	9	38	42	151	54	184
08:00		1	4			22	36				
08:15		2	1			20	38				
08:30		4	3			12	36				
08:45		3	8	10	16	22	26	76	136	86	152
09:00		4	4			34	32				
09:15		3	4			24	25				
09:30		1	4			22	32				
09:45		4	4	12	16	31	39	111	128	123	144
10:00		2	3			42	20				
10:15		10	4			50	22				
10:30		6	6			28	27				
10:45		2	6	20	19	46	24	166	93	186	112
11:00		1	5			37	28				
11:15		5	2			50	18				
11:30		8	8			46	15				
11:45		4	2	18	17	45	13	178	74	196	91
Total		154	312			1045	2031			1199	2343
Percent		33.0%	67.0%			34.0%	66.0%			33.9%	66.1%

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	13-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Mon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	18			12	85				
12:15		1	30			10	61				
12:30		2	22			12	72				
12:45		2	26	9	96	4	70	38	288	47	384
01:00		0	13			12	52				
01:15		1	16			8	72				
01:30		1	20			9	56				
01:45		1	20	3	69	7	86	36	266	39	335
02:00		0	24			6	71				
02:15		1	24			10	83				
02:30		0	15			0	84				
02:45		1	16	2	79	1	89	17	327	19	406
03:00		0	10			4	78				
03:15		0	22			2	105				
03:30		0	20			4	72				
03:45		1	22	1	74	3	83	13	338	14	412
04:00		3	27			8	84				
04:15		1	32			5	90				
04:30		4	28			5	92				
04:45		4	34	12	121	17	101	35	367	47	488
05:00		2	30			10	76				
05:15		0	32			10	91				
05:30		4	38			26	93				
05:45		12	43	18	143	20	92	66	352	84	495
06:00		8	41			26	92				
06:15		6	36			33	98				
06:30		10	32			32	70				
06:45		20	35	44	144	36	67	127	327	171	471
07:00		14	21			54	70				
07:15		16	21			60	54				
07:30		14	16			52	62				
07:45		16	22	60	80	57	44	223	230	283	310
08:00		16	16			80	51				
08:15		30	22			70	62				
08:30		18	14			54	44				
08:45		21	16	85	68	53	44	257	201	342	269
09:00		24	20			85	44				
09:15		16	13			78	50				
09:30		18	8			78	44				
09:45		25	15	83	56	83	40	324	178	407	234
10:00		18	9			88	40				
10:15		28	4			82	31				
10:30		21	6			70	32				
10:45		18	3	85	22	70	28	310	131	395	153
11:00		21	10			78	28				
11:15		20	6			68	28				
11:30		18	3			71	22				
11:45		20	4	79	23	60	16	277	94	356	117
Total		481	975			1723	3099			2204	4074
Percent		33.0%	67.0%			35.7%	64.3%			35.1%	64.9%

Accurate Counts
978-664-2565

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

LG038C02

Start	14-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	28			24	76				
12:15		8	19			9	66				
12:30		1	15			12	68				
12:45		0	24	15	86	17	80	62	290	77	376
01:00		2	22			20	94				
01:15		0	30			5	82				
01:30		0	30			14	81				
01:45		1	24	3	106	8	84	47	341	50	447
02:00		2	20			6	83				
02:15		0	37			4	92				
02:30		0	16			6	89				
02:45		1	19	3	92	7	98	23	362	26	454
03:00		0	22			5	90				
03:15		2	25			5	112				
03:30		0	15			6	118				
03:45		2	24	4	86	4	95	20	415	24	501
04:00		2	18			6	87				
04:15		0	36			3	96				
04:30		4	36			6	84				
04:45		5	36	11	126	10	86	25	353	36	479
05:00		2	32			7	108				
05:15		2	38			17	113				
05:30		1	48			10	103				
05:45		0	30	5	148	13	88	47	412	52	560
06:00		6	41			23	98				
06:15		7	41			20	102				
06:30		14	29			32	81				
06:45		23	42	50	153	34	75	109	356	159	509
07:00		25	28			53	56				
07:15		22	24			66	64				
07:30		21	28			58	46				
07:45		15	18	83	98	70	52	247	218	330	316
08:00		24	15			80	45				
08:15		18	14			71	44				
08:30		24	16			112	38				
08:45		21	12	87	57	94	58	357	185	444	242
09:00		34	10			86	44				
09:15		24	11			66	66				
09:30		29	6			85	42				
09:45		27	9	114	36	112	38	349	190	463	226
10:00		24	6			76	50				
10:15		24	12			80	32				
10:30		10	7			76	24				
10:45		14	10	72	35	86	22	318	128	390	163
11:00		18	9			74	36				
11:15		24	11			63	30				
11:30		28	4			74	30				
11:45		26	5	96	29	78	22	289	118	385	147
Total		543	1052			1893	3368			2436	4420
Percent		34.0%	66.0%			36.0%	64.0%			35.5%	64.5%

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	15-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	26			26	68				
12:15		2	33			20	84				
12:30		7	23			14	80				
12:45		3	22	16	104	12	83	72	315	88	419
01:00		6	28			14	70				
01:15		6	28			8	92				
01:30		1	32			16	93				
01:45		2	24	15	112	6	70	44	325	59	437
02:00		2	20			6	87				
02:15		1	31			13	74				
02:30		1	46			4	88				
02:45		1	20	5	117	4	117	27	366	32	483
03:00		0	18			5	92				
03:15		0	26			4	102				
03:30		1	26			4	96				
03:45		2	21	3	91	2	108	15	398	18	489
04:00		3	23			6	96				
04:15		2	22			9	90				
04:30		2	30			6	104				
04:45		4	26	11	101	6	101	27	391	38	492
05:00		2	23			14	94				
05:15		2	40			14	117				
05:30		1	34			24	96				
05:45		3	35	8	132	8	78	60	385	68	517
06:00		4	26			20	102				
06:15		7	27			34	92				
06:30		16	24			21	90				
06:45		18	29	45	106	44	94	119	378	164	484
07:00		18	27			58	83				
07:15		25	32			68	62				
07:30		14	26			52	55				
07:45		26	30	83	115	76	58	254	258	337	373
08:00		22	16			86	64				
08:15		23	12			88	59				
08:30		20	16			78	50				
08:45		17	6	82	50	87	54	339	227	421	277
09:00		38	15			87	50				
09:15		22	14			70	56				
09:30		13	13			79	45				
09:45		26	12	99	54	75	45	311	196	410	250
10:00		28	11			90	44				
10:15		20	12			76	50				
10:30		17	6			61	36				
10:45		18	8	83	37	79	38	306	168	389	205
11:00		26	10			68	30				
11:15		32	7			66	31				
11:30		11	12			89	31				
11:45		19	9	88	38	82	20	305	112	393	150
Total		538	1057			1879	3519			2417	4576
Percent		33.7%	66.3%			34.8%	65.2%			34.6%	65.4%

Accurate Counts
978-664-2565

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

LG038C02

Start	16-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	22			30	71				
12:15		6	20			25	81				
12:30		12	14			22	64				
12:45		1	23	23	79	16	68	93	284	116	363
01:00		4	24			18	87				
01:15		2	22			18	78				
01:30		2	16			24	81				
01:45		1	23	9	85	11	78	71	324	80	409
02:00		1	25			8	88				
02:15		3	34			9	96				
02:30		1	16			8	104				
02:45		0	20	5	95	5	107	30	395	35	490
03:00		0	24			8	77				
03:15		2	14			5	88				
03:30		2	15			5	108				
03:45		1	18	5	71	6	102	24	375	29	446
04:00		1	20			4	75				
04:15		0	23			11	112				
04:30		3	32			5	97				
04:45		2	22	6	97	3	100	23	384	29	481
05:00		2	24			9	89				
05:15		2	27			10	106				
05:30		2	22			19	91				
05:45		6	26	12	99	16	94	54	380	66	479
06:00		8	32			26	94				
06:15		10	40			20	110				
06:30		22	12			31	100				
06:45		15	26	55	110	36	97	113	401	168	511
07:00		26	34			57	74				
07:15		21	28			68	65				
07:30		14	20			52	64				
07:45		26	26	87	108	74	42	251	245	338	353
08:00		27	14			74	44				
08:15		26	15			69	50				
08:30		22	16			82	49				
08:45		22	14	97	59	81	43	306	186	403	245
09:00		18	12			84	54				
09:15		18	16			70	41				
09:30		10	10			92	51				
09:45		24	7	70	45	87	62	333	208	403	253
10:00		16	8			83	56				
10:15		19	18			73	46				
10:30		18	13			75	44				
10:45		18	7	71	46	74	46	305	192	376	238
11:00		18	8			66	38				
11:15		16	10			74	36				
11:30		20	8			74	48				
11:45		19	10	73	36	83	26	297	148	370	184
Total		513	930			1900	3522			2413	4452
Percent		35.6%	64.4%			35.0%	65.0%			35.1%	64.9%

Accurate Counts
978-664-2565

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

LG038C02

Start	17-May-13	WB		Hour Totals		EB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		13	13			38	66				
12:15		6	21			32	88				
12:30		5	12			16	68				
12:45		6	17	30	63	23	76	109	298	139	361
01:00		1	21			26	77				
01:15		6	19			21	58				
01:30		4	15			14	60				
01:45		2	14	13	69	25	84	86	279	99	348
02:00		4	14			17	90				
02:15		0	14			19	96				
02:30		2	25			13	85				
02:45		2	20	8	73	17	95	66	366	74	439
03:00		1	21			12	80				
03:15		4	22			8	106				
03:30		2	34			11	138				
03:45		5	24	12	101	6	94	37	418	49	519
04:00		2	25			5	88				
04:15		1	28			10	98				
04:30		3	40			7	95				
04:45		1	22	7	115	12	92	34	373	41	488
05:00		7	19			14	106				
05:15		8	38			18	108				
05:30		9	34			17	96				
05:45		8	28	32	119	22	84	71	394	103	513
06:00		11	32			25	76				
06:15		6	40			26	74				
06:30		18	30			28	81				
06:45		10	40	45	142	37	73	116	304	161	446
07:00		20	27			46	66				
07:15		26	8			56	62				
07:30		16	26			70	67				
07:45		18	16	80	77	70	43	242	238	322	315
08:00		23	14			64	53				
08:15		16	18			58	63				
08:30		22	13			62	46				
08:45		22	10	83	55	86	53	270	215	353	270
09:00		21	22			74	58				
09:15		22	14			70	37				
09:30		17	8			86	42				
09:45		21	8	81	52	91	49	321	186	402	238
10:00		25	13			74	49				
10:15		16	18			56	41				
10:30		15	12			58	54				
10:45		22	12	78	55	92	50	280	194	358	249
11:00		16	8			70	51				
11:15		16	6			78	49				
11:30		20	16			64	24				
11:45		18	9	70	39	84	28	296	152	366	191
Total		539	960			1928	3417			2467	4377
Percent		36.0%	64.0%			36.1%	63.9%			36.0%	64.0%

Accurate Counts
978-664-2565

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

LG038C02

Start Time	18-May-13 Sat	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		8	11			28	54				
12:15		11	13			42	63				
12:30		4	14			30	57				
12:45		16	12	39	50	26	48	126	222	165	272
01:00		6	10			30	51				
01:15		6	16			34	68				
01:30		8	13			27	84				
01:45		4	9	24	48	31	58	122	261	146	309
02:00		1	14			28	68				
02:15		2	10			32	64				
02:30		3	14			23	62				
02:45		2	16	8	54	15	62	98	256	106	310
03:00		6	18			18	48				
03:15		5	13			10	58				
03:30		0	12			9	58				
03:45		0	14	11	57	7	58	44	222	55	279
04:00		1	11			5	61				
04:15		1	10			7	50				
04:30		1	11			5	48				
04:45		0	20	3	52	3	48	20	207	23	259
05:00		4	12			3	60				
05:15		1	16			10	54				
05:30		4	20			12	68				
05:45		2	20	11	68	14	52	39	234	50	302
06:00		5	18			18	41				
06:15		2	20			18	46				
06:30		6	14			15	41				
06:45		4	12	17	64	20	52	71	180	88	244
07:00		8	18			20	50				
07:15		4	16			25	50				
07:30		10	18			21	47				
07:45		4	20	26	72	25	49	91	196	117	268
08:00		10	10			26	64				
08:15		3	16			41	51				
08:30		3	13			34	46				
08:45		6	12	22	51	41	33	142	194	164	245
09:00		8	10			31	41				
09:15		3	9			50	51				
09:30		2	8			37	47				
09:45		7	8	20	35	56	38	174	177	194	212
10:00		10	10			36	48				
10:15		12	18			50	43				
10:30		14	15			46	64				
10:45		7	13	43	56	40	46	172	201	215	257
11:00		8	13			40	40				
11:15		20	16			49	48				
11:30		7	11			52	40				
11:45		13	14	48	54	42	40	183	168	231	222
Total		272	661			1282	2518			1554	3179
Percent		29.2%	70.8%			33.7%	66.3%			32.8%	67.2%
Grand Total		3338	7381			13612	27965			16950	35346
Percent		31.1%	68.9%			32.7%	67.3%			32.4%	67.6%
ADT		ADT 5,867		AADT 5,867							

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	06-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	*	*	*	*	*	*	*	*	*	*	**37**	124	**33**	129	35	126
01:00	*	*	*	*	*	*	*	*	*	*	15	99	14	107	14	103
02:00	*	*	*	*	*	*	*	*	*	*	11	100	11	120	11	110
03:00	*	*	*	*	*	*	*	*	*	*	6	33	3	28	4	30
04:00	*	*	*	*	*	*	*	*	*	*	3	19	4	25	4	22
05:00	*	*	*	*	*	*	*	*	*	*	9	42	6	26	8	34
06:00	*	*	*	*	*	*	*	*	*	*	27	74	11	37	19	56
07:00	*	*	*	*	*	*	*	*	*	*	9	124	12	42	10	83
08:00	*	*	*	*	*	*	*	*	*	*	1	146	10	76	6	111
09:00	*	*	*	*	*	*	*	*	*	*	0	171	12	111	6	141
10:00	*	*	*	*	*	*	*	*	77	277	2	**220**	20	166	33	221
11:00	*	*	*	*	*	*	*	*	**96**	**322**	5	211	18	**178**	**40**	**237**
12:00 PM	*	*	*	*	*	*	*	*	75	323	3	218	26	194	35	245
01:00	*	*	*	*	*	*	*	*	85	329	16	228	19	**245**	40	267
02:00	*	*	*	*	*	*	*	*	109	379	38	258	32	211	60	283
03:00	*	*	*	*	*	*	*	*	79	372	34	277	32	233	48	**294**
04:00	*	*	*	*	*	*	*	*	120	**389**	52	260	33	211	68	287
05:00	*	*	*	*	*	*	*	*	**135**	371	48	258	33	201	**72**	277
06:00	*	*	*	*	*	*	*	*	112	356	48	275	**36**	154	65	262
07:00	*	*	*	*	*	*	*	*	82	272	48	294	33	151	54	239
08:00	*	*	*	*	*	*	*	*	51	234	45	**313**	16	136	37	228
09:00	*	*	*	*	*	*	*	*	43	176	**57**	209	16	128	39	171
10:00	*	*	*	*	*	*	*	*	44	185	49	164	19	93	37	147
11:00	*	*	*	*	*	*	*	*	26	157	35	194	17	74	26	142
Lane	0	0	0	0	0	0	0	0	1134	4142	598	4311	466	3076	771	4116
Day	0		0		0		0		5276		4909		3542		4887	
AM Peak	-	-	-	-	-	-	-	-	11:00	11:00	00:00	10:00	00:00	11:00	11:00	11:00
Vol.	-	-	-	-	-	-	-	-	96	322	37	220	33	178	40	237
PM Peak	-	-	-	-	-	-	-	-	17:00	16:00	21:00	20:00	18:00	13:00	17:00	15:00
Vol.	-	-	-	-	-	-	-	-	135	389	57	313	36	245	72	294

Accurate Counts
978-664-2565

LG038C02

Location : Main Street
Location : East of Ames Street
City/State: Cambridge, MA

Start	13-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	9	38	15	62	16	72	23	93	30	109	39	126	*	*	22	83
01:00	3	36	3	47	15	44	9	71	13	86	24	122	*	*	11	68
02:00	2	17	3	23	5	27	5	30	8	66	8	98	*	*	5	44
03:00	1	13	4	20	3	15	5	24	12	37	11	44	*	*	6	26
04:00	12	35	11	25	11	27	6	23	7	34	3	20	*	*	8	27
05:00	18	66	5	47	8	60	12	54	32	71	11	39	*	*	14	56
06:00	44	127	50	109	45	119	55	113	45	116	17	71	*	*	43	109
07:00	60	223	83	247	83	254	87	251	80	242	26	91	*	*	70	218
08:00	**85**	257	87	**357**	82	**339**	**97**	306	**83**	270	22	142	*	*	76	278
09:00	83	**324**	**114**	349	**99**	311	70	**333**	81	**321**	20	174	*	*	**78**	**302**
10:00	85	310	72	318	83	306	71	305	78	280	43	172	*	*	72	282
11:00	79	277	96	289	88	305	73	297	70	296	**48**	**183**	*	*	76	274
12:00 PM	96	288	86	290	104	315	79	284	63	298	50	222	*	*	80	283
01:00	69	266	106	341	112	325	85	324	69	279	48	**261**	*	*	82	299
02:00	79	327	92	362	117	366	95	395	73	366	54	256	*	*	85	345
03:00	74	338	86	**415**	91	**398**	71	375	101	**418**	57	222	*	*	80	**361**
04:00	121	**367**	126	353	101	391	97	384	115	373	52	207	*	*	102	346
05:00	143	352	148	412	**132**	385	99	380	119	394	68	234	*	*	118	360
06:00	**144**	327	**153**	356	106	378	**110**	**401**	**142**	304	64	180	*	*	**120**	324
07:00	80	230	98	218	115	258	108	245	77	238	**72**	196	*	*	92	231
08:00	68	201	57	185	50	227	59	186	55	215	51	194	*	*	57	201
09:00	56	178	36	190	54	196	45	208	52	186	35	177	*	*	46	189
10:00	22	131	35	128	37	168	46	192	55	194	56	201	*	*	42	169
11:00	23	94	29	118	38	112	36	148	39	152	54	168	*	*	36	132
Lane	1456	4822	1595	5261	1595	5398	1443	5422	1499	5345	933	3800	0	0	1421	5007
Day	6278		6856		6993		6865		6844		4733		0		6428	
AM Peak	08:00	09:00	09:00	08:00	09:00	08:00	08:00	09:00	08:00	09:00	11:00	11:00	-	-	09:00	09:00
Vol.	85	324	114	357	99	339	97	333	83	321	48	183	-	-	78	302
PM Peak	18:00	16:00	18:00	15:00	17:00	15:00	18:00	18:00	18:00	15:00	19:00	13:00	-	-	18:00	15:00
Vol.	144	367	153	415	132	398	110	401	142	418	72	261	-	-	120	361

Comb. Total	6278	6856	6993	6865	12120	9642	3542	11315
ADT	ADT 5,867	AADT 5,867						

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	10-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		*	106			*	86				
12:15		*	104			*	83				
12:30		*	115			*	82				
12:45		*	102	0	427	*	84	0	335	0	762
01:00		*	90			*	70				
01:15		*	117			*	74				
01:30		*	103			*	72				
01:45		*	108	0	418	*	94	0	310	0	728
02:00		*	96			*	78				
02:15		*	101			*	108				
02:30		*	96			*	80				
02:45		*	93	0	386	*	104	0	370	0	756
03:00		*	114			*	133				
03:15		*	78			*	114				
03:30		*	118			*	120				
03:45		*	94	0	404	*	104	0	471	0	875
04:00		*	96			*	96				
04:15		*	110			*	118				
04:30		*	102			*	106				
04:45		*	110	0	418	*	113	0	433	0	851
05:00		*	138			*	110				
05:15		*	126			*	132				
05:30		*	122			*	107				
05:45		*	136	0	522	*	116	0	465	0	987
06:00		*	128			*	110				
06:15		*	117			*	102				
06:30		*	122			*	88				
06:45		*	92	0	459	*	92	0	392	0	851
07:00		*	105			*	84				
07:15		*	86			*	77				
07:30		*	76			*	59				
07:45		*	85	0	352	*	52	0	272	0	624
08:00		*	90			*	48				
08:15		*	70			*	44				
08:30		*	58			*	47				
08:45		*	64	0	282	*	44	0	183	0	465
09:00		128	50			116	37				
09:15		118	44			96	44				
09:30		126	39			102	38				
09:45		112	44	484	177	112	44	426	163	910	340
10:00		94	41			91	38				
10:15		95	36			70	34				
10:30		94	51			82	40				
10:45		87	41	370	169	88	36	331	148	701	317
11:00		86	43			90	34				
11:15		82	27			84	20				
11:30		103	32			90	22				
11:45		109	28	380	130	117	35	381	111	761	241
Total		1234	4144			1138	3653			2372	7797
Percent		22.9%	77.1%			23.8%	76.2%			23.3%	76.7%

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	11-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		50	52			17	50				
12:15		22	59			16	60				
12:30		21	57			13	49				
12:45		17	57	110	225	18	68	64	227	174	452
01:00		16	58			14	54				
01:15		16	44			7	58				
01:30		10	64			7	60				
01:45		20	72	62	238	16	67	44	239	106	477
02:00		27	69			8	62				
02:15		10	47			9	66				
02:30		18	44			12	64				
02:45		13	62	68	222	10	55	39	247	107	469
03:00		21	52			10	62				
03:15		12	61			4	70				
03:30		10	60			6	53				
03:45		10	58	53	231	4	56	24	241	77	472
04:00		4	66			4	37				
04:15		5	56			5	52				
04:30		4	42			10	46				
04:45		8	54	21	218	8	41	27	176	48	394
05:00		2	42			9	40				
05:15		14	58			12	42				
05:30		27	66			12	38				
05:45		27	65	70	231	27	60	60	180	130	411
06:00		9	60			16	28				
06:15		21	76			17	36				
06:30		24	57			20	47				
06:45		21	44	75	237	24	44	77	155	152	392
07:00		14	49			30	36				
07:15		23	50			28	43				
07:30		30	62			21	45				
07:45		34	54	101	215	18	36	97	160	198	375
08:00		25	48			24	36				
08:15		30	51			28	38				
08:30		26	62			39	34				
08:45		35	36	116	197	42	28	133	136	249	333
09:00		31	30			37	18				
09:15		43	38			34	38				
09:30		37	26			34	32				
09:45		58	42	169	136	42	26	147	114	316	250
10:00		51	30			40	16				
10:15		52	25			38	14				
10:30		48	38			52	42				
10:45		46	33	197	126	40	31	170	103	367	229
11:00		53	41			50	26				
11:15		52	23			46	21				
11:30		50	30			50	26				
11:45		52	31	207	125	51	20	197	93	404	218
Total		1249	2401			1079	2071			2328	4472
Percent		34.2%	65.8%			34.3%	65.7%			34.2%	65.8%

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start Time	12-May-13 Sun	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		13	50			26	59				
12:15		34	42			18	49				
12:30		22	50			14	50				
12:45		19	56	88	198	10	63	68	221	156	419
01:00		15	47			8	54				
01:15		20	55			15	66				
01:30		14	40			10	50				
01:45		16	53	65	195	11	41	44	211	109	406
02:00		20	48			7	48				
02:15		20	45			11	58				
02:30		14	54			8	43				
02:45		17	62	71	209	12	42	38	191	109	400
03:00		8	61			8	46				
03:15		12	52			4	52				
03:30		7	49			6	52				
03:45		2	68	29	230	7	49	25	199	54	429
04:00		14	47			4	48				
04:15		12	46			7	42				
04:30		4	39			4	34				
04:45		1	35	31	167	2	44	17	168	48	335
05:00		9	42			6	36				
05:15		6	50			4	36				
05:30		6	48			8	38				
05:45		6	58	27	198	12	38	30	148	57	346
06:00		6	48			8	45				
06:15		8	59			4	38				
06:30		9	48			10	32				
06:45		6	46	29	201	13	35	35	150	64	351
07:00		14	46			7	38				
07:15		24	36			8	28				
07:30		14	36			10	28				
07:45		8	43	60	161	17	34	42	128	102	289
08:00		25	27			16	30				
08:15		16	46			13	28				
08:30		17	38			9	25				
08:45		27	28	85	139	32	20	70	103	155	242
09:00		25	26			19	22				
09:15		28	28			26	18				
09:30		22	34			24	22				
09:45		34	24	109	112	30	16	99	78	208	190
10:00		34	30			24	20				
10:15		43	17			28	14				
10:30		41	25			42	25				
10:45		38	28	156	100	37	36	131	95	287	195
11:00		31	21			41	25				
11:15		42	28			40	12				
11:30		46	24			38	17				
11:45		38	16	157	89	48	18	167	72	324	161
Total		907	1999			766	1764			1673	3763
Percent		31.2%	68.8%			30.3%	69.7%			30.8%	69.2%

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	13-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Mon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		14	94			11	82				
12:15		11	81			14	65				
12:30		10	72			7	77				
12:45		5	80	40	327	8	62	40	286	80	613
01:00		12	77			3	68				
01:15		6	67			6	70				
01:30		13	86			4	58				
01:45		6	80	37	310	4	78	17	274	54	584
02:00		8	72			3	72				
02:15		3	94			4	74				
02:30		5	77			3	85				
02:45		4	96	20	339	5	74	15	305	35	644
03:00		6	108			3	91				
03:15		0	79			1	104				
03:30		3	116			2	80				
03:45		4	100	13	403	8	86	14	361	27	764
04:00		4	96			7	96				
04:15		12	99			4	98				
04:30		8	101			16	105				
04:45		18	106	42	402	11	132	38	431	80	833
05:00		30	128			22	98				
05:15		16	148			24	118				
05:30		34	138			36	132				
05:45		38	136	118	550	56	114	138	462	256	1012
06:00		44	128			52	86				
06:15		52	106			61	88				
06:30		64	96			72	70				
06:45		58	86	218	416	102	74	287	318	505	734
07:00		106	76			84	60				
07:15		93	76			88	59				
07:30		108	70			100	50				
07:45		112	58	419	280	128	51	400	220	819	500
08:00		134	69			98	30				
08:15		120	61			112	50				
08:30		129	54			113	36				
08:45		134	49	517	233	140	39	463	155	980	388
09:00		132	52			121	30				
09:15		156	54			102	29				
09:30		110	32			116	42				
09:45		118	34	516	172	88	38	427	139	943	311
10:00		102	30			80	36				
10:15		88	38			75	37				
10:30		100	37			78	38				
10:45		100	32	390	137	66	50	299	161	689	298
11:00		78	30			68	26				
11:15		85	24			62	12				
11:30		76	28			65	9				
11:45		75	21	314	103	60	16	255	63	569	166
Total		2644	3672			2393	3175			5037	6847
Percent		41.9%	58.1%			43.0%	57.0%			42.4%	57.6%

Accurate Counts
978-664-2565

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

LG038C03

Start Time	14-May-13 Tue	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		28	82			14	90				
12:15		15	80			6	58				
12:30		13	79			8	83				
12:45		6	97	62	338	6	76	34	307	96	645
01:00		10	94			6	76				
01:15		14	97			10	74				
01:30		15	72			4	72				
01:45		10	92	49	355	10	82	30	304	79	659
02:00		18	86			7	98				
02:15		4	90			1	90				
02:30		7	87			4	101				
02:45		8	96	37	359	5	84	17	373	54	732
03:00		10	104			8	106				
03:15		4	94			4	110				
03:30		4	107			2	94				
03:45		8	94	26	399	6	83	20	393	46	792
04:00		5	110			7	99				
04:15		4	105			4	96				
04:30		6	102			6	100				
04:45		8	113	23	430	16	115	33	410	56	840
05:00		13	131			12	120				
05:15		20	143			28	117				
05:30		28	130			36	112				
05:45		48	148	109	552	45	96	121	445	230	997
06:00		50	132			64	102				
06:15		63	113			64	95				
06:30		52	116			72	87				
06:45		92	112	257	473	110	82	310	366	567	839
07:00		114	77			89	70				
07:15		110	92			110	58				
07:30		102	60			104	49				
07:45		114	72	440	301	112	61	415	238	855	539
08:00		144	55			126	43				
08:15		149	52			112	42				
08:30		160	64			119	50				
08:45		170	64	623	235	124	41	481	176	1104	411
09:00		154	38			144	50				
09:15		150	50			130	54				
09:30		148	48			128	52				
09:45		128	47	580	183	124	34	526	190	1106	373
10:00		130	51			96	41				
10:15		96	33			84	40				
10:30		94	46			76	40				
10:45		96	42	416	172	92	35	348	156	764	328
11:00		90	38			78	26				
11:15		93	26			82	15				
11:30		78	20			73	9				
11:45		105	24	366	108	87	10	320	60	686	168
Total		2988	3905			2655	3418			5643	7323
Percent		43.3%	56.7%			43.7%	56.3%			43.5%	56.5%

Accurate Counts
978-664-2565

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

LG038C03

Start Time	15-May-13 Wed	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		33	88			14	108				
12:15		27	84			11	88				
12:30		10	74			11	90				
12:45		15	98	85	344	12	74	48	360	133	704
01:00		13	84			8	80				
01:15		8	93			11	74				
01:30		13	84			4	82				
01:45		8	103	42	364	8	91	31	327	73	691
02:00		18	93			8	97				
02:15		6	104			5	84				
02:30		7	84			4	108				
02:45		8	72	39	353	10	94	27	383	66	736
03:00		7	104			4	94				
03:15		6	92			7	104				
03:30		6	111			8	106				
03:45		6	113	25	420	9	115	28	419	53	839
04:00		6	80			6	92				
04:15		6	108			6	114				
04:30		6	124			8	109				
04:45		12	143	30	455	6	107	26	422	56	877
05:00		12	124			19	134				
05:15		21	124			21	126				
05:30		36	128			41	115				
05:45		45	141	114	517	62	112	143	487	257	1004
06:00		42	123			44	104				
06:15		50	108			66	101				
06:30		64	126			89	115				
06:45		72	112	228	469	72	94	271	414	499	883
07:00		112	96			100	92				
07:15		92	103			106	65				
07:30		102	75			104	86				
07:45		120	68	426	342	135	58	445	301	871	643
08:00		118	62			119	46				
08:15		128	52			116	39				
08:30		141	60			108	42				
08:45		173	58	560	232	151	33	494	160	1054	392
09:00		133	60			148	54				
09:15		113	60			141	46				
09:30		128	50			122	52				
09:45		110	42	484	212	98	40	509	192	993	404
10:00		128	40			108	30				
10:15		108	36			96	32				
10:30		96	34			84	32				
10:45		90	46	422	156	81	33	369	127	791	283
11:00		84	37			82	44				
11:15		87	30			82	20				
11:30		92	30			83	17				
11:45		104	20	367	117	94	19	341	100	708	217
Total		2822	3981			2732	3692			5554	7673
Percent		41.5%	58.5%			42.5%	57.5%			42.0%	58.0%

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	16-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		35	116			24	92				
12:15		21	82			10	80				
12:30		12	80			9	76				
12:45		17	84	85	362	6	73	49	321	134	683
01:00		14	96			7	76				
01:15		20	91			8	88				
01:30		19	88			7	76				
01:45		7	77	60	352	5	84	27	324	87	676
02:00		14	98			2	86				
02:15		10	97			4	96				
02:30		6	105			4	103				
02:45		4	98	34	398	6	88	16	373	50	771
03:00		6	98			2	104				
03:15		12	94			5	112				
03:30		6	124			6	104				
03:45		9	112	33	428	4	91	17	411	50	839
04:00		8	94			8	92				
04:15		12	110			6	115				
04:30		8	103			6	113				
04:45		16	116	44	423	14	107	34	427	78	850
05:00		10	119			16	122				
05:15		8	164			26	128				
05:30		28	151			30	120				
05:45		42	136	88	570	46	98	118	468	206	1038
06:00		52	129			70	96				
06:15		50	136			63	92				
06:30		70	106			74	80				
06:45		68	118	240	489	93	76	300	344	540	833
07:00		104	98			92	64				
07:15		100	96			110	78				
07:30		98	92			89	60				
07:45		103	74	405	360	106	54	397	256	802	616
08:00		118	64			119	42				
08:15		142	57			121	48				
08:30		142	56			120	38				
08:45		137	60	539	237	125	54	485	182	1024	419
09:00		132	44			140	49				
09:15		144	62			137	46				
09:30		130	42			112	66				
09:45		137	48	543	196	114	28	503	189	1046	385
10:00		128	58			100	46				
10:15		106	38			80	34				
10:30		107	44			82	34				
10:45		92	41	433	181	88	38	350	152	783	333
11:00		92	30			70	40				
11:15		106	37			100	18				
11:30		87	25			66	20				
11:45		122	31	407	123	100	26	336	104	743	227
Total		2911	4119			2632	3551			5543	7670
Percent		41.4%	58.6%			42.6%	57.4%			42.0%	58.0%

Accurate Counts
978-664-2565

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

LG038C03

Start	17-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		37	109			20	76				
12:15		30	78			12	108				
12:30		16	102			11	76				
12:45		11	108	94	397	10	85	53	345	147	742
01:00		13	101			5	78				
01:15		12	82			10	74				
01:30		16	91			12	70				
01:45		8	94	49	368	6	93	33	315	82	683
02:00		12	104			9	88				
02:15		11	100			7	100				
02:30		14	90			3	112				
02:45		10	104	47	398	3	100	22	400	69	798
03:00		9	96			8	82				
03:15		9	117			4	104				
03:30		8	104			8	104				
03:45		4	102	30	419	6	106	26	396	56	815
04:00		13	107			8	97				
04:15		6	88			18	86				
04:30		9	108			6	90				
04:45		14	88	42	391	16	80	48	353	90	744
05:00		16	123			16	111				
05:15		18	134			18	116				
05:30		27	137			37	104				
05:45		48	104	109	498	44	103	115	434	224	932
06:00		33	98			52	79				
06:15		56	92			56	95				
06:30		44	108			76	68				
06:45		78	86	211	384	81	65	265	307	476	691
07:00		80	80			92	88				
07:15		95	60			86	60				
07:30		95	76			93	64				
07:45		104	72	374	288	118	42	389	254	763	542
08:00		127	70			98	49				
08:15		139	72			117	51				
08:30		106	54			129	26				
08:45		129	50	501	246	110	37	454	163	955	409
09:00		132	60			116	34				
09:15		140	38			114	48				
09:30		116	38			94	46				
09:45		114	49	502	185	112	38	436	166	938	351
10:00		124	35			71	40				
10:15		132	36			54	28				
10:30		88	52			74	46				
10:45		96	42	440	165	86	42	285	156	725	321
11:00		94	34			71	30				
11:15		90	39			64	22				
11:30		81	30			86	28				
11:45		110	25	375	128	86	22	307	102	682	230
Total		2774	3867			2433	3391			5207	7258
Percent		41.8%	58.2%			41.8%	58.2%			41.8%	58.2%

Accurate Counts
978-664-2565

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

LG038C03

Start	18-May-13	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		33	62			16	58				
12:15		37	71			19	45				
12:30		13	52			15	60				
12:45		20	46	103	231	10	53	60	216	163	447
01:00		14	58			18	46				
01:15		20	76			10	52				
01:30		18	70			17	51				
01:45		16	64	68	268	9	58	54	207	122	475
02:00		13	47			16	52				
02:15		25	58			5	47				
02:30		15	66			14	65				
02:45		7	54	60	225	6	67	41	231	101	456
03:00		11	58			13	56				
03:15		10	66			9	50				
03:30		6	48			3	48				
03:45		3	67	30	239	4	52	29	206	59	445
04:00		4	47			6	50				
04:15		1	70			4	64				
04:30		8	58			8	48				
04:45		7	57	20	232	4	48	22	210	42	442
05:00		4	55			8	50				
05:15		12	73			4	42				
05:30		12	72			14	52				
05:45		24	70	52	270	19	52	45	196	97	466
06:00		20	56			14	46				
06:15		25	56			26	42				
06:30		18	48			20	48				
06:45		22	54	85	214	31	38	91	174	176	388
07:00		32	54			23	35				
07:15		30	54			31	42				
07:30		18	48			19	36				
07:45		28	50	108	206	18	50	91	163	199	369
08:00		29	56			40	32				
08:15		44	40			26	26				
08:30		44	34			24	44				
08:45		42	40	159	170	38	28	128	130	287	300
09:00		36	30			32	26				
09:15		45	53			35	34				
09:30		40	47			36	24				
09:45		54	26	175	156	43	24	146	108	321	264
10:00		50	39			41	38				
10:15		41	36			58	41				
10:30		52	36			49	24				
10:45		108	40	251	151	50	41	198	144	449	295
11:00		38	39			46	34				
11:15		54	26			34	30				
11:30		40	34			50	26				
11:45		72	28	204	127	48	22	178	112	382	239
Total		1315	2489			1083	2097			2398	4586
Percent		34.6%	65.4%			34.1%	65.9%			34.3%	65.7%

Accurate Counts
978-664-2565

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

LG038C03

Start Time	19-May-13 Sun	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		21	*			26	*				
12:15		19	*			20	*				
12:30		20	*			8	*				
12:45		18	*	78	0	7	*	61	0	139	0
01:00		18	*			17	*				
01:15		16	*			12	*				
01:30		12	*			9	*				
01:45		21	*	67	0	12	*	50	0	117	0
02:00		11	*			8	*				
02:15		9	*			10	*				
02:30		20	*			8	*				
02:45		19	*	59	0	5	*	31	0	90	0
03:00		8	*			9	*				
03:15		10	*			10	*				
03:30		6	*			10	*				
03:45		8	*	32	0	8	*	37	0	69	0
04:00		4	*			8	*				
04:15		5	*			9	*				
04:30		1	*			5	*				
04:45		2	*	12	0	4	*	26	0	38	0
05:00		6	*			3	*				
05:15		11	*			7	*				
05:30		2	*			4	*				
05:45		10	*	29	0	15	*	29	0	58	0
06:00		17	*			14	*				
06:15		4	*			11	*				
06:30		10	*			16	*				
06:45		18	*	49	0	17	*	58	0	107	0
07:00		13	*			18	*				
07:15		12	*			10	*				
07:30		8	*			14	*				
07:45		14	*	47	0	10	*	52	0	99	0
08:00		20	*			20	*				
08:15		20	*			12	*				
08:30		22	*			18	*				
08:45		1	*	63	0	2	*	52	0	115	0
09:00		*	*	*	*	*	*	*	*	*	*
09:15		*	*	*	*	*	*	*	*	*	*
09:30		*	*	*	*	*	*	*	*	*	*
09:45		*	*	*	*	*	*	*	*	*	*
10:00		*	*	*	*	*	*	*	*	*	*
10:15		*	*	*	*	*	*	*	*	*	*
10:30		*	*	*	*	*	*	*	*	*	*
10:45		*	*	*	*	*	*	*	*	*	*
11:00		*	*	*	*	*	*	*	*	*	*
11:15		*	*	*	*	*	*	*	*	*	*
11:30		*	*	*	*	*	*	*	*	*	*
11:45		*	*	*	*	*	*	*	*	*	*
Total		436	0			396	0			832	0
Percent		100.0%	0.0%			100.0%	0.0%			100.0%	0.0%
Grand Total		19280	30577			17307	26812			36587	57389
Percent		38.7%	61.3%			39.2%	60.8%			38.9%	61.1%
ADT		ADT 10,442		AADT 10,442							

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	06-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	*	*	*	*	*	*	*	*	110	64	88	68	99	66
01:00	*	*	*	*	*	*	*	*	*	*	62	44	65	44	64	44
02:00	*	*	*	*	*	*	*	*	*	*	68	39	71	38	70	38
03:00	*	*	*	*	*	*	*	*	*	*	53	24	29	25	41	24
04:00	*	*	*	*	*	*	*	*	*	*	21	27	31	17	26	22
05:00	*	*	*	*	*	*	*	*	*	*	70	60	27	30	48	45
06:00	*	*	*	*	*	*	*	*	*	*	75	77	29	35	52	56
07:00	*	*	*	*	*	*	*	*	*	*	101	97	60	42	80	70
08:00	*	*	*	*	*	*	*	*	*	*	116	133	85	70	100	102
09:00	*	*	*	*	*	*	*	*	**484**	**426**	169	147	109	99	**254**	224
10:00	*	*	*	*	*	*	*	*	370	331	197	170	156	131	241	211
11:00	*	*	*	*	*	*	*	*	380	381	**207**	**197**	**157**	**167**	248	**248**
12:00 PM	*	*	*	*	*	*	*	*	427	335	225	227	198	**221**	283	261
01:00	*	*	*	*	*	*	*	*	418	310	**238**	239	195	211	284	253
02:00	*	*	*	*	*	*	*	*	386	370	222	**247**	209	191	272	269
03:00	*	*	*	*	*	*	*	*	404	**471**	231	241	**230**	199	288	**304**
04:00	*	*	*	*	*	*	*	*	418	433	218	176	167	168	268	259
05:00	*	*	*	*	*	*	*	*	**522**	465	231	180	198	148	**317**	264
06:00	*	*	*	*	*	*	*	*	459	392	237	155	201	150	299	232
07:00	*	*	*	*	*	*	*	*	352	272	215	160	161	128	243	187
08:00	*	*	*	*	*	*	*	*	282	183	197	136	139	103	206	141
09:00	*	*	*	*	*	*	*	*	177	163	136	114	112	78	142	118
10:00	*	*	*	*	*	*	*	*	169	148	126	103	100	95	132	115
11:00	*	*	*	*	*	*	*	*	130	111	125	93	89	72	115	92
Lane	0	0	0	0	0	0	0	0	5378	4791	3650	3150	2906	2530	4172	3645
Day	0		0		0		0		10169		6800		5436		7817	
AM Peak	-	-	-	-	-	-	-	-	09:00	09:00	11:00	11:00	11:00	11:00	09:00	11:00
Vol.	-	-	-	-	-	-	-	-	484	426	207	197	157	167	254	248
PM Peak	-	-	-	-	-	-	-	-	17:00	15:00	13:00	14:00	15:00	12:00	17:00	15:00
Vol.	-	-	-	-	-	-	-	-	522	471	238	247	230	221	317	304

Accurate Counts
978-664-2565

LG038C03

Location : Vassar Street
Location : South of Main Street
City/State: Cambridge, MA

Start	13-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	40	40	62	34	85	48	85	49	94	53	103	60	**78**	**61**	78	49
01:00	37	17	49	30	42	31	60	27	49	33	68	54	67	50	53	35
02:00	20	15	37	17	39	27	34	16	47	22	60	41	59	31	42	24
03:00	13	14	26	20	25	28	33	17	30	26	30	29	32	37	27	24
04:00	42	38	23	33	30	26	44	34	42	48	20	22	12	26	30	32
05:00	118	138	109	121	114	143	88	118	109	115	52	45	29	29	88	101
06:00	218	287	257	310	228	271	240	300	211	265	85	91	49	58	184	226
07:00	419	400	440	415	426	445	405	397	374	389	108	91	47	52	317	313
08:00	**517**	**463**	**623**	481	**560**	494	539	485	501	**454**	159	128	63	52	423	365
09:00	516	427	580	**526**	484	**509**	**543**	**503**	**502**	436	175	146	*	*	**467**	**424**
10:00	390	299	416	348	422	369	433	350	440	285	**251**	**198**	*	*	392	308
11:00	314	255	366	320	367	341	407	336	375	307	204	178	*	*	339	290
12:00 PM	327	286	338	307	344	360	362	321	397	345	231	216	*	*	333	306
01:00	310	274	355	304	364	327	352	324	368	315	268	207	*	*	336	292
02:00	339	305	359	373	353	383	398	373	398	400	225	**231**	*	*	345	344
03:00	403	361	399	393	420	419	428	411	419	396	239	206	*	*	385	364
04:00	402	431	430	410	455	422	423	427	391	353	232	210	*	*	389	376
05:00	**550**	**462**	**552**	**445**	**517**	**487**	**570**	**468**	**498**	**434**	**270**	196	*	*	**493**	**415**
06:00	416	318	473	366	469	414	489	344	384	307	214	174	*	*	408	320
07:00	280	220	301	238	342	301	360	256	288	254	206	163	*	*	296	239
08:00	233	155	235	176	232	160	237	182	246	163	170	130	*	*	226	161
09:00	172	139	183	190	212	192	196	189	185	166	156	108	*	*	184	164
10:00	137	161	172	156	156	127	181	152	165	156	151	144	*	*	160	149
11:00	103	63	108	60	117	100	123	104	128	102	127	112	*	*	118	90
Lane	6316	5568	6893	6073	6803	6424	7030	6183	6641	5824	3804	3180	436	396	6113	5411
Day	11884		12966		13227		13213		12465		6984		832		11524	
AM Peak	08:00	08:00	08:00	09:00	08:00	09:00	09:00	09:00	09:00	08:00	10:00	10:00	00:00	00:00	09:00	09:00
Vol.	517	463	623	526	560	509	543	503	502	454	251	198	78	61	467	424
PM Peak	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	14:00	-	-	17:00	17:00
Vol.	550	462	552	445	517	487	570	468	498	434	270	231	-	-	493	415

Comb. Total	11884	12966	13227	13213	22634	13784	6268	19341
ADT	ADT 10,442	AADT 10,442						

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	10-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		*	80			*	77				
12:15		*	66			*	86				
12:30		*	84			*	74				
12:45		*	63	0	293	*	87	0	324	0	617
01:00		*	68			*	84				
01:15		*	54			*	80				
01:30		*	60			*	74				
01:45		*	92	0	274	*	106	0	344	0	618
02:00		*	72			*	76				
02:15		*	86			*	76				
02:30		*	96			*	80				
02:45		*	82	0	336	*	72	0	304	0	640
03:00		*	120			*	77				
03:15		*	126			*	74				
03:30		*	138			*	84				
03:45		*	158	0	542	*	94	0	329	0	871
04:00		*	136			*	74				
04:15		*	129			*	88				
04:30		*	142			*	70				
04:45		*	131	0	538	*	89	0	321	0	859
05:00		*	142			*	104				
05:15		*	162			*	82				
05:30		*	144			*	90				
05:45		*	129	0	577	*	82	0	358	0	935
06:00		*	101			*	68				
06:15		*	107			*	64				
06:30		*	100			*	60				
06:45		*	87	0	395	*	72	0	264	0	659
07:00		*	85			*	59				
07:15		*	60			*	48				
07:30		*	47			*	70				
07:45		*	58	0	250	*	46	0	223	0	473
08:00		*	52			*	46				
08:15		*	46			*	41				
08:30		*	40			*	48				
08:45		*	34	0	172	*	40	0	175	0	347
09:00		80	38			95	15				
09:15		64	75			108	4				
09:30		59	62			89	1				
09:45		70	58	273	233	86	4	378	24	651	257
10:00		69	79			66	2				
10:15		64	74			60	2				
10:30		82	94			68	2				
10:45		68	62	283	309	78	4	272	10	555	319
11:00		77	82			61	4				
11:15		62	54			70	2				
11:30		78	42			75	1				
11:45		78	52	295	230	74	0	280	7	575	237
Total		851	4149			930	2683			1781	6832
Percent		17.0%	83.0%			25.7%	74.3%			20.7%	79.3%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	11-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		64	62			4	2				
12:15		36	57			0	2				
12:30		32	60			1	2				
12:45		46	58	178	237	2	2	7	8	185	245
01:00		38	60			1	4				
01:15		34	62			2	2				
01:30		34	56			0	2				
01:45		17	65	123	243	2	2	5	10	128	253
02:00		20	65			0	0				
02:15		38	56			4	4				
02:30		34	63			0	2				
02:45		25	70	117	254	0	0	4	6	121	260
03:00		16	76			0	5				
03:15		10	63			0	2				
03:30		12	60			0	3				
03:45		12	56	50	255	1	0	1	10	51	265
04:00		6	56			0	2				
04:15		4	39			0	2				
04:30		11	50			1	0				
04:45		4	68	25	213	1	2	2	6	27	219
05:00		16	50			0	4				
05:15		22	68			0	5				
05:30		24	59			0	7				
05:45		34	48	96	225	3	1	3	17	99	242
06:00		18	56			5	2				
06:15		33	64			2	4				
06:30		26	44			2	3				
06:45		29	48	106	212	0	2	9	11	115	223
07:00		32	42			2	2				
07:15		26	56			0	2				
07:30		38	57			2	2				
07:45		41	52	137	207	1	1	5	7	142	214
08:00		34	46			1	1				
08:15		32	47			0	0				
08:30		34	39			0	2				
08:45		44	41	144	173	2	8	3	11	147	184
09:00		41	38			0	1				
09:15		46	45			4	0				
09:30		52	31			2	0				
09:45		66	18	205	132	1	2	7	3	212	135
10:00		49	34			10	1				
10:15		38	30			23	0				
10:30		30	35			30	0				
10:45		63	34	180	133	6	2	69	3	249	136
11:00		55	28			0	0				
11:15		61	34			2	4				
11:30		70	27			2	1				
11:45		74	26	260	115	2	2	6	7	266	122
Total		1621	2399			121	99			1742	2498
Percent		40.3%	59.7%			55.0%	45.0%			41.1%	58.9%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	12-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Sun	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		22	44			1	2				
12:15		22	47			2	2				
12:30		16	48			2	2				
12:45		15	42	75	181	0	2	5	8	80	189
01:00		14	56			1	2				
01:15		19	46			0	2				
01:30		17	42			2	0				
01:45		10	42	60	186	0	0	3	4	63	190
02:00		11	46			0	1				
02:15		18	40			0	2				
02:30		11	47			0	2				
02:45		6	38	46	171	0	1	0	6	46	177
03:00		8	50			0	2				
03:15		11	40			0	2				
03:30		4	46			1	2				
03:45		6	44	29	180	0	2	1	8	30	188
04:00		4	32			0	1				
04:15		8	49			0	2				
04:30		4	40			0	2				
04:45		8	27	24	148	0	2	0	7	24	155
05:00		11	28			0	0				
05:15		8	53			1	1				
05:30		9	28			2	4				
05:45		3	32	31	141	1	2	4	7	35	148
06:00		10	32			0	4				
06:15		15	42			0	6				
06:30		11	54			0	2				
06:45		10	42	46	170	0	0	0	12	46	182
07:00		10	60			0	1				
07:15		8	48			0	1				
07:30		10	34			0	1				
07:45		12	33	40	175	1	2	1	5	41	180
08:00		8	27			0	3				
08:15		21	42			0	2				
08:30		11	32			0	1				
08:45		24	38	64	139	1	3	1	9	65	148
09:00		23	25			2	2				
09:15		36	32			0	0				
09:30		22	28			3	0				
09:45		31	20	112	105	1	2	6	4	118	109
10:00		36	28			1	0				
10:15		29	21			3	2				
10:30		26	20			0	0				
10:45		26	26	117	95	2	2	6	4	123	99
11:00		31	18			2	6				
11:15		32	22			0	1				
11:30		40	20			2	4				
11:45		32	16	135	76	2	0	6	11	141	87
Total		779	1767			33	85			812	1852
Percent		30.6%	69.4%			28.0%	72.0%			30.5%	69.5%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	13-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Mon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		14	41			4	71				
12:15		10	66			1	76				
12:30		6	54			0	68				
12:45		8	58	38	219	0	73	5	288	43	507
01:00		4	50			0	63				
01:15		6	68			2	64				
01:30		2	64			0	66				
01:45		12	66	24	248	6	73	8	266	32	514
02:00		2	66			1	68				
02:15		4	64			0	64				
02:30		4	68			3	78				
02:45		3	76	13	274	0	64	4	274	17	548
03:00		6	66			1	68				
03:15		0	102			0	81				
03:30		6	107			2	88				
03:45		4	109	16	384	1	74	4	311	20	695
04:00		5	120			2	72				
04:15		2	115			2	72				
04:30		10	128			2	85				
04:45		10	138	27	501	0	78	6	307	33	808
05:00		16	130			4	86				
05:15		10	158			4	92				
05:30		34	150			4	81				
05:45		25	120	85	558	6	76	18	335	103	893
06:00		47	96			14	90				
06:15		54	124			33	84				
06:30		57	98			32	76				
06:45		66	85	224	403	34	64	113	314	337	717
07:00		65	87			42	62				
07:15		68	76			26	55				
07:30		53	61			8	57				
07:45		82	48	268	272	16	39	92	213	360	485
08:00		91	41			15	30				
08:15		73	48			16	44				
08:30		79	40			18	34				
08:45		92	35	335	164	34	28	83	136	418	300
09:00		60	36			21	42				
09:15		75	26			32	36				
09:30		58	52			25	40				
09:45		77	24	270	138	13	24	91	142	361	280
10:00		68	19			60	24				
10:15		42	22			58	21				
10:30		60	38			79	35				
10:45		52	23	222	102	79	28	276	108	498	210
11:00		54	15			62	24				
11:15		44	18			54	14				
11:30		64	11			64	22				
11:45		70	14	232	58	70	11	250	71	482	129
Total		1754	3321			950	2765			2704	6086
Percent		34.6%	65.4%			25.6%	74.4%			30.8%	69.2%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	14-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		7	54			16	73				
12:15		7	49			10	62				
12:30		4	58			8	68				
12:45		7	60	25	221	6	58	40	261	65	482
01:00		6	75			10	72				
01:15		6	72			9	62				
01:30		4	70			3	72				
01:45		4	68	20	285	0	87	22	293	42	578
02:00		6	83			3	78				
02:15		4	68			8	86				
02:30		5	70			10	66				
02:45		1	74	16	295	3	76	24	306	40	601
03:00		6	78			3	72				
03:15		1	108			3	82				
03:30		4	103			6	94				
03:45		6	104	17	393	1	86	13	334	30	727
04:00		4	100			4	82				
04:15		5	136			4	85				
04:30		6	120			7	83				
04:45		9	154	24	510	3	84	18	334	42	844
05:00		12	142			7	94				
05:15		14	145			16	97				
05:30		24	148			37	103				
05:45		26	126	76	561	50	86	110	380	186	941
06:00		20	139			42	78				
06:15		42	125			46	90				
06:30		51	116			44	87				
06:45		42	94	155	474	66	82	198	337	353	811
07:00		60	88			96	70				
07:15		67	80			96	72				
07:30		80	56			80	64				
07:45		84	62	291	286	98	44	370	250	661	536
08:00		104	54			119	44				
08:15		94	48			130	36				
08:30		76	51			114	42				
08:45		83	55	357	208	132	38	495	160	852	368
09:00		92	58			107	36				
09:15		76	40			98	30				
09:30		84	56			114	36				
09:45		80	28	332	182	110	32	429	134	761	316
10:00		78	45			100	30				
10:15		60	40			81	26				
10:30		66	28			74	28				
10:45		75	26	279	139	69	38	324	122	603	261
11:00		46	22			74	23				
11:15		52	21			70	14				
11:30		52	20			55	21				
11:45		84	14	234	77	78	11	277	69	511	146
Total		1826	3631			2320	2980			4146	6611
Percent		33.5%	66.5%			43.8%	56.2%			38.5%	61.5%

Accurate Counts
978-664-2565

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

LG038C04

Start	15-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		7	64			18	70				
12:15		16	68			11	82				
12:30		8	76			10	70				
12:45		5	74	36	282	4	61	43	283	79	565
01:00		5	56			6	72				
01:15		2	66			9	72				
01:30		6	60			5	86				
01:45		3	72	16	254	4	72	24	302	40	556
02:00		2	60			1	78				
02:15		2	82			5	93				
02:30		4	84			6	78				
02:45		2	78	10	304	3	75	15	324	25	628
03:00		2	80			1	84				
03:15		3	107			3	72				
03:30		3	104			4	84				
03:45		2	108	10	399	6	78	14	318	24	717
04:00		5	112			4	89				
04:15		1	128			4	102				
04:30		10	128			6	82				
04:45		6	154	22	522	1	93	15	366	37	888
05:00		14	134			2	86				
05:15		13	152			15	74				
05:30		25	152			28	58				
05:45		28	154	80	592	50	94	95	312	175	904
06:00		27	153			46	60				
06:15		34	164			44	84				
06:30		52	132			33	81				
06:45		54	115	167	564	65	91	188	316	355	880
07:00		58	90			80	78				
07:15		70	80			82	70				
07:30		80	75			92	54				
07:45		97	54	305	299	90	48	344	250	649	549
08:00		76	48			120	65				
08:15		84	54			119	44				
08:30		92	45			136	36				
08:45		90	59	342	206	132	40	507	185	849	391
09:00		88	38			112	45				
09:15		89	46			122	37				
09:30		73	40			98	46				
09:45		88	35	338	159	81	34	413	162	751	321
10:00		76	33			86	30				
10:15		54	29			68	22				
10:30		67	42			79	24				
10:45		77	33	274	137	61	24	294	100	568	237
11:00		52	34			62	22				
11:15		54	24			60	16				
11:30		78	21			67	20				
11:45		56	16	240	95	78	19	267	77	507	172
Total		1840	3813			2219	2995			4059	6808
Percent		32.5%	67.5%			42.6%	57.4%			37.4%	62.6%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	16-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		16	56			20	80				
12:15		6	76			16	72				
12:30		7	78			7	70				
12:45		7	70	36	280	14	68	57	290	93	570
01:00		8	61			5	68				
01:15		9	72			15	84				
01:30		9	62			8	67				
01:45		10	72	36	267	9	71	37	290	73	557
02:00		6	74			4	70				
02:15		6	66			7	74				
02:30		6	88			8	76				
02:45		3	78	21	306	1	94	20	314	41	620
03:00		1	85			1	78				
03:15		1	120			3	82				
03:30		1	114			0	69				
03:45		4	88	7	407	6	75	10	304	17	711
04:00		3	115			7	105				
04:15		5	148			5	94				
04:30		3	147			2	80				
04:45		4	130	15	540	5	84	19	363	34	903
05:00		7	146			6	90				
05:15		20	164			11	92				
05:30		17	135			25	76				
05:45		22	120	66	565	52	78	94	336	160	901
06:00		27	122			46	66				
06:15		39	122			50	94				
06:30		42	112			72	96				
06:45		68	102	176	458	78	107	246	363	422	821
07:00		64	90			76	77				
07:15		54	84			70	72				
07:30		74	78			96	71				
07:45		78	52	270	304	97	52	339	272	609	576
08:00		76	60			108	54				
08:15		73	76			120	46				
08:30		83	47			132	48				
08:45		76	50	308	233	126	49	486	197	794	430
09:00		83	36			108	35				
09:15		94	50			114	33				
09:30		78	38			96	48				
09:45		84	32	339	156	118	30	436	146	775	302
10:00		72	38			78	38				
10:15		68	36			84	32				
10:30		90	23			66	36				
10:45		76	22	306	119	84	31	312	137	618	256
11:00		62	36			72	29				
11:15		65	28			67	36				
11:30		53	25			66	26				
11:45		73	20	253	109	88	28	293	119	546	228
Total		1833	3744			2349	3131			4182	6875
Percent		32.9%	67.1%			42.9%	57.1%			37.8%	62.2%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	17-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		13	74			12	77				
12:15		10	76			9	67				
12:30		14	70			22	92				
12:45		10	84	47	304	16	56	59	292	106	596
01:00		8	68			11	72				
01:15		10	70			12	82				
01:30		8	68			4	73				
01:45		8	84	34	290	9	80	36	307	70	597
02:00		10	66			10	78				
02:15		9	105			8	81				
02:30		8	94			8	84				
02:45		4	80	31	345	7	84	33	327	64	672
03:00		7	99			6	84				
03:15		5	124			4	126				
03:30		6	111			6	131				
03:45		2	131	20	465	7	122	23	463	43	928
04:00		3	122			1	79				
04:15		3	138			3	94				
04:30		7	126			4	80				
04:45		10	140	23	526	4	77	12	330	35	856
05:00		8	119			3	86				
05:15		20	108			8	88				
05:30		17	122			7	100				
05:45		33	130	78	479	44	88	62	362	140	841
06:00		34	106			50	101				
06:15		21	118			48	96				
06:30		33	81			36	82				
06:45		57	91	145	396	58	54	192	333	337	729
07:00		52	92			80	50				
07:15		62	57			70	70				
07:30		76	60			85	46				
07:45		89	48	279	257	88	44	323	210	602	467
08:00		109	52			118	60				
08:15		87	54			100	50				
08:30		78	38			116	60				
08:45		84	46	358	190	102	42	436	212	794	402
09:00		72	33			112	42				
09:15		87	48			100	36				
09:30		76	47			104	46				
09:45		70	34	305	162	92	46	408	170	713	332
10:00		64	42			86	42				
10:15		53	32			72	23				
10:30		67	36			88	38				
10:45		60	26	244	136	86	44	332	147	576	283
11:00		80	28			68	28				
11:15		63	28			82	28				
11:30		64	35			61	24				
11:45		82	22	289	113	84	18	295	98	584	211
Total		1853	3663			2211	3251			4064	6914
Percent		33.6%	66.4%			40.5%	59.5%			37.0%	63.0%

Accurate Counts
978-664-2565

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

LG038C04

Start	18-May-13	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		19	87			21	30				
12:15		20	88			13	50				
12:30		17	102			24	41				
12:45		15	91	71	368	24	58	82	179	153	547
01:00		12	81			29	52				
01:15		10	67			7	48				
01:30		17	77			8	41				
01:45		10	85	49	310	17	77	61	218	110	528
02:00		19	74			17	76				
02:15		14	44			22	48				
02:30		9	44			14	45				
02:45		12	50	54	212	12	43	65	212	119	424
03:00		10	54			4	52				
03:15		4	41			6	50				
03:30		2	41			8	38				
03:45		8	42	24	178	6	50	24	190	48	368
04:00		6	56			3	58				
04:15		7	40			3	50				
04:30		4	44			2	46				
04:45		6	48	23	188	4	58	12	212	35	400
05:00		5	48			2	44				
05:15		5	53			5	47				
05:30		11	62			8	41				
05:45		30	40	51	203	22	56	37	188	88	391
06:00		13	70			12	58				
06:15		9	57			14	50				
06:30		13	58			10	56				
06:45		21	42	56	227	18	60	54	224	110	451
07:00		26	54			16	42				
07:15		16	42			16	48				
07:30		38	70			8	51				
07:45		48	48	128	214	24	50	64	191	192	405
08:00		48	42			27	44				
08:15		56	36			20	38				
08:30		52	32			26	40				
08:45		72	38	228	148	42	37	115	159	343	307
09:00		72	42			26	41				
09:15		68	28			22	38				
09:30		58	35			38	28				
09:45		64	26	262	131	36	42	122	149	384	280
10:00		60	42			38	36				
10:15		80	18			50	40				
10:30		72	29			40	32				
10:45		72	23	284	112	36	48	164	156	448	268
11:00		82	24			29	32				
11:15		64	25			30	31				
11:30		95	19			50	33				
11:45		71	23	312	91	36	16	145	112	457	203
Total		1542	2382			945	2190			2487	4572
Percent		39.3%	60.7%			30.1%	69.9%			35.2%	64.8%

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start Time	19-May-13 Sun	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		18	*			35	*				
12:15		22	*			24	*				
12:30		16	*			16	*				
12:45		13	*	69	0	20	*	95	0	164	0
01:00		15	*			18	*				
01:15		12	*			14	*				
01:30		13	*			8	*				
01:45		10	*	50	0	13	*	53	0	103	0
02:00		12	*			10	*				
02:15		12	*			8	*				
02:30		7	*			18	*				
02:45		8	*	39	0	13	*	49	0	88	0
03:00		7	*			13	*				
03:15		9	*			5	*				
03:30		7	*			7	*				
03:45		3	*	26	0	14	*	39	0	65	0
04:00		3	*			5	*				
04:15		4	*			5	*				
04:30		5	*			2	*				
04:45		7	*	19	0	6	*	18	0	37	0
05:00		7	*			4	*				
05:15		7	*			4	*				
05:30		7	*			5	*				
05:45		13	*	34	0	2	*	15	0	49	0
06:00		10	*			6	*				
06:15		8	*			10	*				
06:30		8	*			8	*				
06:45		15	*	41	0	6	*	30	0	71	0
07:00		14	*			17	*				
07:15		11	*			10	*				
07:30		12	*			16	*				
07:45		15	*	52	0	19	*	62	0	114	0
08:00		22	*			22	*				
08:15		9	*			16	*				
08:30		18	*			22	*				
08:45		1	*	50	0	4	*	64	0	114	0
09:00		*	*	*	*	*	*	*	*	*	*
09:15		*	*	*	*	*	*	*	*	*	*
09:30		*	*	*	*	*	*	*	*	*	*
09:45		*	*	*	*	*	*	*	*	*	*
10:00		*	*	*	*	*	*	*	*	*	*
10:15		*	*	*	*	*	*	*	*	*	*
10:30		*	*	*	*	*	*	*	*	*	*
10:45		*	*	*	*	*	*	*	*	*	*
11:00		*	*	*	*	*	*	*	*	*	*
11:15		*	*	*	*	*	*	*	*	*	*
11:30		*	*	*	*	*	*	*	*	*	*
11:45		*	*	*	*	*	*	*	*	*	*
Total		380	0			425	0			805	0
Percent		100.0%	0.0%			100.0%	0.0%			100.0%	0.0%
Grand Total		14279	28869			12503	20179			26782	49048
Percent		33.1%	66.9%			38.3%	61.7%			35.3%	64.7%
ADT		ADT 8,426		AADT 8,426							

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	06-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	*	*	*	*	*	*	178	7	75	5	126	6
01:00	*	*	*	*	*	*	*	*	*	*	123	5	60	3	92	4
02:00	*	*	*	*	*	*	*	*	*	*	117	4	46	0	82	2
03:00	*	*	*	*	*	*	*	*	*	*	50	1	29	1	40	1
04:00	*	*	*	*	*	*	*	*	*	*	25	2	24	0	24	1
05:00	*	*	*	*	*	*	*	*	*	*	96	3	31	4	64	4
06:00	*	*	*	*	*	*	*	*	*	*	106	9	46	0	76	4
07:00	*	*	*	*	*	*	*	*	*	*	137	5	40	1	88	3
08:00	*	*	*	*	*	*	*	*	*	*	144	3	64	1	104	2
09:00	*	*	*	*	*	*	*	*	273	**378**	205	7	112	**6**	197	**130**
10:00	*	*	*	*	*	*	*	*	283	272	180	**69**	117	6	193	116
11:00	*	*	*	*	*	*	*	*	**295**	280	**260**	6	**135**	6	**230**	97
12:00 PM	*	*	*	*	*	*	*	*	293	324	237	8	181	8	237	113
01:00	*	*	*	*	*	*	*	*	274	344	243	10	**186**	4	234	119
02:00	*	*	*	*	*	*	*	*	336	304	254	6	171	6	254	105
03:00	*	*	*	*	*	*	*	*	542	329	**255**	10	180	8	**326**	116
04:00	*	*	*	*	*	*	*	*	538	321	213	6	148	7	300	111
05:00	*	*	*	*	*	*	*	*	**577**	**358**	225	**17**	141	7	314	**127**
06:00	*	*	*	*	*	*	*	*	395	264	212	11	170	**12**	259	96
07:00	*	*	*	*	*	*	*	*	250	223	207	7	175	5	211	78
08:00	*	*	*	*	*	*	*	*	172	175	173	11	139	9	161	65
09:00	*	*	*	*	*	*	*	*	233	24	132	3	105	4	157	10
10:00	*	*	*	*	*	*	*	*	309	10	133	3	95	4	179	6
11:00	*	*	*	*	*	*	*	*	230	7	115	7	76	11	140	8
Lane	0	0	0	0	0	0	0	0	5000	3613	4020	220	2546	118	4088	1324
Day	0		0		0		0		8613		4240		2664		5412	
AM Peak	-	-	-	-	-	-	-	-	11:00	09:00	11:00	10:00	11:00	09:00	11:00	09:00
Vol.	-	-	-	-	-	-	-	-	295	378	260	69	135	6	230	130
PM Peak	-	-	-	-	-	-	-	-	17:00	17:00	15:00	17:00	13:00	18:00	15:00	17:00
Vol.	-	-	-	-	-	-	-	-	577	358	255	17	186	12	326	127

Accurate Counts
978-664-2565

LG038C04

Location : Third Street
Location : North of Broadway
City/State: Cambridge, MA

Start	13-May-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	38	5	25	40	36	43	36	57	47	59	71	82	**69**	**95**	46	54
01:00	24	8	20	22	16	24	36	37	34	36	49	61	50	53	33	34
02:00	13	4	16	24	10	15	21	20	31	33	54	65	39	49	26	30
03:00	16	4	17	13	10	14	7	10	20	23	24	24	26	39	17	18
04:00	27	6	24	18	22	15	15	19	23	12	23	12	19	18	22	14
05:00	85	18	76	110	80	95	66	94	78	62	51	37	34	15	67	62
06:00	224	113	155	198	167	188	176	246	145	192	56	54	41	30	138	146
07:00	268	92	291	370	305	344	270	339	279	323	128	64	52	62	228	228
08:00	**335**	83	**357**	**495**	**342**	**507**	308	**486**	**358**	**436**	228	115	50	64	283	312
09:00	270	91	332	429	338	413	**339**	436	305	408	262	122	*	*	**308**	**316**
10:00	222	**276**	279	324	274	294	306	312	244	332	284	**164**	*	*	268	284
11:00	232	250	234	277	240	267	253	293	289	295	**312**	145	*	*	260	254
12:00 PM	219	288	221	261	282	283	280	290	304	292	**368**	179	*	*	279	266
01:00	248	266	285	293	254	302	267	290	290	307	310	218	*	*	276	279
02:00	274	274	295	306	304	324	306	314	345	327	212	212	*	*	289	293
03:00	384	311	393	334	399	318	407	304	465	**463**	178	190	*	*	371	**320**
04:00	501	307	510	334	522	**366**	540	**363**	**526**	330	188	212	*	*	464	319
05:00	**558**	**335**	**561**	**380**	**592**	312	**565**	336	479	362	203	188	*	*	**493**	319
06:00	403	314	474	337	564	316	458	363	396	333	227	**224**	*	*	420	314
07:00	272	213	286	250	299	250	304	272	257	210	214	191	*	*	272	231
08:00	164	136	208	160	206	185	233	197	190	212	148	159	*	*	192	175
09:00	138	142	182	134	159	162	156	146	162	170	131	149	*	*	155	150
10:00	102	108	139	122	137	100	119	137	136	147	112	156	*	*	124	128
11:00	58	71	77	69	95	77	109	119	113	98	91	112	*	*	90	91
Lane	5075	3715	5457	5300	5653	5214	5577	5480	5516	5462	3924	3135	380	425	5121	4637
Day	8790		10757		10867		11057		10978		7059		805		9758	
AM Peak	08:00	10:00	08:00	08:00	08:00	08:00	09:00	08:00	08:00	08:00	11:00	10:00	00:00	00:00	09:00	09:00
Vol.	335	276	357	495	342	507	339	486	358	436	312	164	69	95	308	316
PM Peak	17:00	17:00	17:00	17:00	17:00	16:00	17:00	16:00	16:00	15:00	12:00	18:00	-	-	17:00	15:00
Vol.	558	335	561	380	592	366	565	363	526	463	368	224	-	-	493	320

Comb. Total	8790	10757	10867	11057	19591	11299	3469	15170
ADT	ADT 8,426	AADT 8,426						

Accurate Counts
978-664-2565

LG038C05

Location : Broadway
Location : West of Third Street
City/State: Cambridge, MA

Start Time	Mon A.M.	13-May-1 P.M.		Tue A.M.	14-May-1 P.M.		Wed A.M.	15-May-1 P.M.		Daily Average A.M.	Daily Average P.M.
12:00	*	102		28	122		25	110		26	111
12:15	*	118		23	106		28	118		26	114
12:30	*	92		18	100		28	126		23	106
12:45	*	112		19	112		16	133		18	119
01:00	*	108		18	120		23	124		20	117
01:15	*	100		13	127		19	130		16	119
01:30	*	122		15	159		13	147		14	143
01:45	*	116		3	132		7	146		5	131
02:00	*	148		7	162		10	147		8	152
02:15	*	132		12	164		10	186		11	161
02:30	*	145		4	156		10	146		7	149
02:45	*	152		3	160		6	156		4	156
03:00	*	134		5	166		4	170		4	157
03:15	*	150		7	180		6	171		6	167
03:30	*	172		7	156		7	184		7	171
03:45	*	132		6	153		9	164		8	150
04:00	*	159		9	166		6	162		8	162
04:15	*	160		4	196		12	193		8	183
04:30	*	188		16	164		12	147		14	166
04:45	*	162		21	173		16	152		18	162
05:00	*	**202**		23	**191**		18	184		20	**192**
05:15	*	**206**		20	**211**		20	**254**		20	**224**
05:30	*	**170**		22	**190**		26	**243**		24	**201**
05:45	*	**186**		30	**180**		29	**252**		30	**206**
06:00	*	168		39	164		44	**194**		42	175
06:15	*	167		70	192		49	160		60	173
06:30	*	136		69	164		78	160		74	153
06:45	*	134		104	147		93	145		98	142
07:00	*	134		103	144		118	180		110	153
07:15	*	136		132	141		122	126		127	134
07:30	*	98		117	109		110	126		114	111
07:45	*	83		120	88		134	112		127	94
08:00	*	76		164	104		161	100		162	93
08:15	*	88		**167**	72		**176**	72		**172**	77
08:30	*	85		**164**	91		**181**	96		**172**	91
08:45	*	68		**182**	78		**166**	70		**174**	72
09:00	*	84		**168**	80		**166**	94		**167**	86
09:15	*	76		137	73		154	78		146	76
09:30	*	68		137	57		136	72		136	66
09:45	*	58		138	66		173	76		156	67
10:00	*	56		142	60		124	70		133	62
10:15	*	56		116	50		108	66		112	57
10:30	*	66		106	54		106	52		106	57
10:45	*	50		120	61		114	60		117	57
11:00	**104**	46		122	41		96	48		107	45
11:15	**102**	42		100	46		107	52		103	47
11:30	**97**	23		108	35		102	42		102	33
11:45	**110**	33		120	22		109	36		113	30
Total	413	5499		3278	5885		3287	6232		3275	5870
Combined Total	5912			9163			9519			9145	
Peak	11:00	05:00	-	08:15	05:00	-	08:15	05:15	-	08:15	05:00
Vol.	413	764	-	681	772	-	689	943	-	685	823
P.H.F.	0.939	0.927		0.935	0.915		0.952	0.928		0.984	0.919

Accurate Counts
978-664-2565

LG038C05

Location : Broadway
Location : West of Third Street
City/State: Cambridge, MA

Start Time	Thu A.M.	16-May-1 P.M.		Fri A.M.	17-May-1 P.M.		Sat A.M.	18-May-1 P.M.		Daily Average A.M.	Daily Average P.M.
12:00	34	142		48	113		62	96		48	117
12:15	24	122		36	126		53	100		38	116
12:30	28	114		37	118		54	102		40	111
12:45	21	125		33	125		70	108		41	119
01:00	21	144		18	113		49	120		29	126
01:15	21	126		25	124		36	96		27	115
01:30	19	112		25	142		46	**116**		30	123
01:45	8	162		18	146		33	**108**		20	139
02:00	14	163		16	152		48	**128**		26	148
02:15	14	174		11	198		54	**114**		26	162
02:30	12	163		20	177		40	102		24	147
02:45	10	174		8	198		34	108		17	160
03:00	5	151		20	156		14	115		13	141
03:15	6	192		12	179		20	116		13	162
03:30	6	176		18	196		12	102		12	158
03:45	7	140		10	170		14	118		10	143
04:00	7	144		6	182		14	110		9	145
04:15	12	216		13	181		5	91		10	163
04:30	10	192		12	**170**		4	112		9	**158**
04:45	16	167		18	**171**		16	110		17	**149**
05:00	18	**212**		20	**200**		20	117		19	**176**
05:15	12	**219**		22	**202**		13	101		16	**174**
05:30	26	**198**		34	150		16	103		25	150
05:45	38	**174**		36	163		24	126		33	154
06:00	46	166		38	178		24	106		36	150
06:15	66	179		58	163		24	114		49	152
06:30	76	194		56	123		35	114		56	144
06:45	92	168		78	142		49	90		73	133
07:00	102	152		110	133		48	114		87	133
07:15	110	114		107	128		32	103		83	115
07:30	126	117		109	129		53	96		96	114
07:45	126	119		128	109		54	95		103	108
08:00	159	96		**148**	115		48	79		118	97
08:15	**164**	95		**170**	105		46	84		**127**	95
08:30	**188**	102		**146**	98		56	89		**130**	96
08:45	**163**	98		**158**	80		58	77		**126**	85
09:00	**170**	73		143	83		52	76		**122**	77
09:15	118	98		140	78		57	87		105	88
09:30	110	92		152	92		72	70		111	85
09:45	146	73		138	84		87	92		124	83
10:00	115	76		114	80		86	68		105	75
10:15	126	88		102	68		90	86		106	81
10:30	111	64		122	88		81	82		105	78
10:45	99	65		110	90		82	84		97	80
11:00	118	58		110	60		**80**	82		103	67
11:15	116	66		120	76		**101**	94		112	79
11:30	108	51		122	72		**100**	83		110	69
11:45	136	44		119	70		**86**	69		114	61
Total	3280	6350		3314	6296		2252	4753		2950	5801
Combined Total	9630			9610			7005			8751	
Peak	08:15	05:00	-	08:00	04:30	-	11:00	01:30	-	08:15	04:30
Vol.	685	803	-	622	743	-	367	466	-	505	657
P.H.F.	0.911	0.917		0.915	0.920		0.908	0.910		0.971	0.933

Accurate Counts
978-664-2565

Location : Broadway
Location : West of Third Street
City/State: Cambridge, MA

LG038C05

Start Time	Sun A.M.	19-May-1 P.M.	Mon A.M.	20-May-1 P.M.	Tue A.M.	21-May-1 P.M.	Daily Average A.M.	Daily Average P.M.
12:00	**72**	*	*	*	*	*	**72**	*
12:15	**67**	*	*	*	*	*	**67**	*
12:30	**38**	*	*	*	*	*	**38**	*
12:45	**49**	*	*	*	*	*	**49**	*
01:00	60	*	*	*	*	*	60	*
01:15	42	*	*	*	*	*	42	*
01:30	42	*	*	*	*	*	42	*
01:45	44	*	*	*	*	*	44	*
02:00	32	*	*	*	*	*	32	*
02:15	32	*	*	*	*	*	32	*
02:30	33	*	*	*	*	*	33	*
02:45	30	*	*	*	*	*	30	*
03:00	21	*	*	*	*	*	21	*
03:15	16	*	*	*	*	*	16	*
03:30	14	*	*	*	*	*	14	*
03:45	25	*	*	*	*	*	25	*
04:00	9	*	*	*	*	*	9	*
04:15	6	*	*	*	*	*	6	*
04:30	11	*	*	*	*	*	11	*
04:45	11	*	*	*	*	*	11	*
05:00	9	*	*	*	*	*	9	*
05:15	12	*	*	*	*	*	12	*
05:30	15	*	*	*	*	*	15	*
05:45	16	*	*	*	*	*	16	*
06:00	10	*	*	*	*	*	10	*
06:15	22	*	*	*	*	*	22	*
06:30	17	*	*	*	*	*	17	*
06:45	34	*	*	*	*	*	34	*
07:00	39	*	*	*	*	*	39	*
07:15	25	*	*	*	*	*	25	*
07:30	40	*	*	*	*	*	40	*
07:45	50	*	*	*	*	*	50	*
08:00	50	*	*	*	*	*	50	*
08:15	44	*	*	*	*	*	44	*
08:30	56	*	*	*	*	*	56	*
08:45	6	*	*	*	*	*	6	*
09:00	*	*	*	*	*	*	*	*
09:15	*	*	*	*	*	*	*	*
09:30	*	*	*	*	*	*	*	*
09:45	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*
10:15	*	*	*	*	*	*	*	*
10:30	*	*	*	*	*	*	*	*
10:45	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*
11:15	*	*	*	*	*	*	*	*
11:30	*	*	*	*	*	*	*	*
11:45	*	*	*	*	*	*	*	*
Total	1099	0	0	0	0	0	1099	0
Combined Total	1099		0		0		1099	
Peak	12:00	-	-	-	-	-	12:00	-
Vol.	226	-	-	-	-	-	226	-
P.H.F.	0.785						0.785	
ADT		ADT 8,818	AADT 8,818					

Accurate Counts
978-664-2565

LG038C05

Location : Broadway
Location : West of Third Street
City/State: Cambridge, MA

Start Time	Mon 13-May-13	Tue 14-May-13	Wed 15-May-13	Thu 16-May-13	Fri 17-May-13		Average Day		Sat 18-May-13	Sun 19-May-13		Week Average		
12:00 AM	*	88	97	107	154		112		239	**226**		152		
01:00	*	49	62	69	86		66		164	188		103		
02:00	*	26	36	50	55		42		176	127		78		
03:00	*	25	26	24	60		34		60	76		45		
04:00	*	50	46	45	49		48		39	37		44		
05:00	*	95	93	94	112		98		73	52		86		
06:00	*	282	264	280	230		264		132	83		212		
07:00	*	472	484	464	454		468		187	154		369		
08:00	*	**677**	**684**	**674**	**622**		**664**		208	156		504		
09:00	*	580	629	544	573		582		268	*		**519**		
10:00	*	484	452	451	448		459		339	*		435		
11:00	**413**	450	414	478	471		445		**367**	*		432		
12:00 PM	424	440	487	503	482		467		406	*		457		
01:00	446	538	547	544	525		520		440	*		507		
02:00	577	642	635	674	**725**		651		**452**	*		618		
03:00	588	655	689	659	701		658		451	*		624		
04:00	669	699	654	719	704		689		423	*		645		
05:00	**764**	**772**	**933**	**803**	715		**797**		447	*		**739**		
06:00	605	667	659	707	606		649		424	*		611		
07:00	451	482	544	502	499		496		408	*		481		
08:00	317	345	338	391	398		358		329	*		353		
09:00	286	276	320	336	337		311		325	*		313		
10:00	228	225	248	293	326		264		320	*		273		
11:00	144	144	178	219	278		193		328	*		215		
Day Total	5912	9163	9519	9630	9610		9335		7005	1099		8815		
% Avg. WkDay	63.3%	98.2%	102.0%	103.2%	102.9%									
% Avg. Week	67.1%	103.9%	108.0%	109.2%	109.0%		105.9%		79.5%	12.5%				
AM Peak	11:00	08:00	08:00	08:00	08:00	-	08:00	-	11:00	00:00	-	09:00	-	-
Vol.	413	677	684	674	622	-	664	-	367	226	-	519	-	-
PM Peak	17:00	17:00	17:00	17:00	14:00	-	17:00	-	14:00	-	-	17:00	-	-
Vol.	764	772	933	803	725	-	797	-	452	-	-	739	-	-
Grand Total	5912	9163	9519	9630	9610		9335		7005	1099		8815		
ADT		ADT 8,818		AADT 8,818										

Binney Street

Start		10-May	Tue	11-May	Wed	12-May	Thu	13-May	Fri	14-May	Sat	15-May	Sun	16-May		M-F Weekday Av				
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB		WB	EB			WB
12:00 AM	0	0	57	52	38	69	42	56	33	63	63	69	55	57		43	60			63
01:00	0	0	33	36	24	31	29	44	33	35	46	53	30	54		30	37			46
02:00	0	0	20	23	25	22	11	16	20	30	47	64	37	46		19	23			47
03:00	0	0	27	19	35	21	27	33	35	18	32	37	26	27		31	23			32
04:00	0	0	49	27	73	27	50	31	89	36	24	25	26	11		65	30			24
05:00	0	0	287	53	265	67	289	64	294	71	107	33	38	29		284	64			107
06:00	1	0	475	150	481	161	488	171	459	161	133	42	71	30		476	161			133
07:00	3	0	583	292	583	284	580	262	533	279	89	89	64	45		570	279			56
08:00	0	0	644	365	657	359	689	342	621	323	118	118	56	39		653	347			10
09:00	0	0	573	339	522	331	546	357	540	310	148	148	124	86	est	343	270			7
10:00	107	102	391	286	408	314	420	325	388	324	202	202	169	118	est	343	270			15
11:00	303	330	326	336	347	331	351	314	318	358	216	216	180	126	est	329	334			8
12:00 PM	334	347	328	367	354	358	332	367	346	412	207	207	173	121	est	339	370			14
01:00	306	373	327	439	322	380	380	393	301	426	289	289	241	169	est	327	402			49
02:00	305	553	273	529	303	523	332	554	305	594	244	252	142	147	est	304	551			244
03:00	258	707	289	716	290	748	309	732	362	752	199	253	116	148	est	302	731			199
04:00	271	770	311	771	318	799	357	773	372	672	223	212	130	124	est	326	757			223
05:00	415	783	388	829	425	854	379	774	346	627	222	197	130	115	est	391	773			222
06:00	310	518	382	544	415	548	350	594	344	437	268	199	157	116	est	360	528			268
07:00	172	317	192	362	230	357	272	331	195	308	249	220	145	128	est	212	335			249
08:00	138	195	184	210	162	239	173	251	179	240	156	173	91	101	est	167	227			156
09:00	118	160	145	170	133	184	158	175	155	168	204	133	119	78	est	142	171			204
10:00	97	99	115	140	100	133	114	136	120	136	110	139	64	81	est	109	129			110
11:00	70	89	57	94	71	108	74	106	88	120	92	115	54	67	est	72	103			92
Lane	**3,208**	**5,343**	**6,456**	**7,149**	**6,581**	**7,248**	**6,752**	**7,201**	**6,476**	**6,900**	**3,688**	**3,485**	**2,439**	**2,064**		**6,234**	**6,976**	**13,210**	Round this for weekdaysthis for weekdays	2578
Day		**8,551**		**13,605**		**13,829**		**13,953**		**13,376**		**7,173**		**4,502**				**7,173**	Round this for Saturday	
																		4,502	Round this for Sunday	

Binney Street

									Fri		7-May	Sat		8-May	Sun		9-May	
12:00 AM	*	*	*	*	*	*	*	*	*	*		0	55	0	0	0		28
01:00	*	*	*	*	*	*	*	*	*	*		0	33	0	0	0		16
02:00	*	*	*	*	*	*	*	*	*	*		0	33	0	0	0		16
03:00	*	*	*	*	*	*	*	*	*	*		0	24	0	0	0		12
04:00	*	*	*	*	*	*	*	*	*	*		0	5	0	0	0		2
05:00	*	*	*	*	*	*	*	*	*	*		0	15	0	0	0		8
06:00	*	*	*	*	*	*	*	*	*	*		0	36	0	0	0		18
07:00	*	*	*	*	*	*	*	*	*	*		0	46	0	0	0		23
08:00	*	*	*	*	*	*	*	*	*	*		0	47	0	0	0		24
09:00	*	*	*	*	*	*	*	*		468	350	0	88	0	0	156		146
10:00	*	*	*	*	*	*	*	*		349	297	4	90	0	0	118		129
11:00	*	*	*	*	*	*	*	*		359	374	0	9	0	0	120		128
12:00 PM	*	*	*	*	*	*	*	*		194	343	0	0	0	0	65		114
01:00	*	*	*	*	*	*	*	*		0	362	0	0	0	0	0		121
02:00	*	*	*	*	*	*	*	*		0	446	0	0	0	0	0		149
03:00	*	*	*	*	*	*	*	*		0	472	0	0	0	0	0		157
04:00	*	*	*	*	*	*	*	*		2	447	0	0	0	0	1		149
05:00	*	*	*	*	*	*	*	*		0	452	0	0	0	0	0		151
06:00	*	*	*	*	*	*	*	*		0	341	0	0	0	0	0		114
07:00	*	*	*	*	*	*	*	*		0	220	0	0	0	0	0		73
08:00	*	*	*	*	*	*	*	*		0	158	0	0	0	0	0		53
09:00	*	*	*	*	*	*	*	*		0	119	0	0	0	0	0		40
10:00	*	*	*	*	*	*	*	*		0	88	0	0	0	0	0		29
11:00	*	*	*	*	*	*	*	*		0	84	0	0	0	0	0		28

Main Street

										Friday		Saturday		Sunday				
									WB	EB	WB	EB	WB	EB	WB	EB		
12:00 AM	*	*	*	*	*	*	*	*	*	*		37	124	33	129	35	126	
01:00	*	*	*	*	*	*	*	*	*	*		15	99	14	107	14	103	
02:00	*	*	*	*	*	*	*	*	*	*		11	100	11	120	11	110	
03:00	*	*	*	*	*	*	*	*	*	*		6	33	3	28	4	30	
04:00	*	*	*	*	*	*	*	*	*	*		3	19	4	25	4	22	
05:00	*	*	*	*	*	*	*	*	*	*		9	42	6	26	8	34	
06:00	*	*	*	*	*	*	*	*	*	*		27	74	11	37	19	56	
07:00	*	*	*	*	*	*	*	*	*	*		9	124	12	42	10	83	
08:00	*	*	*	*	*	*	*	*	*	*		1	146	10	76	6	111	
09:00	*	*	*	*	*	*	*	*	*	*		0	171	12	111	6	141	
10:00	*	*	*	*	*	*	*	*		77	277	2	220	20	166	33	221	
11:00	*	*	*	*	*	*	*	*		96	322	5	211	18	178	40	237	
12:00 PM	*	*	*	*	*	*	*	*		75	323	3	218	26	194	35	245	
01:00	*	*	*	*	*	*	*	*		85	329	16	228	19	245	40	267	
02:00	*	*	*	*	*	*	*	*		109	379	38	258	32	211	60	283	
03:00	*	*	*	*	*	*	*	*		79	372	34	277	32	233	48	294	
04:00	*	*	*	*	*	*	*	*		120	389	52	260	33	211	68	287	
05:00	*	*	*	*	*	*	*	*		135	371	48	258	33	201	72	277	
06:00	*	*	*	*	*	*	*	*		112	356	48	275	36	154	65	262	
07:00	*	*	*	*	*	*	*	*		82	272	48	294	33	151	54	239	
08:00	*	*	*	*	*	*	*	*		51	234	45	313	16	136	37	228	
09:00	*	*	*	*	*	*	*	*		43	176	57	209	16	128	39	171	
10:00	*	*	*	*	*	*	*	*		44	185	49	164	19	93	37	147	
11:00	*	*	*	*	*	*	*	*		26	157	35	194	17	74	26	142	
												598	**4311**	**466**	**3,076**	771	4116	
													4,909		**3,542**	Round these for Saturday/Sunday		

Main Street

	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday				Weekday Average		
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	
12:00 AM	9	38	15	62	16	72	23	93	30	109	39	126	*	*	19	75	
01:00	3	36	3	47	15	44	9	71	13	86	24	122	*	*	9	57	
02:00	2	17	3	23	5	27	5	30	8	66	8	98	*	*	5	33	
03:00	1	13	4	20	3	15	5	24	12	37	11	44	*	*	5	22	
04:00	12	35	11	25	11	27	6	23	7	34	3	20	*	*	9	29	
05:00	18	66	5	47	8	60	12	54	32	71	11	39	*	*	15	60	
06:00	44	127	50	109	45	119	55	113	45	116	17	71	*	*	48	117	
07:00	60	223	83	247	83	254	87	251	80	242	26	91	*	*	79	243	
08:00	85	257	87	357	82	339	97	306	83	270	22	142	*	*	87	306	
09:00	83	324	114	349	99	311	70	333	81	321	20	174	*	*	89	328	
10:00	85	310	72	318	83	306	71	305	78	280	43	172	*	*	78	304	
11:00	79	277	96	289	88	305	73	297	70	296	48	183	*	*	81	293	
12:00 PM	96	288	86	290	104	315	79	284	63	298	50	222	*	*	86	295	
01:00	69	266	106	341	112	325	85	324	69	279	48	261	*	*	88	307	
02:00	79	327	92	362	117	366	95	395	73	366	54	256	*	*	91	363	
03:00	74	338	86	415	91	398	71	375	101	418	57	222	*	*	85	389	
04:00	121	367	126	353	101	391	97	384	115	373	52	207	*	*	112	374	
05:00	143	352	148	412	132	385	99	380	119	394	68	234	*	*	128	385	
06:00	144	327	153	356	106	378	110	401	142	304	64	180	*	*	131	353	
07:00	80	230	98	218	115	258	108	245	77	238	72	196	*	*	96	238	
08:00	68	201	57	185	50	227	59	186	55	215	51	194	*	*	58	203	
09:00	56	178	36	190	54	196	45	208	52	186	35	177	*	*	49	192	
10:00	22	131	35	128	37	168	46	192	55	194	56	201	*	*	39	163	
11:00	23	94	29	118	38	112	36	148	39	152	54	168	*	*	33	125	
											933	**3,800**	Use this		**1,518**	**5,250**	Use this for EB Weekdays
												4,733				**6,767**	

Vassar Street

	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	40	40	62	34	85	48	85	49	94	53	103	60	78	61	73	45
01:00	37	17	49	30	42	31	60	27	49	33	68	54	67	50	47	28
02:00	20	15	37	17	39	27	34	16	47	22	60	41	59	31	35	19
03:00	13	14	26	20	25	28	33	17	30	26	30	29	32	37	25	21
04:00	42	38	23	33	30	26	44	34	42	48	20	22	12	26	36	36
05:00	118	138	109	121	114	143	88	118	109	115	52	45	29	29	108	127
06:00	218	287	257	310	228	271	240	300	211	265	85	91	49	58	231	287
07:00	419	400	440	415	426	445	405	397	374	389	108	91	47	52	413	409
08:00	517	463	623	481	560	494	539	485	501	454	159	128	63	52	548	475
09:00	516	427	580	526	484	509	543	503	502	436	175	146	*	*	525	480
10:00	390	299	416	348	422	369	433	350	440	285	251	198	*	*	420	330
11:00	314	255	366	320	367	341	407	336	375	307	204	178	*	*	366	312
12:00 PM	327	286	338	307	344	360	362	321	397	345	231	216	*	*	354	324
01:00	310	274	355	304	364	327	352	324	368	315	268	207	*	*	350	309
02:00	339	305	359	373	353	383	398	373	398	400	225	231	*	*	369	367
03:00	403	361	399	393	420	419	428	411	419	396	239	206	*	*	414	396
04:00	402	431	430	410	455	422	423	427	391	353	232	210	*	*	420	409
05:00	550	462	552	445	517	487	570	468	498	434	270	196	*	*	537	459
06:00	416	318	473	366	469	414	489	344	384	307	214	174	*	*	446	350
07:00	280	220	301	238	342	301	360	256	288	254	206	163	*	*	314	254
08:00	233	155	235	176	232	160	237	182	246	163	170	130	*	*	237	167
09:00	172	139	183	190	212	192	196	189	185	166	156	108	*	*	190	175
10:00	137	161	172	156	156	127	181	152	165	156	151	144	*	*	162	150
11:00	103	63	108	60	117	100	123	104	128	102	127	112	*	*	116	86
															6,737	**6,014**
																12,751	Round this for weekdays

Vassar Street

									Friday		Saturday		Sunday		Weekday Average	
12:00 AM	*	*	*	*	*	*	*	*	*	*	110	64	88	68	*	*
01:00	*	*	*	*	*	*	*	*	*	*	62	44	65	44	*	*
02:00	*	*	*	*	*	*	*	*	*	*	68	39	71	38	*	*
03:00	*	*	*	*	*	*	*	*	*	*	53	24	29	25	*	*
04:00	*	*	*	*	*	*	*	*	*	*	21	27	31	17	*	*
05:00	*	*	*	*	*	*	*	*	*	*	70	60	27	30	*	*
06:00	*	*	*	*	*	*	*	*	*	*	75	77	29	35	*	*
07:00	*	*	*	*	*	*	*	*	*	*	101	97	60	42	*	*
08:00	*	*	*	*	*	*	*	*	*	*	116	133	85	70	*	*
09:00	*	*	*	*	*	*	*	*	484	426	169	147	109	99	484	426
10:00	*	*	*	*	*	*	*	*	370	331	197	170	156	131	370	331
11:00	*	*	*	*	*	*	*	*	380	381	207	197	157	167	380	381
12:00 PM	*	*	*	*	*	*	*	*	427	335	225	227	198	221	427	335
01:00	*	*	*	*	*	*	*	*	418	310	238	239	195	211	418	310
02:00	*	*	*	*	*	*	*	*	386	370	222	247	209	191	386	370
03:00	*	*	*	*	*	*	*	*	404	471	231	241	230	199	404	471
04:00	*	*	*	*	*	*	*	*	418	433	218	176	167	168	418	433
05:00	*	*	*	*	*	*	*	*	522	465	231	180	198	148	522	465
06:00	*	*	*	*	*	*	*	*	459	392	237	155	201	150	459	392
07:00	*	*	*	*	*	*	*	*	352	272	215	160	161	128	352	272
08:00	*	*	*	*	*	*	*	*	282	183	197	136	139	103	282	183
09:00	*	*	*	*	*	*	*	*	177	163	136	114	112	78	177	163
10:00	*	*	*	*	*	*	*	*	169	148	126	103	100	95	169	148
11:00	*	*	*	*	*	*	*	*	130	111	125	93	89	72	130	111
											3,650	**3,150**	**2,906**	**2,530**	5378	4791
												6,800		**5,436**		

Use this for Saturdays and Sundays

Third Street

	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday Average	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	*	*	*	*	*	*	178	7	75	5	126	6
01:00	*	*	*	*	*	*	*	*	*	*	123	5	60	3	92	4
02:00	*	*	*	*	*	*	*	*	*	*	117	4	46	0	82	2
03:00	*	*	*	*	*	*	*	*	*	*	50	1	29	1	40	1
04:00	*	*	*	*	*	*	*	*	*	*	25	2	24	0	24	1
05:00	*	*	*	*	*	*	*	*	*	*	96	3	31	4	64	4
06:00	*	*	*	*	*	*	*	*	*	*	106	9	46	0	76	4
07:00	*	*	*	*	*	*	*	*	*	*	137	5	40	1	88	3
08:00	*	*	*	*	*	*	*	*	*	*	144	3	64	1	104	2
09:00	*	*	*	*	*	*	*	*	273	378	205	7	112	6	197	130
10:00	*	*	*	*	*	*	*	*	283	272	180	69	117	6	193	116
11:00	*	*	*	*	*	*	*	*	295	280	260	6	135	6	230	97
12:00 PM	*	*	*	*	*	*	*	*	293	324	237	8	181	8	237	113
01:00	*	*	*	*	*	*	*	*	274	344	243	10	186	4	234	119
02:00	*	*	*	*	*	*	*	*	336	304	254	6	171	6	254	105
03:00	*	*	*	*	*	*	*	*	542	329	255	10	180	8	326	116
04:00	*	*	*	*	*	*	*	*	538	321	213	6	148	7	300	111
05:00	*	*	*	*	*	*	*	*	577	358	225	17	141	7	314	127
06:00	*	*	*	*	*	*	*	*	395	264	212	11	170	12	259	96
07:00	*	*	*	*	*	*	*	*	250	223	207	7	175	5	211	78
08:00	*	*	*	*	*	*	*	*	172	175	173	11	139	9	161	65
09:00	*	*	*	*	*	*	*	*	233	24	132	3	105	4	157	10
10:00	*	*	*	*	*	*	*	*	309	10	133	3	95	4	179	6
11:00	*	*	*	*	*	*	*	*	230	7	115	7	76	11	140	8
									5,000	3,613	**4,020**	**220**	**2,546**	**118**		
												4,240		**2,664**	Use This for Sat and Sun	

	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday Average		
Third Street	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	
12:00 AM	38	5	25	40	36	43	36	57	47	59	71	82	69	95	36	41	
01:00	24	8	20	22	16	24	36	37	34	36	49	61	50	53	26	25	
02:00	13	4	16	24	10	15	21	20	31	33	54	65	39	49	18	19	
03:00	16	4	17	13	10	14	7	10	20	23	24	24	26	39	14	13	
04:00	27	6	24	18	22	15	15	19	23	12	23	12	19	18	22	14	
05:00	85	18	76	110	80	95	66	94	78	62	51	37	34	15	77	76	
06:00	224	113	155	198	167	188	176	246	145	192	56	54	41	30	173	187	
07:00	268	92	291	370	305	344	270	339	279	323	128	64	52	62	283	294	
08:00	335	83	357	495	342	507	308	486	358	436	228	115	50	64	340	401	
09:00	270	91	332	429	338	413	339	436	305	408	262	122	•	•	317	355	
10:00	222	276	279	324	274	294	306	312	244	332	284	164	•	•	265	308	
11:00	232	250	234	277	240	267	253	293	289	295	312	145	•	•	250	276	
12:00 PM	219	288	221	261	282	283	280	290	304	292	368	179	•	•	261	283	
01:00	248	266	285	293	254	302	267	290	290	307	310	218	•	•	269	292	
02:00	274	274	295	306	304	324	306	314	345	327	212	212	•	•	305	309	
03:00	384	311	393	334	399	318	407	304	465	463	178	190	•	•	410	346	
04:00	501	307	510	334	522	366	540	363	526	330	188	212	•	•	520	340	
05:00	558	335	561	380	592	312	565	336	479	362	203	188	•	•	551	345	
06:00	403	314	474	337	564	316	458	363	396	333	227	224	•	•	459	333	
07:00	272	213	286	250	299	250	304	272	257	210	214	191	•	•	284	239	
08:00	164	136	208	160	206	185	233	197	190	212	148	159	•	•	200	178	
09:00	138	142	182	134	159	162	156	146	162	170	131	149	•	•	159	151	
10:00	102	108	139	122	137	100	119	137	136	147	112	156	•	•	127	123	
11:00	58	71	77	69	95	77	109	119	113	98	91	112	•	•	90	87	
	5,075	**3,715**	**5,457**	**5,300**	**5,653**	**5,214**	**5,577**	**5,480**	**5,516**	**5,462**	**3,924**	**3,135**			**5,456**	**5,034**	
		8,790		**10,757**		**10,867**		**11,057**		**10,978**		**7,059**				**10,490**	Round this for weekdays

Broadway 2013	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Weekday Average			
*Construction pre	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	89	116	88	115	97	110	107	127	154	158	239	276	226	261	107	125	152	
01:00	50	58	49	57	62	62	69	83	86	112	164	189	188	217	63	74	103	
02:00	26	31	26	31	36	52	50	36	55	65	176	203	127	147	39	43	78	
03:00	24	28	25	30	26	26	24	43	60	53	60	69	76	88	32	36	45	
04:00	63	75	50	59	46	68	45	62	49	72	39	45	37	43	51	67	44	
05:00	78	288	95	352	93	345	94	393	112	361	73	84	52	60	94	348	86	
06:00	328	620	282	534	264	544	280	538	230	521	132	152	83	96	277	551	212	
07:00	482	720	472	705	484	630	464	588	454	629	187	216	154	178	471	654	369	
08:00	812	887	677	739	684	763	674	732	622	694	208	240	156	180	694	763	504	
09:00	722	845	580	679	629	677	544	738	573	630	268	309	230	266	610	714	519	
10:00	555	705	484	615	452	610	451	571	448	601	339	391	292	336	459	620	435	
11:00	413	604	450	569	414	604	478	577	471	563	367	424	316	364	445	583	432	
12:00 PM	424	603	440	593	487	586	503	560	482	585	406	469	349	403	467	585	457	
01:00	446	563	538	520	547	539	544	522	525	556	440	508	378	437	520	540	507	
02:00	577	575	642	539	635	555	674	523	725	576	452	522	389	449	651	554	618	
03:00	588	644	655	511	689	552	659	552	701	618	451	520	388	448	658	575	624	
04:00	669	657	699	596	654	639	719	575	704	662	423	488	364	420	689	626	645	
05:00	764	705	772	603	933	669	803	602	715	586	447	516	384	444	797	633	739	
06:00	605	705	667	630	659	662	707	630	606	539	424	489	365	421	649	633	611	
07:00	451	519	482	504	544	526	502	488	499	428	408	471	351	405	496	493	481	
08:00	317	363	345	361	338	430	391	434	398	409	329	380	283	327	358	399	353	
09:00	286	307	276	376	320	364	336	360	337	369	325	375	280	323	311	355	313	
10:00	228	317	225	260	248	311	293	393	326	344	320	369	275	318	264	325	273	
11:00	144	175	144	179	178	224	219	235	278	291	328	379	282	326	193	221	215	
Day Total	9,140	11,109	9,163	10,157	9,519	10,550	9,630	10,363	9,610	10,421	7,005	8,084	6,024	6,952	**9,393**	**10,520**	8,815	
		20,249		**19,320**		**20,069**		**19,993**		**20,031**		**15,089**		**12,976**		**19,913**	Round this for weekdays	

2013	47,062	EB		2012	40,128	EB		2011	44,693	EB
2013	52,600	WB	Est.	2012	46,325	WB		2011	55,800	WB
					86,453	Combined M-F Wkdys			100,493	Combined M-F Wkdys
				Assume WB=	1.154431	* 2012 WB Volumes			1.248518	1.201474

Estimates based on hourly variations

Broadway 2012

	Monday		Tuesday		Wednesday		Thursday		Friday				0			
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB						
12:00 AM	100	102	91	101	102	97	93	112	134	139	•	•	•	•	104	110
01:00	46	51	52	50	61	55	72	73	85	99	•	•	•	•	63	66
02:00	31	27	26	27	37	46	30	32	49	57	•	•	•	•	35	38
03:00	22	25	21	26	24	23	29	38	38	47	•	•	•	•	27	32
04:00	48	66	53	52	48	60	36	55	48	63	•	•	•	•	47	59
05:00	95	254	92	310	75	304	115	346	97	318	•	•	•	•	95	306
06:00	249	546	243	470	221	479	265	474	199	459	•	•	•	•	235	486
07:00	462	634	349	621	367	555	407	518	334	554	•	•	•	•	384	576
08:00	688	781	510	651	476	672	509	645	499	611	•	•	•	•	536	672
09:00	571	744	434	598	464	596	421	650	401	555	•	•	•	•	458	629
10:00	457	621	383	542	378	537	381	503	371	529	•	•	•	•	394	546
11:00	431	532	382	501	409	532	398	508	393	496	•	•	•	•	403	514
12:00 PM	448	531	429	522	384	516	420	493	456	515	•	•	•	•	427	515
01:00	471	496	452	458	449	475	496	460	479	490	•	•	•	•	469	476
02:00	517	506	465	475	477	489	512	461	521	507	•	•	•	•	498	488
03:00	531	567	531	450	534	486	479	486	599	544	•	•	•	•	535	507
04:00	658	579	601	525	569	563	580	506	510	583	•	•	•	•	584	551
05:00	729	621	782	531	652	589	656	530	520	516	•	•	•	•	668	557
06:00	594	621	556	555	559	583	506	555	431	475	•	•	•	•	529	558
07:00	400	457	460	444	418	463	447	430	381	377	•	•	•	•	421	434
08:00	279	320	485	318	316	379	330	382	313	360	•	•	•	•	345	352
09:00	260	270	430	331	289	321	292	317	286	325	•	•	•	•	311	313
10:00	225	279	265	229	274	274	288	346	285	303	•	•	•	•	267	286
11:00	139	154	177	158	185	197	228	207	221	256	•	•	•	•	190	194
	8451	9784	8269	8945	7768	9291	7990	9127	7650	9178						

Broadway 2011

12:00 AM	68	89	71	125	86	119	93	110	114	171	•	•	•	•	86	123
01:00	36	52	52	78	68	99	72	108	85	113	•	•	•	•	63	90
02:00	38	40	35	39	45	46	43	46	79	80	•	•	•	•	48	50
03:00	25	34	23	32	30	30	29	29	32	60	•	•	•	•	28	37
04:00	39	66	36	61	40	72	50	75	54	75	•	•	•	•	44	70
05:00	110	302	94	288	91	268	102	317	99	278	•	•	•	•	99	291
06:00	288	565	311	509	286	537	298	553	323	532	•	•	•	•	301	539
07:00	443	666	488	617	504	720	512	878	510	703	•	•	•	•	491	717
08:00	633	947	644	810	630	1027	685	1102	658	941	•	•	•	•	650	965
09:00	492	778	513	720	564	752	524	865	525	733	•	•	•	•	524	770
10:00	418	540	450	539	478	620	468	669	425	535	•	•	•	•	448	581
11:00	418	527	432	555	403	568	423	611	443	499	•	•	•	•	424	552
12:00 PM	420	520	425	545	291	573	403	629	476	543	•	•	•	•	403	562
01:00	462	483	487	508	513	563	482	552	443	562	•	•	•	•	477	534
02:00	473	511	531	524	557	538	516	637	628	570	•	•	•	•	541	556
03:00	557	628	634	587	565	637	623	710	647	637	•	•	•	•	605	640
04:00	662	720	682	646	701	731	690	738	737	659	•	•	•	•	694	699
05:00	780	848	816	727	787	801	811	931	791	696	•	•	•	•	797	801
06:00	581	720	629	585	640	691	712	754	590	584	•	•	•	•	630	667
07:00	403	481	447	510	503	477	478	639	449	540	•	•	•	•	456	529
08:00	308	361	323	379	312	382	405	519	409	462	•	•	•	•	351	421
09:00	223	316	295	310	318	350	336	417	397	467	•	•	•	•	314	372
10:00	180	250	213	270	251	306	273	330	377	461	•	•	•	•	259	323
11:00	157	185	164	244	184	206	210	324	308	406	•	•	•	•	205	273
	8214	10629	8795	10208	8847	11113	9238	12543	9599	11307						

Cambridge Research Park ATRs

Table 4
Average Daily Traffic Counts

Location	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Volume	K	Peak Direction	Volume	K	Peak Direction
First Street 100' N of Charles Street							
5/15/13	8,485	548	6.5%	62% NB	676	8.0%	75% NB
5/16/13	8,427	508	6.0%	59% NB	727	8.6%	67% NB
Second Street 100' N of Charles Street							
5/15/13	2,090	139	6.7%	82% SB	444	21.2%	77% NB
5/16/13	1,874	142	7.6%	80% SB	258	13.8%	73% NB
Third Street 100' N of Charles Street							
5/15/13	9,159	670	7.3%	79% SB	766	8.4%	72% NB
5/16/13	9,164	657	7.2%	78% SB	737	8.0%	73% NB
Sciarappa Street 100' N of Charles Street							
5/21/13	469	42	9.0%	64% SB	68	14.5%	71% NB
5/22/13	443	32	7.2%	69% SB	51	11.5%	76% NB
Fifth Street 100' N of Charles Street							
5/21/13	847	72	8.5%	70% SB	111	13.1%	70% NB
5/22/13	785	57	7.3%	70% SB	88	11.2%	70% NB
Sixth Street 100' N of Charles Street							
5/7/13	2,643	271	10.3%	72% SB	271	10.3%	82% NB
5/8/13	2,593	268	10.3%	70% SB	287	11.1%	84% NB
Fulkerson Street (one-way) 100' N of Charles Street							
5/21/13	2,090	233	11.1%	100% SB	149	7.1%	100% SB
5/22/13	2,289	248	10.8%	100% SB	149	6.5%	100% SB
Binney Street 200' W of Fulkerson Street							
5/15/13	4,005	341	8.5%	60% EB	384	9.6%	76% EB
5/16/13	3,942	326	8.3%	59% EB	401	10.2%	72% EB

(2-day Average)

Table 4
Average Daily Traffic Counts

Location	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Volume	K	Peak Direction	Volume	K	Peak Direction
First Street 100' N of Charles Street	(7591)	(494)			(708)		
5/14/14	7,617	511	6.7%	50% NB	708	9.3%	73% NB
5/15/14	7,564	477	6.3%	52% NB	707	9.3%	75% NB
Second Street 100' N of Charles Street	(1932)	(171)			(313)		
5/14/14	1,788	187	10.5%	84% SB	312	17.4%	84% NB
5/15/14	2,075	170	8.2%	80% SB	314	15.1%	74% NB
Third Street 100' N of Charles Street	(8369)	(602)			(731)		
5/14/14	8,365	606	7.2%	81% SB	738	8.8%	72% NB
5/15/14	8,372	598	7.1%	81% SB	723	8.6%	73% NB
Sciarappa Street 100' N of Charles Street	(447)	(38)			(70)		
5/14/14	401	35	8.1%	63% NB	58	14.5%	83% NB
5/15/14	493	40	8.1%	65% SB	82	16.6%	89% NB
Fifth Street 100' N of Charles Street	(1106)	(152)			(139)		
5/14/14	1,114	170	15.3%	78% SB	140	12.6%	84% NB
5/15/14	1,098	134	12.2%	76% SB	138	12.6%	81% NB
Sixth Street 100' N of Charles Street	(2329)	(210)			(297)		
5/14/14	2,255	195	8.6%	61% SB	280	12.4%	75% NB
5/15/14	2,403	225	9.4%	58% SB	313	13.0%	73% NB
Fulkerson Street (one-way) 100' N of Charles Street	(2588)	(294)			(166)		
5/15/14	2,499	300	12.0%	100% SB	161	6.4%	100% SB
5/15/14	2,677	288	10.8%	100% SB	171	6.4%	100% SB
Binney Street 200' W of Fulkerson Street	(3929)	(330)			(387)		
5/14/14	3,724	321	8.6%	64% EB	346	9.3%	74% EB
5/15/14	4,134	339	8.2%	61% EB	427	10.3%	71% EB

May 2008 Binney Street Project ATRs

Binney Street (EB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

81573A EB volume
Site Code: 10082.00

Start Time	EB Lane 2 A.M.		EB Lane 2 P.M.		EB Lane 1 A.M.		EB Lane 1 P.M.		Combined A.M.		Combined P.M.		06-May-08 Tue
12:00	7		77		6		51		13		128		
12:15	9		54		4		50		13		104		
12:30	6		52		1		38		7		90		
12:45	4	26	64	247	4	15	38	177	8	41	102	424	
01:00	5		54		4		56		9		110		
01:15	0		53		2		41		2		94		
01:30	1		49		2		35		3		84		
01:45	1	7	69	225	2	10	52	184	3	17	121	409	
02:00	4		75		2		59		6		134		
02:15	2		89		2		55		4		144		
02:30	1		60		3		54		4		114		
02:45	2	9	86	310	2	9	54	222	4	18	140	532	
03:00	8		81		7		85		15		166		
03:15	0		85		0		67		0		152		
03:30	1		78		3		62		4		140		
03:45	6	15	80	324	2	12	74	288	8	27	154	612	
04:00	2		86		6		93		8		179		
04:15	9		117		3		80		12		197		
04:30	2		120		4		89		6		209		
04:45	2	15	150	473	5	18	86	348	7	33	236	821	
05:00	5		147		2		103		7		250		
05:15	8		143		4		116		12		259		
05:30	3		123		11		81		14		204		
05:45	11	27	108	521	17	34	88	388	28	61	196	909	
06:00	17		117		22		76		39		193		
06:15	17		81		26		69		43		150		
06:30	16		76		26		48		42		124		
06:45	22	72	73	347	22	96	51	244	44	168	124	591	
07:00	23		56		29		59		52		115		
07:15	34		59		36		39		70		98		
07:30	29		37		26		27		55		64		
07:45	42	128	57	209	42	133	30	155	84	261	87	364	
08:00	58		35		55		26		113		61		
08:15	50		37		50		29		100		66		
08:30	38		32		49		14		87		46		
08:45	54	200	24	128	51	205	22	91	105	405	46	219	
09:00	55		25		55		31		110		56		
09:15	67		22		34		24		101		46		
09:30	69		29		34		17		103		46		
09:45	49	240	28	104	41	164	15	87	90	404	43	191	
10:00	49		25		34		14		83		39		
10:15	51		16		41		10		92		26		
10:30	46		10		26		7		72		17		
10:45	78	224	12	63	37	138	14	45	115	362	26	108	
11:00	55		11		29		8		84		19		
11:15	67		12		41		9		108		21		
11:30	41		12		44		7		85		19		
11:45	56	219	6	41	25	139	11	35	81	358	17	76	
Total	1182		2992		973		2264		2155		5256		
Percent	54.8%		56.9%		45.2%		43.1%						
Day Total		4174				3237				7411			
Peak	10:30		04:45		08:00		04:30		08:45		04:30		
Vol.	246		563		205		394		419		954		
P.H.F.	0.788		0.938		0.932		0.849		0.952		0.921		

Binney Street (EB) between
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Email: datarequests@pdillc.com

81573A EB volume
Site Code: 10082.00

Start Time	EB Lane 2 A.M.		EB Lane 2 P.M.		EB Lane 1 A.M.		EB Lane 1 P.M.		Combined A.M.		Combined P.M.		07-May-08 Wed
12:00	13		98		7		41		20		139		
12:15	5		52		2		36		7		88		
12:30	6		55		3		40		9		95		
12:45	1	25	40	245	2	14	45	162	3	39	85	407	
01:00	1		39		1		37		2		76		
01:15	7		54		6		46		13		100		
01:30	3		61		4		55		7		116		
01:45	2	13	56	210	0	11	53	191	2	24	109	401	
02:00	0		58		3		57		3		115		
02:15	5		60		2		50		7		110		
02:30	3		69		2		58		5		127		
02:45	5	13	64	251	3	10	71	236	8	23	135	487	
03:00	1		81		2		68		3		149		
03:15	1		81		3		60		4		141		
03:30	3		87		2		75		5		162		
03:45	5	10	64	313	1	8	65	268	6	18	129	581	
04:00	0		91		2		80		2		171		
04:15	2		97		2		86		4		183		
04:30	2		119		6		83		8		202		
04:45	4	8	90	397	5	15	70	319	9	23	160	716	
05:00	8		130		3		96		11		226		
05:15	6		141		6		100		12		241		
05:30	6		126		8		92		14		218		
05:45	8	28	99	496	17	34	80	368	25	62	179	864	
06:00	12		98		24		90		36		188		
06:15	14		90		27		63		41		153		
06:30	27		75		23		49		50		124		
06:45	20	73	63	326	30	104	52	254	50	177	115	580	
07:00	32		71		26		59		58		130		
07:15	52		60		23		40		75		100		
07:30	41		44		31		33		72		77		
07:45	42	167	37	212	47	127	26	158	89	294	63	370	
08:00	48		44		59		29		107		73		
08:15	48		36		49		24		97		60		
08:30	49		50		43		19		92		69		
08:45	43	188	31	161	42	193	14	86	85	381	45	247	
09:00	49		28		48		23		97		51		
09:15	62		24		49		16		111		40		
09:30	77		36		58		27		135		63		
09:45	90	278	21	109	39	194	19	85	129	472	40	194	
10:00	83		23		32		9		115		32		
10:15	70		17		21		14		91		31		
10:30	87		17		26		12		113		29		
10:45	75	315	19	76	38	117	14	49	113	432	33	125	
11:00	62		17		31		9		93		26		
11:15	60		12		43		11		103		23		
11:30	46		9		45		5		91		14		
11:45	54	222	7	45	61	180	6	31	115	402	13	76	
Total	1340		2841		1007		2207		2347		5048		
Percent	57.1%		56.3%		42.9%		43.7%						
Day Total		4181				3214				7395			
Peak	09:45		05:00		07:45		05:00		09:15		05:00		
Vol.	330		496		198		368		490		864		
P.H.F.	0.917		0.879		0.839		0.920		0.907		0.896		

PRECISION
D A T A
INDUSTRIES, LLC
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Email: datarequests@pdillc.com

Binney Street (EB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573A EB class
Site Code: 10082.00

EB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	20	4	1	1	0	0	0	0	0	0	0	0	26
01:00	0	5	0	1	1	0	0	0	0	0	0	0	0	7
02:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
03:00	0	8	2	1	2	0	0	0	2	0	0	0	0	15
04:00	0	8	0	1	5	1	0	0	0	0	0	0	0	15
05:00	0	16	2	1	4	2	0	1	1	0	0	0	0	27
06:00	0	39	15	8	7	3	0	0	0	0	0	0	0	72
07:00	1	82	28	3	10	2	0	0	2	0	0	0	0	128
08:00	1	131	41	9	10	5	0	3	0	0	0	0	0	200
09:00	2	162	38	11	20	3	0	1	3	0	0	0	0	240
10:00	2	127	38	17	20	10	1	2	6	1	0	0	0	224
11:00	0	130	46	17	14	8	0	3	1	0	0	0	0	219
12 PM	4	163	45	13	17	3	0	1	1	0	0	0	0	247
13:00	2	152	34	10	18	6	0	3	0	0	0	0	0	225
14:00	4	197	71	10	24	2	0	1	1	0	0	0	0	310
15:00	4	249	48	7	13	1	0	2	0	0	0	0	0	324
16:00	1	386	61	9	11	2	0	3	0	0	0	0	0	473
17:00	2	462	44	4	6	0	0	3	0	0	0	0	0	521
18:00	2	300	32	9	4	0	0	0	0	0	0	0	0	347
19:00	0	187	16	3	2	0	0	1	0	0	0	0	0	209
20:00	1	108	9	5	4	0	0	1	0	0	0	0	0	128
21:00	0	88	12	3	0	0	0	1	0	0	0	0	0	104
22:00	0	55	3	5	0	0	0	0	0	0	0	0	0	63
23:00	1	35	5	0	0	0	0	0	0	0	0	0	0	41
Total	27	3117	596	148	193	48	1	26	17	1	0	0	0	4174
Percent	0.6%	74.7%	14.3%	3.5%	4.6%	1.1%	0.0%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	11:00	10:00	09:00	10:00	10:00	08:00	10:00	10:00				09:00
Vol.	2	162	46	17	20	10	1	3	6	1				240
PM Peak	12:00	17:00	14:00	12:00	14:00	13:00		13:00	12:00					17:00
Vol.	4	462	71	13	24	6		3	1					521

PRECISION
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Binney Street (EB) between
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Client: VHB/M. Miller

81573A EB class
Site Code: 10082.00

EB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	22	3	0	0	0	0	0	0	0	0	0	0	25
01:00	0	12	0	0	1	0	0	0	0	0	0	0	0	13
02:00	0	9	2	1	0	0	0	0	1	0	0	0	0	13
03:00	0	4	2	1	3	0	0	0	0	0	0	0	0	10
04:00	0	5	0	0	1	0	0	0	2	0	0	0	0	8
05:00	0	16	2	3	2	2	1	0	2	0	0	0	0	28
06:00	1	40	22	3	4	1	0	0	2	0	0	0	0	73
07:00	0	108	27	7	15	4	1	0	5	0	0	0	0	167
08:00	0	139	27	5	14	1	0	1	1	0	0	0	0	188
09:00	2	170	49	13	25	11	1	5	0	1	0	0	1	278
10:00	1	190	56	19	27	11	3	2	6	0	0	0	0	315
11:00	4	142	31	16	19	7	0	2	1	0	0	0	0	222
12 PM	0	155	45	11	17	8	0	4	4	0	0	0	0	244
13:00	0	134	40	10	17	4	0	3	3	0	0	0	0	211
14:00	4	167	50	6	15	5	0	3	1	0	0	0	0	251
15:00	5	227	59	13	8	0	0	1	0	0	0	0	0	313
16:00	3	326	48	8	8	0	0	3	0	1	0	0	0	397
17:00	2	438	42	3	8	0	0	3	0	0	0	0	0	496
18:00	3	278	36	4	3	1	0	1	0	0	0	0	0	326
19:00	0	180	24	6	2	0	0	0	0	0	0	0	0	212
20:00	3	133	13	7	4	0	0	0	1	0	0	0	0	161
21:00	2	95	11	0	1	0	0	0	0	0	0	0	0	109
22:00	2	63	7	3	0	0	0	1	0	0	0	0	0	76
23:00	0	38	5	0	1	0	0	0	1	0	0	0	0	45
Total	32	3091	601	139	195	55	6	29	30	2	0	0	1	4181
Percent	0.8%	73.9%	14.4%	3.3%	4.7%	1.3%	0.1%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	10:00	10:00	10:00	10:00	09:00	10:00	09:00	10:00	09:00			09:00	10:00
Vol.	4	190	56	19	27	11	3	5	6	1			1	315
PM Peak	15:00	17:00	15:00	15:00	12:00	12:00		12:00	12:00	16:00				17:00
Vol.	5	438	59	13	17	8		4	4	1				496

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81573A EB class
Site Code: 10082.00

EB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	12	2	0	0	0	0	0	1	0	0	0	0	15
01:00	0	7	0	1	1	0	0	0	0	1	0	0	0	10
02:00	0	7	0	0	0	0	0	0	1	1	0	0	0	9
03:00	0	5	3	0	1	0	0	0	3	0	0	0	0	12
04:00	0	9	2	4	1	1	0	0	1	0	0	0	0	18
05:00	0	25	5	1	1	0	0	0	1	0	0	0	0	33
06:00	0	71	15	6	1	1	0	0	3	0	0	0	0	97
07:00	0	84	23	7	8	3	0	1	7	0	0	0	0	133
08:00	0	159	17	4	8	9	2	0	4	1	0	0	0	204
09:00	1	117	19	4	10	8	0	1	5	0	0	0	0	165
10:00	1	84	23	7	10	8	0	0	4	1	0	0	0	138
11:00	0	80	27	7	6	11	2	3	2	1	0	0	0	139
12 PM	2	113	23	9	9	13	0	4	4	0	0	0	0	177
13:00	0	109	32	13	14	9	0	0	5	2	0	0	0	184
14:00	0	148	43	7	7	8	1	0	7	1	0	0	0	222
15:00	0	216	49	3	7	10	0	1	2	0	0	0	0	288
16:00	0	300	34	3	6	2	0	2	1	0	0	0	0	348
17:00	0	348	28	1	6	0	0	3	2	0	0	0	0	388
18:00	0	213	21	5	3	0	0	1	0	0	0	0	0	243
19:00	0	137	14	1	3	0	0	0	1	0	0	0	0	156
20:00	0	71	12	3	4	0	0	0	1	0	0	0	0	91
21:00	0	74	8	3	0	0	0	0	2	0	0	0	0	87
22:00	0	38	5	2	0	0	0	0	0	0	0	0	0	45
23:00	0	31	1	1	0	0	0	0	2	0	0	0	0	35
Total	4	2458	406	92	106	83	5	16	59	8	0	0	0	3237
Percent	0.1%	75.9%	12.5%	2.8%	3.3%	2.6%	0.2%	0.5%	1.8%	0.2%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	11:00	07:00	09:00	11:00	08:00	11:00	07:00	01:00				08:00
Vol.	1	159	27	7	10	11	2	3	7	1				204
PM Peak	12:00	17:00	15:00	13:00	13:00	12:00	14:00	12:00	14:00	13:00				17:00
Vol.	2	348	49	13	14	13	1	4	7	2				388

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81573A EB class
Site Code: 10082.00

EB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	12	2	0	0	0	0	0	0	0	0	0	0	14
01:00	0	8	1	0	2	0	0	0	0	0	0	0	0	11
02:00	0	4	1	0	0	1	0	0	4	0	0	0	0	10
03:00	0	4	1	0	1	0	0	0	2	0	0	0	0	8
04:00	0	7	3	0	0	2	0	0	3	0	0	0	0	15
05:00	0	24	6	1	1	1	0	0	1	0	0	0	0	34
06:00	0	71	18	3	3	4	0	0	4	1	0	0	0	104
07:00	1	71	23	7	9	7	1	1	6	0	0	0	0	126
08:00	0	151	21	4	3	5	2	2	6	0	0	0	0	194
09:00	1	127	32	4	18	7	0	1	3	1	0	0	0	194
10:00	0	71	20	5	5	11	1	1	3	0	0	0	0	117
11:00	0	102	34	10	21	5	4	2	2	0	0	0	0	180
12 PM	0	100	27	5	10	11	1	0	7	1	0	0	0	162
13:00	0	130	29	4	11	7	2	0	7	1	0	0	0	191
14:00	0	162	41	4	19	5	1	1	1	2	0	0	0	236
15:00	0	193	44	6	9	12	0	2	2	0	0	0	0	268
16:00	0	264	39	6	4	3	0	0	3	0	0	0	0	319
17:00	0	332	26	1	5	2	0	0	1	1	0	0	0	368
18:00	0	227	22	1	3	0	0	0	1	0	0	0	0	254
19:00	0	132	19	4	3	0	0	0	0	0	0	0	0	158
20:00	0	73	11	2	0	0	0	0	0	0	0	0	0	86
21:00	0	74	6	3	1	0	0	0	1	0	0	0	0	85
22:00	1	42	1	3	0	1	0	0	1	0	0	0	0	49
23:00	0	22	4	1	0	1	0	0	3	0	0	0	0	31
Total	3	2403	431	74	128	85	12	10	61	7	0	0	0	3214
Percent	0.1%	74.8%	13.4%	2.3%	4.0%	2.6%	0.4%	0.3%	1.9%	0.2%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	11:00	11:00	11:00	10:00	11:00	08:00	07:00	06:00				08:00
Vol.	1	151	34	10	21	11	4	2	6	1				194
PM Peak	22:00	17:00	15:00	15:00	14:00	15:00	13:00	15:00	12:00	14:00				17:00
Vol.	1	332	44	6	19	12	2	2	7	2				368

Binney Street (WB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

81573A WB volume
Site Code: 10082.00

Start Time	WB Lane 2 A.M.		WB Lane 2 P.M.		WB Lane 1 A.M.		WB Lane 1 P.M.		Combined A.M.		Combined P.M.		06-May-08 Tue
12:00	1		61		5		37		6		98		
12:15	4		34		5		36		9		70		
12:30	7		36		5		37		12		73		
12:45	2	14	56	187	1	16	32	142	3	30	88	329	
01:00	3		59		4		38		7		97		
01:15	0		74		5		4		5		78		
01:30	1		79		3		18		4		97		
01:45	2	6	47	259	1	13	37	97	3	19	84	356	
02:00	3		52		0		48		3		100		
02:15	1		34		0		38		1		72		
02:30	3		36		2		37		5		73		
02:45	0	7	35	157	1	3	34	157	1	10	69	314	
03:00	3		33		1		30		4		63		
03:15	3		32		2		28		5		60		
03:30	2		38		2		43		4		81		
03:45	3	11	26	129	1	6	35	136	4	17	61	265	
04:00	4		38		2		30		6		68		
04:15	2		31		3		25		5		56		
04:30	6		29		8		43		14		72		
04:45	10	22	37	135	12	25	29	127	22	47	66	262	
05:00	5		45		8		41		13		86		
05:15	20		43		18		61		38		104		
05:30	21		50		29		40		50		90		
05:45	33	79	49	187	33	88	55	197	66	167	104	384	
06:00	40		49		39		40		79		89		
06:15	66		33		49		44		115		77		
06:30	66		47		46		32		112		79		
06:45	63	235	36	165	61	195	33	149	124	430	69	314	
07:00	70		34		49		38		119		72		
07:15	72		27		54		29		126		56		
07:30	86		25		64		24		150		49		
07:45	69	297	26	112	67	234	21	112	136	531	47	224	
08:00	90		36		60		22		150		58		
08:15	81		22		67		20		148		42		
08:30	108		17		75		14		183		31		
08:45	83	362	20	95	74	276	25	81	157	638	45	176	
09:00	70		12		76		18		146		30		
09:15	66		23		42		26		108		49		
09:30	73		20		68		17		141		37		
09:45	64	273	30	85	53	239	20	81	117	512	50	166	
10:00	75		14		55		13		130		27		
10:15	58		10		44		13		102		23		
10:30	64		11		34		12		98		23		
10:45	42	239	5	40	35	168	15	53	77	407	20	93	
11:00	41		5		41		17		82		22		
11:15	47		12		38		11		85		23		
11:30	54		8		34		7		88		15		
11:45	56	198	7	32	42	155	4	39	98	353	11	71	
Total	1743		1583		1418		1371		3161		2954		
Percent	55.1%		53.6%		44.9%		46.4%						
Day Total		3326				2789				6115			
Peak	08:00		00:45		08:15		05:00		08:00		05:15		
Vol.	362		268		292		197		638		387		
P.H.F.	0.838		0.848		0.961		0.807		0.872		0.930		

Binney Street (WB) between
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Client: VHB/M. Miller

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81573A WB volume
Site Code: 10082.00

Start Time	WB Lane 2 A.M.		WB Lane 2 P.M.		WB Lane 1 A.M.		WB Lane 1 P.M.		Combined A.M.		Combined P.M.		07-May-08 Wed
12:00	1		69		8		34		9		103		
12:15	12		48		6		35		18		83		
12:30	8		59		4		26		12		85		
12:45	1	22	77	253	1	19	38	133	2	41	115	386	
01:00	3		60		1		29		4		89		
01:15	3		52		2		31		5		83		
01:30	5		63		4		28		9		91		
01:45	4	15	56	231	2	9	36	124	6	24	92	355	
02:00	2		55		4		30		6		85		
02:15	1		51		2		28		3		79		
02:30	4		54		2		22		6		76		
02:45	1	8	41	201	0	8	42	122	1	16	83	323	
03:00	0		37		2		20		2		57		
03:15	1		44		5		29		6		73		
03:30	1		49		3		17		4		66		
03:45	1	3	49	179	2	12	32	98	3	15	81	277	
04:00	3		38		1		34		4		72		
04:15	4		21		3		31		7		52		
04:30	7		35		4		30		11		65		
04:45	4	18	36	130	8	16	42	137	12	34	78	267	
05:00	8		36		12		43		20		79		
05:15	13		37		16		47		29		84		
05:30	24		51		28		42		52		93		
05:45	33	78	62	186	43	99	44	176	76	177	106	362	
06:00	53		52		44		46		97		98		
06:15	69		40		41		43		110		83		
06:30	74		31		56		35		130		66		
06:45	72	268	34	157	54	195	36	160	126	463	70	317	
07:00	87		36		66		39		153		75		
07:15	66		24		53		32		119		56		
07:30	89		28		69		23		158		51		
07:45	82	324	28	116	62	250	34	128	144	574	62	244	
08:00	91		20		60		24		151		44		
08:15	97		27		77		23		174		50		
08:30	102		23		79		22		181		45		
08:45	87	377	20	90	79	295	21	90	166	672	41	180	
09:00	34		26		76		21		110		47		
09:15	82		22		60		19		142		41		
09:30	129		25		26		22		155		47		
09:45	124	369	22	95	7	169	22	84	131	538	44	179	
10:00	105		14		8		7		113		21		
10:15	69		16		50		16		119		32		
10:30	55		14		41		8		96		22		
10:45	48	277	13	57	37	136	12	43	85	413	25	100	
11:00	39		8		35		11		74		19		
11:15	45		8		47		7		92		15		
11:30	55		6		40		6		95		12		
11:45	53	192	1	23	41	163	8	32	94	355	9	55	
Total	1951		1718		1371		1327		3322		3045		
Percent	58.7%		56.4%		41.3%		43.6%						
Day Total		3669				2698				6367			
Peak	09:15		12:00		08:15		05:15		08:00		12:00		
Vol.	440		253		311		179		672		386		
P.H.F.	0.853		0.821		0.984		0.952		0.928		0.839		

PRECISION
D A T A
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Binney Street (WB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573A WB class
Site Code: 10082.00

WB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	14	0	0	0	0	0	0	0	0	0	0	0	14
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
02:00	1	6	0	0	0	0	0	0	0	0	0	0	0	7
03:00	0	5	1	2	0	2	0	0	1	0	0	0	0	11
04:00	0	13	2	2	1	3	0	0	0	1	0	0	0	22
05:00	0	45	13	4	10	4	0	0	2	1	0	0	0	79
06:00	1	168	37	3	9	7	4	3	2	0	0	0	1	235
07:00	1	222	30	3	13	9	4	1	12	2	0	0	0	297
08:00	0	307	23	4	15	8	1	1	2	0	0	0	1	362
09:00	1	216	24	12	8	7	2	1	2	0	0	0	0	273
10:00	1	164	21	16	14	13	1	1	6	1	0	0	1	239
11:00	1	133	31	15	8	4	3	1	2	0	0	0	0	198
12 PM	3	133	25	7	3	7	5	2	1	1	0	0	0	187
13:00	1	195	31	9	12	7	0	3	0	1	0	0	0	259
14:00	1	117	22	6	5	4	1	0	1	0	0	0	0	157
15:00	1	96	19	3	6	2	1	0	1	0	0	0	0	129
16:00	0	113	9	6	7	0	0	0	0	0	0	0	0	135
17:00	0	176	6	3	2	0	0	0	0	0	0	0	0	187
18:00	0	146	8	4	4	0	0	2	1	0	0	0	0	165
19:00	0	104	6	0	2	0	0	0	0	0	0	0	0	112
20:00	0	86	5	2	0	1	0	0	0	1	0	0	0	95
21:00	0	81	2	1	1	0	0	0	0	0	0	0	0	85
22:00	0	39	1	0	0	0	0	0	0	0	0	0	0	40
23:00	0	27	5	0	0	0	0	0	0	0	0	0	0	32
Total	12	2611	322	102	120	78	22	15	33	8	0	0	3	3326
Percent	0.4%	78.5%	9.7%	3.1%	3.6%	2.3%	0.7%	0.5%	1.0%	0.2%	0.0%	0.0%	0.1%	
AM Peak	02:00	08:00	06:00	10:00	08:00	10:00	06:00	06:00	07:00	07:00			06:00	08:00
Vol.	1	307	37	16	15	13	4	3	12	2			1	362
PM Peak	12:00	13:00	13:00	13:00	13:00	12:00	12:00	13:00	12:00	12:00				13:00
Vol.	3	195	31	9	12	7	5	3	1	1				259

PRECISION
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Binney Street (WB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573A WB class
Site Code: 10082.00

WB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	20	2	0	0	0	0	0	0	0	0	0	0	22
01:00	0	12	1	0	0	1	0	0	0	1	0	0	0	15
02:00	0	6	0	1	0	1	0	0	0	0	0	0	0	8
03:00	0	1	1	0	1	0	0	0	0	0	0	0	0	3
04:00	0	12	0	1	1	4	0	0	0	0	0	0	0	18
05:00	1	50	15	3	4	3	1	0	1	0	0	0	0	78
06:00	6	165	55	8	15	10	3	1	5	0	0	0	0	268
07:00	3	244	28	8	15	7	3	5	10	1	0	0	0	324
08:00	1	319	26	8	9	8	2	2	0	2	0	0	0	377
09:00	3	289	39	10	11	5	4	3	5	0	0	0	0	369
10:00	0	191	30	14	20	8	4	2	7	1	0	0	0	277
11:00	0	127	25	4	15	5	4	6	5	0	0	0	1	192
12 PM	4	177	32	8	11	9	3	3	2	3	0	0	1	253
13:00	1	168	18	7	14	7	6	2	5	3	0	0	0	231
14:00	3	151	17	12	10	5	0	0	1	1	0	0	1	201
15:00	0	130	24	9	8	1	0	4	1	2	0	0	0	179
16:00	3	108	11	6	0	1	0	1	0	0	0	0	0	130
17:00	2	166	12	4	2	0	0	0	0	0	0	0	0	186
18:00	1	141	4	3	5	0	0	3	0	0	0	0	0	157
19:00	1	105	8	1	1	0	0	0	0	0	0	0	0	116
20:00	3	83	3	0	0	1	0	0	0	0	0	0	0	90
21:00	0	86	8	0	0	0	0	0	1	0	0	0	0	95
22:00	0	50	6	0	0	0	0	1	0	0	0	0	0	57
23:00	0	19	3	1	0	0	0	0	0	0	0	0	0	23
Total	32	2820	368	108	142	76	30	33	43	14	0	0	3	3669
Percent	0.9%	76.9%	10.0%	2.9%	3.9%	2.1%	0.8%	0.9%	1.2%	0.4%	0.0%	0.0%	0.1%	
AM Peak	06:00	08:00	06:00	10:00	10:00	06:00	09:00	11:00	07:00	08:00			11:00	08:00
Vol.	6	319	55	14	20	10	4	6	10	2			1	377
PM Peak	12:00	12:00	12:00	14:00	13:00	12:00	13:00	15:00	13:00	12:00			12:00	12:00
Vol.	4	177	32	12	14	9	6	4	5	3			1	253

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Binney Street (WB) between
2nd Street and 3rd Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573A WB class
Site Code: 10082.00

WB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	13	0	0	1	1	0	0	1	0	0	0	0	16
01:00	0	7	3	0	0	0	0	0	2	1	0	0	0	13
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	0	2	1	0	3	0	0	0	0	0	0	0	6
04:00	1	9	2	2	4	5	0	0	2	0	0	0	0	25
05:00	0	41	17	13	8	4	0	1	3	1	0	0	0	88
06:00	1	109	41	7	16	11	0	3	4	3	0	0	0	195
07:00	1	161	35	10	11	8	2	2	4	0	0	0	0	234
08:00	2	204	30	7	17	9	1	2	2	2	0	0	0	276
09:00	0	160	28	14	19	8	1	6	1	2	0	0	0	239
10:00	1	104	27	10	15	7	1	0	2	1	0	0	0	168
11:00	1	91	30	10	11	8	1	2	1	0	0	0	0	155
12 PM	0	97	24	6	9	1	0	1	3	1	0	0	0	142
13:00	1	52	20	10	6	4	0	2	2	0	0	0	0	97
14:00	1	105	23	15	10	2	1	0	0	0	0	0	0	157
15:00	0	89	21	9	10	4	0	1	2	0	0	0	0	136
16:00	1	100	13	6	5	0	0	1	1	0	0	0	0	127
17:00	0	164	21	5	5	1	0	0	1	0	0	0	0	197
18:00	0	125	18	4	1	0	0	0	0	1	0	0	0	149
19:00	0	94	12	2	4	0	0	0	0	0	0	0	0	112
20:00	0	67	8	3	1	0	0	0	1	1	0	0	0	81
21:00	0	71	4	2	1	1	0	0	2	0	0	0	0	81
22:00	0	47	4	0	0	0	0	0	2	0	0	0	0	53
23:00	0	32	6	0	0	0	0	0	0	1	0	0	0	39
Total	10	1945	389	136	154	77	7	21	36	14	0	0	0	2789
Percent	0.4%	69.7%	13.9%	4.9%	5.5%	2.8%	0.3%	0.8%	1.3%	0.5%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	09:00	09:00	06:00	07:00	09:00	06:00	06:00				08:00
Vol.	2	204	41	14	19	11	2	6	4	3				276
PM Peak	13:00	17:00	12:00	14:00	14:00	13:00	14:00	13:00	12:00	12:00				17:00
Vol.	1	164	24	15	10	4	1	2	3	1				197

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81573A WB class
Site Code: 10082.00

WB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	16	1	0	0	0	0	0	1	1	0	0	0	19
01:00	0	4	1	1	1	1	0	0	1	0	0	0	0	9
02:00	0	4	4	0	0	0	0	0	0	0	0	0	0	8
03:00	0	4	1	2	0	4	0	0	1	0	0	0	0	12
04:00	0	8	2	0	2	2	0	0	2	0	0	0	0	16
05:00	0	55	15	12	6	4	0	1	5	1	0	0	0	99
06:00	2	108	50	7	13	10	0	1	4	0	0	0	0	195
07:00	0	168	34	9	20	6	0	5	7	1	0	0	0	250
08:00	1	219	40	8	12	10	0	0	5	0	0	0	0	295
09:00	2	113	26	12	6	6	1	2	0	1	0	0	0	169
10:00	3	90	17	9	7	5	0	4	1	0	0	0	0	136
11:00	0	94	27	10	19	7	0	4	2	0	0	0	0	163
12 PM	0	95	20	4	8	4	0	1	1	0	0	0	0	133
13:00	1	89	16	7	4	6	1	0	0	0	0	0	0	124
14:00	1	82	17	7	11	3	0	0	1	0	0	0	0	122
15:00	0	70	10	7	8	0	0	1	1	1	0	0	0	98
16:00	0	105	18	8	5	0	0	1	0	0	0	0	0	137
17:00	0	147	22	4	2	1	0	0	0	0	0	0	0	176
18:00	0	130	18	7	2	0	0	2	1	0	0	0	0	160
19:00	0	101	17	4	4	1	0	0	0	1	0	0	0	128
20:00	0	77	5	3	2	0	0	0	3	0	0	0	0	90
21:00	2	77	4	0	0	0	0	0	1	0	0	0	0	84
22:00	0	38	5	0	0	0	0	0	0	0	0	0	0	43
23:00	0	28	3	1	0	0	0	0	0	0	0	0	0	32
Total	12	1922	373	122	132	70	2	22	37	6	0	0	0	2698
Percent	0.4%	71.2%	13.8%	4.5%	4.9%	2.6%	0.1%	0.8%	1.4%	0.2%	0.0%	0.0%	0.0%	
AM Peak	10:00	08:00	06:00	05:00	07:00	06:00	09:00	07:00	07:00	00:00				08:00
Vol.	3	219	50	12	20	10	1	5	7	1				295
PM Peak	21:00	17:00	17:00	16:00	14:00	13:00	13:00	18:00	20:00	15:00				17:00
Vol.	2	147	22	8	11	6	1	2	3	1				176

3rd Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
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Email: datarequests@pdillc.com

81573B volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	19		58		12		53		31		111		
12:15	12		69		3		47		15		116		
12:30	7		57		3		45		10		102		
12:45	8	46	48	232	1	19	36	181	9	65	84	413	
01:00	12		61		4		70		16		131		
01:15	6		62		5		56		11		118		
01:30	7		61		2		49		9		110		
01:45	2	27	53	237	3	14	54	229	5	41	107	466	
02:00	4		70		1		46		5		116		
02:15	1		71		2		46		3		117		
02:30	2		85		0		43		2		128		
02:45	1	8	80	306	1	4	47	182	2	12	127	488	
03:00	5		89		3		57		8		146		
03:15	0		111		0		58		0		169		
03:30	1		132		1		34		2		166		
03:45	2	8	106	438	1	5	57	206	3	13	163	644	
04:00	2		122		3		51		5		173		
04:15	1		133		8		35		9		168		
04:30	2		149		5		53		7		202		
04:45	3	8	133	537	9	25	36	175	12	33	169	712	
05:00	12		142		16		52		28		194		
05:15	10		176		22		48		32		224		
05:30	15		141		26		49		41		190		
05:45	21	58	147	606	37	101	57	206	58	159	204	812	
06:00	23		138		82		54		105		192		
06:15	25		117		93		47		118		164		
06:30	23		101		73		50		96		151		
06:45	30	101	89	445	100	348	51	202	130	449	140	647	
07:00	30		90		102		38		132		128		
07:15	32		73		127		37		159		110		
07:30	40		46		89		24		129		70		
07:45	55	157	41	250	109	427	27	126	164	584	68	376	
08:00	42		41		96		22		138		63		
08:15	36		33		122		19		158		52		
08:30	41		36		114		21		155		57		
08:45	47	166	34	144	122	454	28	90	169	620	62	234	
09:00	50		38		125		31		175		69		
09:15	64		22		115		20		179		42		
09:30	49		35		111		15		160		50		
09:45	41	204	27	122	90	441	19	85	131	645	46	207	
10:00	44		34		78		15		122		49		
10:15	51		24		50		12		101		36		
10:30	37		23		52		14		89		37		
10:45	54	186	19	100	48	228	19	60	102	414	38	160	
11:00	34		34		52		9		86		43		
11:15	64		27		36		11		100		38		
11:30	45		23		53		11		98		34		
11:45	60	203	12	96	56	197	6	37	116	400	18	133	
Total	1172		3513		2263		1779		3435		5292		
Percent	34.1%		66.4%		65.9%		33.6%						
Day Total		4685				4042				8727			
Peak	08:45		05:00		08:15		01:00		08:45		05:00		
Vol.	210		606		483		229		683		812		
P.H.F.	0.820		0.861		0.966		0.818		0.954		0.906		

3rd Street bewteen
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81573B volume
Site Code: 10082.00

Start	NB				SB				Combined				07-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	19		67		7		51		26		118		
12:15	5		70		3		48		8		118		
12:30	9		49		4		45		13		94		
12:45	2	35	54	240	3	17	67	211	5	52	121	451	
01:00	2		64		4		45		6		109		
01:15	1		74		2		53		3		127		
01:30	4		61		2		57		6		118		
01:45	2	9	49	248	0	8	61	216	2	17	110	464	
02:00	5		64		4		38		9		102		
02:15	9		68		4		66		13		134		
02:30	7		70		3		44		10		114		
02:45	1	22	81	283	3	14	65	213	4	36	146	496	
03:00	1		86		2		40		3		126		
03:15	2		146		0		44		2		190		
03:30	4		102		2		49		6		151		
03:45	1	8	113	447	2	6	38	171	3	14	151	618	
04:00	1		129		2		46		3		175		
04:15	2		145		1		49		3		194		
04:30	2		147		10		59		12		206		
04:45	6	11	148	569	11	24	47	201	17	35	195	770	
05:00	6		146		9		58		15		204		
05:15	10		180		21		59		31		239		
05:30	11		161		20		50		31		211		
05:45	19	46	151	638	47	97	55	222	66	143	206	860	
06:00	30		146		73		51		103		197		
06:15	21		112		90		51		111		163		
06:30	29		110		89		46		118		156		
06:45	18	98	88	456	89	341	41	189	107	439	129	645	
07:00	39		62		115		30		154		92		
07:15	29		74		99		31		128		105		
07:30	32		66		108		29		140		95		
07:45	44	144	50	252	98	420	28	118	142	564	78	370	
08:00	37		38		130		33		167		71		
08:15	46		49		125		29		171		78		
08:30	57		38		122		23		179		61		
08:45	42	182	46	171	129	506	23	108	171	688	69	279	
09:00	45		46		115		22		160		68		
09:15	43		29		97		23		140		52		
09:30	51		44		86		17		137		61		
09:45	43	182	31	150	96	394	24	86	139	576	55	236	
10:00	44		37		78		9		122		46		
10:15	41		35		55		10		96		45		
10:30	35		22		39		12		74		34		
10:45	46	166	25	119	58	230	13	44	104	396	38	163	
11:00	47		20		35		9		82		29		
11:15	60		21		52		6		112		27		
11:30	58		21		42		10		100		31		
11:45	70	235	8	70	50	179	6	31	120	414	14	101	
Total	1138		3643		2236		1810		3374		5453		
Percent	33.7%		66.8%		66.3%		33.2%						
Day Total		4781				4046				8827			
Peak	11:00		05:00		08:00		04:30		08:00		05:00		
Vol.	235		638		506		223		688		860		
P.H.F.	0.839		0.886		0.973		0.845		0.961		0.900		

PRECISION
D A T A
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3rd Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	41	5	0	0	0	0	0	0	0	0	0	0	46
01:00	0	26	1	0	0	0	0	0	0	0	0	0	0	27
02:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
03:00	0	3	4	0	0	1	0	0	0	0	0	0	0	8
04:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
05:00	1	45	10	0	1	0	0	1	0	0	0	0	0	58
06:00	1	86	13	0	1	0	0	0	0	0	0	0	0	101
07:00	1	132	14	2	4	4	0	0	0	0	0	0	0	157
08:00	2	142	19	1	1	1	0	0	0	0	0	0	0	166
09:00	5	165	23	2	6	2	0	1	0	0	0	0	0	204
10:00	1	145	29	0	11	0	0	0	0	0	0	0	0	186
11:00	1	147	47	0	5	1	0	1	0	0	0	0	0	202
12 PM	5	190	29	2	5	2	0	0	0	0	0	0	0	233
13:00	4	196	30	1	4	1	0	1	0	0	0	0	0	237
14:00	2	234	58	1	7	3	0	1	0	0	0	0	0	306
15:00	6	362	52	1	9	5	0	2	1	0	0	0	0	438
16:00	10	472	40	1	7	5	0	0	0	1	0	0	0	536
17:00	13	566	21	0	3	2	0	1	1	0	0	0	0	607
18:00	8	402	25	1	5	3	0	1	0	0	0	0	0	445
19:00	4	223	19	0	2	0	0	2	0	0	0	0	0	250
20:00	3	132	6	0	3	0	0	0	0	0	0	0	0	144
21:00	1	116	3	0	2	0	0	0	0	0	0	0	0	122
22:00	0	85	14	0	1	0	0	0	0	0	0	0	0	100
23:00	2	83	11	0	0	0	0	0	0	0	0	0	0	96
Total	70	4007	475	12	77	30	0	11	2	1	0	0	0	4685
Percent	1.5%	85.5%	10.1%	0.3%	1.6%	0.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	11:00	07:00	10:00	07:00		05:00						09:00
Vol.	5	165	47	2	11	4		1						204
PM Peak	17:00	17:00	14:00	12:00	15:00	15:00		15:00	15:00	16:00				17:00
Vol.	13	566	58	2	9	5		2	1	1				607

PRECISION
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3rd Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	1	30	3	0	0	0	0	1	0	0	0	0	0	35
01:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
02:00	0	18	3	0	1	0	0	0	0	0	0	0	0	22
03:00	0	4	3	0	1	0	0	0	0	0	0	0	0	8
04:00	0	7	2	0	1	1	0	0	0	0	0	0	0	11
05:00	1	32	13	0	0	0	0	0	0	0	0	0	0	46
06:00	2	72	20	0	3	0	0	1	0	0	0	0	0	98
07:00	1	116	18	0	8	1	0	0	0	0	0	0	0	144
08:00	6	157	17	1	1	0	0	0	0	0	0	0	0	182
09:00	7	144	23	1	5	0	0	2	0	0	0	0	0	182
10:00	4	122	29	0	8	3	0	0	0	0	0	0	0	166
11:00	4	180	39	1	10	0	0	1	0	0	0	0	0	235
12 PM	5	180	43	2	6	2	0	2	0	0	0	0	0	240
13:00	5	199	35	1	5	0	0	2	0	0	0	1	0	248
14:00	4	215	49	1	12	1	0	1	0	0	0	0	0	283
15:00	13	357	64	1	8	1	0	3	0	0	0	0	0	447
16:00	12	502	44	1	7	2	0	1	0	0	0	0	0	569
17:00	9	581	40	0	3	1	0	4	0	0	0	0	0	638
18:00	5	414	27	1	4	2	0	1	1	0	0	0	0	455
19:00	3	220	25	0	4	1	0	0	0	0	0	0	0	253
20:00	5	150	11	0	3	2	0	0	0	0	0	0	0	171
21:00	1	141	5	0	2	1	0	0	0	0	0	0	0	150
22:00	5	99	12	0	3	0	0	0	0	0	0	0	0	119
23:00	2	66	2	0	0	0	0	0	0	0	0	0	0	70
Total	95	4014	528	10	95	18	0	19	1	0	0	1	0	4781
Percent	2.0%	84.0%	11.0%	0.2%	2.0%	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	08:00	11:00	10:00		09:00						11:00
Vol.	7	180	39	1	10	3		2						235
PM Peak	15:00	17:00	15:00	12:00	14:00	12:00		17:00	18:00			13:00		17:00
Vol.	13	581	64	2	12	2		4	1			1		638

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3rd Street bewteen
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81573B class
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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	17	1	0	1	0	0	0	0	0	0	0	0	19
01:00	1	12	1	0	0	0	0	0	0	0	0	0	0	14
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	2	1	0	0	2	0	0	0	0	0	0	0	5
04:00	1	20	2	0	1	1	0	0	0	0	0	0	0	25
05:00	2	74	22	1	2	0	0	0	0	0	0	0	0	101
06:00	4	274	60	2	7	0	0	1	0	0	0	0	0	348
07:00	10	368	40	1	6	0	0	2	0	0	0	0	0	427
08:00	9	413	24	0	4	1	0	2	0	0	0	0	1	454
09:00	11	388	30	1	6	2	0	2	1	0	0	0	0	441
10:00	11	194	16	0	7	0	0	0	0	0	0	0	0	228
11:00	2	169	20	0	2	2	0	1	1	0	0	0	0	197
12 PM	3	148	24	1	2	0	0	1	0	1	0	0	0	180
13:00	8	194	19	2	5	1	0	0	1	0	0	0	0	230
14:00	2	159	16	0	3	0	0	1	0	0	0	1	0	182
15:00	8	174	21	0	1	1	0	0	0	0	0	0	0	205
16:00	9	152	11	0	3	1	0	0	0	0	0	0	0	176
17:00	10	189	5	0	1	1	0	0	0	0	0	0	0	206
18:00	8	183	9	0	1	1	0	0	0	0	0	0	0	202
19:00	7	114	4	0	1	0	0	0	0	0	0	0	0	126
20:00	5	81	4	0	0	0	0	0	0	0	0	0	0	90
21:00	0	78	4	1	2	0	0	0	0	0	0	0	0	85
22:00	6	53	1	0	0	0	0	0	0	0	0	0	0	60
23:00	0	34	3	0	0	0	0	0	0	0	0	0	0	37
Total	117	3494	338	9	55	13	0	10	3	1	0	1	1	4042
Percent	2.9%	86.4%	8.4%	0.2%	1.4%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	06:00	06:00	06:00	03:00		07:00	09:00				08:00	08:00
Vol.	11	413	60	2	7	2		2	1				1	454
PM Peak	17:00	13:00	12:00	13:00	13:00	13:00		12:00	13:00	12:00		14:00		13:00
Vol.	10	194	24	2	5	1		1	1	1		1		230

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81573B class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	1	16	0	0	0	0	0	0	0	0	0	0	0	17
01:00	0	7	0	0	1	0	0	0	0	0	0	0	0	8
02:00	1	10	2	0	1	0	0	0	0	0	0	0	0	14
03:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6
04:00	0	19	4	0	0	1	0	0	0	0	0	0	0	24
05:00	3	72	18	1	2	1	0	0	0	0	0	0	0	97
06:00	10	255	63	3	8	0	0	2	0	0	0	0	0	341
07:00	5	373	34	1	5	0	0	1	0	0	1	0	0	420
08:00	12	453	27	2	5	4	0	2	1	0	0	0	0	506
09:00	7	346	29	1	7	2	0	1	0	0	0	0	0	393
10:00	6	188	29	1	7	0	0	0	0	0	0	0	0	231
11:00	1	147	19	1	8	2	0	0	0	0	0	0	0	178
12 PM	8	168	33	1	2	0	0	0	0	0	0	0	0	212
13:00	8	181	23	0	1	2	0	1	0	0	0	0	0	216
14:00	6	173	22	1	5	4	0	2	0	0	0	0	0	213
15:00	6	145	15	0	5	0	0	0	0	0	0	0	0	171
16:00	6	179	15	0	0	1	0	0	0	0	0	0	0	201
17:00	8	201	12	0	0	1	0	0	0	0	0	0	0	222
18:00	8	171	8	0	1	1	0	0	0	0	0	0	0	189
19:00	2	111	4	0	1	0	0	0	0	0	0	0	0	118
20:00	3	98	6	0	0	1	0	0	0	0	0	0	0	108
21:00	5	76	3	1	1	0	0	0	0	0	0	0	0	86
22:00	0	40	4	0	0	0	0	0	0	0	0	0	0	44
23:00	1	28	2	0	0	0	0	0	0	0	0	0	0	31
Total	107	3462	372	13	61	20	0	9	1	0	1	0	0	4046
Percent	2.6%	85.6%	9.2%	0.3%	1.5%	0.5%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	06:00	06:00	08:00		06:00	08:00		07:00			08:00
Vol.	12	453	63	3	8	4		2	1		1			506
PM Peak	12:00	17:00	12:00	12:00	14:00	14:00		14:00						17:00
Vol.	8	201	33	1	5	4		2						222

1st Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
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Email: datarequests@pdillc.com

81573C volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	6		47		6		45		12		92		
12:15	3		30		5		38		8		68		
12:30	2		33		6		50		8		83		
12:45	1	12	29	139	2	19	62	195	3	31	91	334	
01:00	1		21		3		57		4		78		
01:15	1		32		1		48		2		80		
01:30	1		25		4		32		5		57		
01:45	1	4	28	106	1	9	40	177	2	13	68	283	
02:00	1		37		0		47		1		84		
02:15	1		26		0		48		1		74		
02:30	1		24		0		44		1		68		
02:45	0	3	33	120	2	2	49	188	2	5	82	308	
03:00	3		27		0		50		3		77		
03:15	0		32		2		42		2		74		
03:30	5		41		0		59		5		100		
03:45	1	9	41	141	4	6	45	196	5	15	86	337	
04:00	1		39		5		61		6		100		
04:15	3		32		0		61		3		93		
04:30	2		65		3		50		5		115		
04:45	0	6	51	187	4	12	53	225	4	18	104	412	
05:00	1		70		2		71		3		141		
05:15	4		89		7		81		11		170		
05:30	3		90		1		70		4		160		
05:45	8	16	76	325	12	22	64	286	20	38	140	611	
06:00	10		59		13		65		23		124		
06:15	14		55		18		64		32		119		
06:30	9		60		18		77		27		137		
06:45	20	53	49	223	35	84	51	257	55	137	100	480	
07:00	17		33		38		48		55		81		
07:15	13		30		48		48		61		78		
07:30	31		28		38		39		69		67		
07:45	41	102	38	129	40	164	41	176	81	266	79	305	
08:00	31		26		46		48		77		74		
08:15	43		30		69		31		112		61		
08:30	38		16		69		22		107		38		
08:45	48	160	20	92	74	258	26	127	122	418	46	219	
09:00	49		14		64		25		113		39		
09:15	45		13		52		25		97		38		
09:30	46		13		52		33		98		46		
09:45	40	180	20	60	76	244	24	107	116	424	44	167	
10:00	34		14		59		21		93		35		
10:15	42		15		31		10		73		25		
10:30	30		6		42		12		72		18		
10:45	31	137	4	39	35	167	5	48	66	304	9	87	
11:00	32		5		33		10		65		15		
11:15	31		5		42		8		73		13		
11:30	27		5		52		20		79		25		
11:45	30	120	2	17	54	181	8	46	84	301	10	63	
Total	802		1578		1168		2028		1970		3606		
Percent	40.7%		43.8%		59.3%		56.2%						
Day Total		2380				3196				5576			
Peak	08:45		05:00		08:15		05:00		08:15		05:00		
Vol.	188		325		276		286		454		611		
P.H.F.	0.959		0.903		0.932		0.883		0.930		0.899		

1st Street bewteen
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81573C volume
Site Code: 10082.00

Start	NB				SB				Combined				07-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	8		44		7		42		15		86		
12:15	3		39		8		45		11		84		
12:30	1		26		4		57		5		83		
12:45	2	14	16	125	1	20	59	203	3	34	75	328	
01:00	0		22		1		58		1		80		
01:15	2		22		2		57		4		79		
01:30	3		41		4		50		7		91		
01:45	0	5	25	110	0	7	44	209	0	12	69	319	
02:00	1		28		1		32		2		60		
02:15	1		37		1		34		2		71		
02:30	1		30		1		46		2		76		
02:45	2	5	34	129	0	3	26	138	2	8	60	267	
03:00	1		34		0		40		1		74		
03:15	2		30		2		38		4		68		
03:30	3		61		2		45		5		106		
03:45	3	9	30	155	5	9	49	172	8	18	79	327	
04:00	0		36		2		55		2		91		
04:15	0		52		3		54		3		106		
04:30	0		51		4		56		4		107		
04:45	1	1	57	196	2	11	67	232	3	12	124	428	
05:00	2		63		4		80		6		143		
05:15	6		80		5		83		11		163		
05:30	6		103		4		83		10		186		
05:45	2	16	90	336	8	21	74	320	10	37	164	656	
06:00	7		65		13		62		20		127		
06:15	16		61		19		72		35		133		
06:30	18		55		27		72		45		127		
06:45	20	61	45	226	33	92	51	257	53	153	96	483	
07:00	19		50		48		48		67		98		
07:15	28		33		45		40		73		73		
07:30	25		39		43		45		68		84		
07:45	36	108	22	144	43	179	39	172	79	287	61	316	
08:00	31		28		63		37		94		65		
08:15	45		24		56		31		101		55		
08:30	42		30		74		41		116		71		
08:45	48	166	13	95	66	259	33	142	114	425	46	237	
09:00	49		22		60		36		109		58		
09:15	52		13		53		38		105		51		
09:30	42		9		54		27		96		36		
09:45	45	188	10	54	49	216	17	118	94	404	27	172	
10:00	22		10		58		20		80		30		
10:15	38		13		50		14		88		27		
10:30	28		16		48		11		76		27		
10:45	23	111	12	51	49	205	20	65	72	316	32	116	
11:00	27		16		49		6		76		22		
11:15	32		4		47		7		79		11		
11:30	29		2		47		7		76		9		
11:45	34	122	5	27	53	196	7	27	87	318	12	54	
Total	806		1648		1218		2055		2024		3703		
Percent	39.8%		44.5%		60.2%		55.5%						
Day Total		2454				3273				5727			
Peak	08:30		05:15		08:00		05:00		08:30		05:00		
Vol.	191		338		259		320		444		656		
P.H.F.	0.918		0.820		0.875		0.964		0.957		0.882		

PRECISION
D A T A
INDUSTRIES, LLC
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1st Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573C class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	11	1	0	0	0	0	0	0	0	0	0	0	12
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
03:00	0	5	2	1	1	0	0	0	0	0	0	0	0	9
04:00	0	2	1	3	0	0	0	0	0	0	0	0	0	6
05:00	0	6	2	4	2	1	0	0	1	0	0	0	0	16
06:00	0	35	10	6	1	0	0	0	1	0	0	0	0	53
07:00	1	74	14	4	6	1	0	0	2	0	0	0	0	102
08:00	3	130	19	2	2	2	0	2	0	0	0	0	0	160
09:00	6	139	28	1	3	3	0	0	0	0	0	0	0	180
10:00	1	103	17	4	6	3	0	2	1	0	0	0	0	137
11:00	3	90	17	5	1	1	0	2	1	0	0	0	0	120
12 PM	3	105	20	4	4	1	0	2	0	0	0	0	0	139
13:00	1	85	15	0	4	0	0	1	0	0	0	0	0	106
14:00	1	88	19	2	7	2	0	1	0	0	0	0	0	120
15:00	2	97	32	2	6	0	0	2	0	0	0	0	0	141
16:00	3	145	28	1	3	2	0	5	0	0	0	0	0	187
17:00	3	280	34	1	6	0	0	1	0	0	0	0	0	325
18:00	4	177	30	5	4	2	0	1	0	0	0	0	0	223
19:00	0	107	21	0	1	0	0	0	0	0	0	0	0	129
20:00	1	78	9	1	2	0	0	1	0	0	0	0	0	92
21:00	0	43	15	1	0	0	0	1	0	0	0	0	0	60
22:00	0	35	3	1	0	0	0	0	0	0	0	0	0	39
23:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
Total	32	1856	340	48	59	18	0	21	6	0	0	0	0	2380
Percent	1.3%	78.0%	14.3%	2.0%	2.5%	0.8%	0.0%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	09:00	06:00	07:00	09:00		08:00	07:00					09:00
Vol.	6	139	28	6	6	3		2	2					180
PM Peak	18:00	17:00	17:00	18:00	14:00	14:00		16:00						17:00
Vol.	4	280	34	5	7	2		5						325

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1st Street bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573C class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	14	0	0	0	0	0	0	0	0	0	0	0	14
01:00	0	4	0	0	1	0	0	0	0	0	0	0	0	5
02:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:00	0	6	1	1	1	0	0	0	0	0	0	0	0	9
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	8	1	6	0	0	0	0	1	0	0	0	0	16
06:00	3	37	10	4	4	1	0	0	2	0	0	0	0	61
07:00	0	80	18	5	3	1	0	1	0	0	0	0	0	108
08:00	4	139	16	1	5	1	0	0	0	0	0	0	0	166
09:00	2	136	33	6	8	2	1	0	0	0	0	0	0	188
10:00	0	83	15	7	4	0	0	2	0	0	0	0	0	111
11:00	3	91	10	6	8	3	0	1	0	0	0	0	0	122
12 PM	0	80	32	5	5	2	0	1	0	0	0	0	0	125
13:00	1	79	16	2	7	3	0	1	1	0	0	0	0	110
14:00	2	94	18	2	6	4	0	3	0	0	0	0	0	129
15:00	2	112	26	5	6	3	0	1	0	0	0	0	0	155
16:00	3	160	21	4	4	0	0	2	1	0	0	0	1	196
17:00	4	285	40	0	5	2	0	0	0	0	0	0	0	336
18:00	4	190	24	2	3	1	0	1	1	0	0	0	0	226
19:00	2	114	25	2	0	0	0	1	0	0	0	0	0	144
20:00	3	76	14	2	0	0	0	0	0	0	0	0	0	95
21:00	1	47	6	0	0	0	0	0	0	0	0	0	0	54
22:00	0	44	5	1	0	0	0	1	0	0	0	0	0	51
23:00	1	20	5	0	0	1	0	0	0	0	0	0	0	27
Total	35	1904	337	61	70	24	1	15	6	0	0	0	1	2454
Percent	1.4%	77.6%	13.7%	2.5%	2.9%	1.0%	0.0%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	10:00	09:00	11:00	09:00	10:00	06:00					09:00
Vol.	4	139	33	7	8	3	1	2	2					188
PM Peak	17:00	17:00	17:00	12:00	13:00	14:00		14:00	13:00				16:00	17:00
Vol.	4	285	40	5	7	4		3	1				1	336

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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	18	1	0	0	0	0	0	0	0	0	0	0	19
01:00	0	7	1	0	0	0	0	0	1	0	0	0	0	9
02:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
03:00	0	1	2	1	1	1	0	0	0	0	0	0	0	6
04:00	0	8	1	2	0	1	0	0	0	0	0	0	0	12
05:00	0	14	3	0	2	3	0	0	0	0	0	0	0	22
06:00	0	64	11	2	3	3	0	1	0	0	0	0	0	84
07:00	2	117	29	3	3	8	0	0	2	0	0	0	0	164
08:00	1	209	26	5	8	6	0	2	1	0	0	0	0	258
09:00	4	191	29	4	9	4	0	3	0	0	0	0	0	244
10:00	0	127	21	5	7	5	0	1	0	1	0	0	0	167
11:00	0	132	33	9	6	1	0	0	0	0	0	0	0	181
12 PM	1	157	26	1	9	0	0	1	0	0	0	0	0	195
13:00	1	149	20	2	3	2	0	0	0	0	0	0	0	177
14:00	2	150	27	2	7	0	0	0	0	0	0	0	0	188
15:00	0	167	19	0	8	2	0	0	0	0	0	0	0	196
16:00	0	201	19	1	3	1	0	0	0	0	0	0	0	225
17:00	2	263	15	2	2	1	0	1	0	0	0	0	0	286
18:00	2	234	19	1	0	0	0	1	0	0	0	0	0	257
19:00	1	161	11	0	3	0	0	0	0	0	0	0	0	176
20:00	0	116	10	0	1	0	0	0	0	0	0	0	0	127
21:00	2	100	4	1	0	0	0	0	0	0	0	0	0	107
22:00	1	42	4	0	1	0	0	0	0	0	0	0	0	48
23:00	0	42	4	0	0	0	0	0	0	0	0	0	0	46
Total	19	2670	336	41	77	38	0	10	4	1	0	0	0	3196
Percent	0.6%	83.5%	10.5%	1.3%	2.4%	1.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	11:00	11:00	09:00	07:00		09:00	07:00	10:00				08:00
Vol.	4	209	33	9	9	8		3	2	1				258
PM Peak	14:00	17:00	14:00	13:00	12:00	13:00		12:00						17:00
Vol.	2	263	27	2	9	2		1						286

PRECISION
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1st Street bewteen
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81573C class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	19	1	0	0	0	0	0	0	0	0	0	0	20
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	4	2	0	3	0	0	0	0	0	0	0	0	9
04:00	0	7	1	1	2	0	0	0	0	0	0	0	0	11
05:00	0	15	3	2	1	0	0	0	0	0	0	0	0	21
06:00	1	55	17	4	8	5	1	0	1	0	0	0	0	92
07:00	0	127	35	1	10	2	0	2	1	1	0	0	0	179
08:00	1	209	32	6	9	1	0	0	1	0	0	0	0	259
09:00	3	177	26	2	4	3	0	1	0	0	0	0	0	216
10:00	1	146	31	6	12	7	0	2	0	0	0	0	0	205
11:00	1	156	21	2	11	3	0	1	1	0	0	0	0	196
12 PM	0	162	31	3	5	2	0	0	0	0	0	0	0	203
13:00	1	169	30	2	4	3	0	0	0	0	0	0	0	209
14:00	0	116	12	1	9	0	0	0	0	0	0	0	0	138
15:00	1	137	20	5	8	1	0	0	0	0	0	0	0	172
16:00	2	207	19	1	2	1	0	0	0	0	0	0	0	232
17:00	2	303	12	2	0	1	0	0	0	0	0	0	0	320
18:00	0	245	11	0	1	0	0	0	0	0	0	0	0	257
19:00	0	160	8	0	0	2	0	2	0	0	0	0	0	172
20:00	0	133	8	0	1	0	0	0	0	0	0	0	0	142
21:00	0	109	9	0	0	0	0	0	0	0	0	0	0	118
22:00	0	61	3	0	1	0	0	0	0	0	0	0	0	65
23:00	1	22	3	1	0	0	0	0	0	0	0	0	0	27
Total	14	2749	335	39	91	31	1	8	4	1	0	0	0	3273
Percent	0.4%	84.0%	10.2%	1.2%	2.8%	0.9%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	07:00	08:00	10:00	10:00	06:00	07:00	06:00	07:00				08:00
Vol.	3	209	35	6	12	7	1	2	1	1				259
PM Peak	16:00	17:00	12:00	15:00	14:00	13:00		19:00						17:00
Vol.	2	303	31	5	9	3		2						320

PRECISION
D A T A
INDUSTRIES, LLC
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Email: datarequests@pdillc.com

Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB volume
Site Code: 10082.00

Start	NB Lane 1				NB Lane 2				NB Lane 3				Combined				06-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	8		33		35		94		30		110		73		237		
12:15	3		15		23		101		21		106		47		222		
12:30	6		9		11		108		19		104		36		221		
12:45	2	19	19	76	10	79	97	400	13	83	82	402	25	181	198	878	
01:00	3		17		11		98		14		80		28		195		
01:15	4		23		10		87		5		91		19		201		
01:30	3		24		6		83		10		91		19		198		
01:45	1	11	34	98	9	36	107	375	5	34	110	372	15	81	251	845	
02:00	1		44		7		124		4		136		12		304		
02:15	1		37		7		124		4		142		12		303		
02:30	1		45		9		127		6		157		16		329		
02:45	3	6	51	177	5	28	129	504	5	19	142	577	13	53	322	1258	
03:00	1		19		11		152		8		155		20		326		
03:15	1		16		6		158		6		147		13		321		
03:30	2		30		10		156		5		184		17		370		
03:45	1	5	36	101	4	31	150	616	2	21	195	681	7	57	381	1398	
04:00	1		69		5		153		5		178		11		400		
04:15	2		89		9		143		1		161		12		393		
04:30	5		59		8		147		14		178		27		384		
04:45	1	9	76	293	6	28	138	581	7	27	167	684	14	64	381	1558	
05:00	4		83		4		148		4		180		12		411		
05:15	2		134		15		20		14		109		31		263		
05:30	1		137		20		29		24		112		45		278		
05:45	2	9	128	482	23	62	42	239	24	66	115	516	49	137	285	1237	
06:00	8		61		17		128		31		145		56		334		
06:15	15		65		35		137		39		168		89		370		
06:30	14		43		37		109		58		125		109		277		
06:45	14	51	41	210	58	147	122	496	57	185	112	550	129	383	275	1256	
07:00	24		41		75		103		66		119		165		263		
07:15	34		41		58		97		67		140		159		278		
07:30	34		17		81		97		72		89		187		203		
07:45	48	140	29	128	85	299	84	381	77	282	95	443	210	721	208	952	
08:00	51		28		91		64		93		79		235		171		
08:15	46		26		108		73		125		92		279		191		
08:30	48		13		97		62		80		78		225		153		
08:45	53	198	10	77	104	400	73	272	115	413	63	312	272	1011	146	661	
09:00	60		22		95		72		83		82		238		176		
09:15	45		12		76		60		83		60		204		132		
09:30	41		25		86		61		77		83		204		169		
09:45	25	171	5	64	87	344	49	242	94	337	44	269	206	852	98	575	
10:00	6		12		75		52		87		77		168		141		
10:15	14		12		87		54		89		60		190		126		
10:30	7		12		87		47		91		42		185		101		
10:45	8	35	5	41	101	350	40	193	79	346	41	220	188	731	86	454	
11:00	24		8		73		37		80		41		177		86		
11:15	22		3		85		51		96		35		203		89		
11:30	10		14		87		33		97		48		194		95		
11:45	20	76	9	34	86	331	34	155	88	361	31	155	194	768	74	344	
Total	730		1781		2135		4454		2174		5181		5039		11416		
%age	14.5%		15.6%		42.4%		39.0%		43.1%		45.4%						
Day Total	2511				6589				7355				16455				
Peak	08:15		05:00		08:15		03:15		08:00		03:30		08:15		04:15		
Vol.	207		482		404		617		413		718		1014		1569		
P.H.F.	0.863		0.880		0.935		0.976		0.826		0.921		0.909		0.954		

Land Boulevard between
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81573D NB volume
Site Code: 10082.00

Start Time	NB Lane 1 A.M.		NB Lane 1 P.M.		NB Lane 2 A.M.		NB Lane 2 P.M.		NB Lane 3 A.M.		NB Lane 3 P.M.		Combined A.M.		Combined P.M.		07-May-08 Wed
12:00	7		22		39		112		41		121		87		255		
12:15	2		26		27		91		22		115		51		232		
12:30	4		23		16		79		9		109		29		211		
12:45	0	13	20	91	6	88	99	381	4	76	81	426	10	177	200	898	
01:00	0		17		13		128		8		108		21		253		
01:15	6		7		13		108		18		110		37		225		
01:30	1		10		9		119		12		119		22		248		
01:45	1	8	22	56	3	38	122	477	7	45	135	472	11	91	279	1005	
02:00	1		34		9		126		1		125		11		285		
02:15	0		51		7		103		11		128		18		282		
02:30	2		31		7		143		8		125		17		299		
02:45	4	7	57	173	7	30	124	496	6	26	134	512	17	63	315	1181	
03:00	4		39		5		127		5		157		14		323		
03:15	1		31		4		160		2		168		7		359		
03:30	0		44		6		127		5		171		11		342		
03:45	2	7	41	155	13	28	126	540	5	17	156	652	20	52	323	1347	
04:00	1		60		9		147		4		154		14		361		
04:15	2		91		6		79		9		131		17		301		
04:30	2		76		4		146		11		163		17		385		
04:45	1	6	109	336	5	24	83	455	7	31	146	594	13	61	338	1385	
05:00	0		64		8		58		9		113		17		235		
05:15	2		78		9		8		9		82		20		168		
05:30	2		126		18		9		18		88		38		223		
05:45	3	7	113	381	13	48	6	81	29	65	96	379	45	120	215	841	
06:00	9		113		29		32		37		121		75		266		
06:15	9		104		36		50		44		108		89		262		
06:30	17		54		46		122		55		124		118		300		
06:45	20	55	40	311	55	166	115	319	58	194	136	489	133	415	291	1119	
07:00	28		42		75		113		69		111		172		266		
07:15	39		38		71		94		86		115		196		247		
07:30	27		21		79		85		80		115		186		221		
07:45	6	100	22	123	112	337	86	378	74	309	113	454	192	746	221	955	
08:00	5		19		106		90		93		106		204		215		
08:15	10		22		121		82		105		87		236		191		
08:30	9		19		104		76		102		102		215		197		
08:45	7	31	13	73	134	465	65	313	112	412	64	359	253	908	142	745	
09:00	6		23		97		68		97		79		200		170		
09:15	6		16		98		69		94		86		198		171		
09:30	5		19		85		61		90		65		180		145		
09:45	5	22	17	75	93	373	63	261	73	354	52	282	171	749	132	618	
10:00	4		12		92		60		102		57		198		129		
10:15	3		14		78		66		99		66		180		146		
10:30	2		4		89		43		96		54		187		101		
10:45	10	19	11	41	90	349	41	210	84	381	51	228	184	749	103	479	
11:00	16		17		82		49		87		45		185		111		
11:15	16		8		115		43		91		33		222		84		
11:30	20		6		78		32		99		45		197		83		
11:45	30	82	7	38	83	358	32	156	88	365	36	159	201	805	75	353	
Total	357		1853		2304		4067		2275		5006		4936		10926		
%age	7.2%		17.0 %		46.7 %		37.2 %		46.1 %		45.8 %						
Day Total		2210				6371				7281				15862			
Peak	06:45		05:30		08:00		03:15		08:15		03:00		08:00		03:15		
Vol.	114		456		465		560		416		652		908		1385		
P.H.F.	0.731		0.905		0.868		0.875		0.929		0.953		0.897		0.959		

PRECISION
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Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	1	10	7	0	1	0	0	0	0	0	0	0	0	19
01:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
02:00	0	3	2	1	0	0	0	0	0	0	0	0	0	6
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	4	2	1	0	1	0	0	1	0	0	0	0	9
05:00	0	4	5	0	0	0	0	0	0	0	0	0	0	9
06:00	1	32	10	2	3	2	0	0	1	0	0	0	0	51
07:00	2	97	30	1	5	4	0	0	1	0	0	0	0	140
08:00	1	146	40	2	2	3	0	3	1	0	0	0	0	198
09:00	1	111	37	4	11	5	0	1	1	0	0	0	0	171
10:00	1	24	7	1	1	1	0	0	0	0	0	0	0	35
11:00	0	45	17	3	6	4	0	0	1	0	0	0	0	76
12 PM	2	38	20	3	8	3	0	0	2	0	0	0	0	76
13:00	0	51	23	10	6	5	1	0	1	1	0	0	0	98
14:00	1	103	40	3	19	3	1	1	5	1	0	0	0	177
15:00	3	75	16	0	5	2	0	0	0	0	0	0	0	101
16:00	2	233	42	2	11	1	0	2	0	0	0	0	0	293
17:00	2	392	80	0	4	0	0	4	0	0	0	0	0	482
18:00	3	164	35	0	8	0	0	0	0	0	0	0	0	210
19:00	2	92	29	0	5	0	0	0	0	0	0	0	0	128
20:00	0	57	17	0	2	1	0	0	0	0	0	0	0	77
21:00	2	46	14	1	1	0	0	0	0	0	0	0	0	64
22:00	0	24	15	0	2	0	0	0	0	0	0	0	0	41
23:00	0	24	9	0	0	1	0	0	0	0	0	0	0	34
Total	24	1788	499	34	101	36	2	11	14	2	0	0	0	2511
Percent	1.0%	71.2%	19.9%	1.4%	4.0%	1.4%	0.1%	0.4%	0.6%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	08:00	09:00	09:00	09:00		08:00	04:00					08:00
Vol.	2	146	40	4	11	5		3	1					198
PM Peak	15:00	17:00	17:00	13:00	14:00	13:00	13:00	17:00	14:00	13:00				17:00
Vol.	3	392	80	10	19	5	1	4	5	1				482

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Land Boulevard between
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City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	8	5	0	0	0	0	0	0	0	0	0	0	13
01:00	0	2	5	0	1	0	0	0	0	0	0	0	0	8
02:00	0	5	1	0	0	0	0	0	1	0	0	0	0	7
03:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
04:00	1	3	1	0	0	0	0	0	1	0	0	0	0	6
05:00	0	3	3	0	0	0	0	0	1	0	0	0	0	7
06:00	2	35	9	2	4	3	0	0	0	0	0	0	0	55
07:00	0	73	14	1	7	3	1	0	1	0	0	0	0	100
08:00	0	31	0	0	0	0	0	0	0	0	0	0	0	31
09:00	0	19	3	0	0	0	0	0	0	0	0	0	0	22
10:00	0	18	0	0	1	0	0	0	0	0	0	0	0	19
11:00	1	52	9	6	11	3	0	0	0	0	0	0	0	82
12 PM	0	59	18	1	6	4	0	0	3	0	0	0	0	91
13:00	0	47	7	0	2	0	0	0	0	0	0	0	0	56
14:00	1	105	34	4	24	2	0	1	1	1	0	0	0	173
15:00	3	110	32	1	5	2	0	0	2	0	0	0	0	155
16:00	3	248	74	3	3	1	0	3	1	0	0	0	0	336
17:00	6	311	54	0	10	0	0	0	0	0	0	0	0	381
18:00	5	246	56	1	3	0	0	0	0	0	0	0	0	311
19:00	0	84	29	3	6	0	0	1	0	0	0	0	0	123
20:00	0	49	24	0	0	0	0	0	0	0	0	0	0	73
21:00	1	52	21	1	0	0	0	0	0	0	0	0	0	75
22:00	0	33	7	0	0	0	0	0	1	0	0	0	0	41
23:00	0	24	12	2	0	0	0	0	0	0	0	0	0	38
Total	23	1623	419	25	83	18	1	5	12	1	0	0	0	2210
Percent	1.0%	73.4%	19.0%	1.1%	3.8%	0.8%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	11:00	11:00	06:00	07:00		02:00					07:00
Vol.	2	73	14	6	11	3	1		1					100
PM Peak	17:00	17:00	16:00	14:00	14:00	12:00		16:00	12:00	14:00				17:00
Vol.	6	311	74	4	24	4		3	3	1				381

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Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	53	25	0	1	0	0	0	0	0	0	0	0	79
01:00	0	25	8	1	1	0	0	0	1	0	0	0	0	36
02:00	0	15	8	0	0	2	0	0	3	0	0	0	0	28
03:00	0	14	12	0	2	0	0	3	0	0	0	0	0	31
04:00	0	11	10	2	3	1	0	0	1	0	0	0	0	28
05:00	0	31	21	1	6	0	0	1	1	1	0	0	0	62
06:00	1	102	32	0	8	2	0	0	2	0	0	0	0	147
07:00	0	211	66	4	10	1	0	2	3	2	0	0	0	299
08:00	0	286	84	4	13	4	0	5	3	1	0	0	0	400
09:00	0	223	89	4	17	5	0	1	5	0	0	0	0	344
10:00	1	204	86	12	28	9	0	2	6	2	0	0	0	350
11:00	0	203	86	5	21	9	0	5	2	0	0	0	0	331
12 PM	1	233	113	10	28	9	0	3	3	0	0	0	0	400
13:00	0	218	115	7	25	2	0	4	3	1	0	0	0	375
14:00	1	303	139	7	34	11	0	5	3	1	0	0	0	504
15:00	1	414	147	3	34	7	2	6	1	1	0	0	0	616
16:00	0	406	133	4	23	3	0	10	1	1	0	0	0	581
17:00	1	181	48	0	7	0	0	2	0	0	0	0	0	239
18:00	0	386	92	3	11	0	0	4	0	0	0	0	0	496
19:00	0	303	69	3	4	0	0	1	1	0	0	0	0	381
20:00	0	204	56	3	7	1	0	0	1	0	0	0	0	272
21:00	0	183	52	3	3	0	0	0	1	0	0	0	0	242
22:00	1	149	40	1	2	0	0	0	0	0	0	0	0	193
23:00	0	117	34	1	1	0	0	0	2	0	0	0	0	155
Total	7	4475	1565	78	289	66	2	54	43	10	0	0	0	6589
Percent	0.1%	67.9%	23.8%	1.2%	4.4%	1.0%	0.0%	0.8%	0.7%	0.2%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	09:00	10:00	10:00	10:00		08:00	10:00	07:00				08:00
Vol.	1	286	89	12	28	9		5	6	2				400
PM Peak	12:00	15:00	15:00	12:00	14:00	14:00	15:00	16:00	12:00	13:00				15:00
Vol.	1	414	147	10	34	11	2	10	3	1				616

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Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	66	21	0	1	0	0	0	0	0	0	0	0	88
01:00	0	24	13	0	1	0	0	0	0	0	0	0	0	38
02:00	0	14	9	0	1	1	0	0	5	0	0	0	0	30
03:00	0	10	7	0	7	0	0	2	1	1	0	0	0	28
04:00	0	8	9	1	1	1	0	0	4	0	0	0	0	24
05:00	0	24	18	1	5	0	0	0	0	0	0	0	0	48
06:00	0	97	52	0	13	1	0	0	2	1	0	0	0	166
07:00	1	242	65	4	14	3	0	0	6	1	0	0	1	337
08:00	0	356	84	3	8	6	1	3	3	1	0	0	0	465
09:00	0	242	93	4	18	8	1	2	3	2	0	0	0	373
10:00	0	216	84	7	27	7	2	2	4	0	0	0	0	349
11:00	2	217	92	9	22	8	3	2	3	0	0	0	0	358
12 PM	0	234	106	5	17	9	1	4	5	0	0	0	0	381
13:00	0	297	118	7	29	7	2	8	9	0	0	0	0	477
14:00	0	305	141	3	43	1	1	1	0	1	0	0	0	496
15:00	0	348	141	8	27	9	0	6	1	0	0	0	0	540
16:00	0	332	100	4	13	2	0	2	2	0	0	0	0	455
17:00	0	66	11	1	1	0	0	1	1	0	0	0	0	81
18:00	0	236	75	0	5	0	0	2	1	0	0	0	0	319
19:00	0	292	78	2	4	0	0	2	0	0	0	0	0	378
20:00	0	236	68	2	6	0	0	0	1	0	0	0	0	313
21:00	0	200	54	3	3	0	0	0	1	0	0	0	0	261
22:00	0	159	47	2	1	1	0	0	0	0	0	0	0	210
23:00	0	115	34	2	3	0	0	0	2	0	0	0	0	156
Total	3	4336	1520	68	270	64	11	37	54	7	0	0	1	6371
Percent	0.0%	68.1%	23.9%	1.1%	4.2%	1.0%	0.2%	0.6%	0.8%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	09:00	11:00	10:00	09:00	11:00	08:00	07:00	09:00			07:00	08:00
Vol.	2	356	93	9	27	8	3	3	6	2			1	465
PM Peak		15:00	14:00	15:00	14:00	12:00	13:00	13:00	13:00	14:00				15:00
Vol.		348	141	8	43	9	2	8	9	1				540

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	76	6	0	0	0	0	0	0	1	0	0	0	83
01:00	0	33	1	0	0	0	0	0	0	0	0	0	0	34
02:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
03:00	0	16	5	0	0	0	0	0	0	0	0	0	0	21
04:00	1	19	5	0	0	1	0	0	1	0	0	0	0	27
05:00	1	46	17	0	1	0	0	0	1	0	0	0	0	66
06:00	1	156	22	1	2	1	0	0	2	0	0	0	0	185
07:00	0	242	27	3	7	0	0	1	1	1	0	0	0	282
08:00	2	361	33	3	4	3	1	3	1	1	0	1	0	413
09:00	1	274	43	5	11	0	0	1	2	0	0	0	0	337
10:00	1	281	46	6	7	2	0	2	1	0	0	0	0	346
11:00	1	284	61	3	7	3	0	1	0	1	0	0	0	361
12 PM	1	327	48	3	11	6	0	3	2	1	0	0	0	402
13:00	2	293	63	2	8	1	0	2	1	0	0	0	0	372
14:00	1	442	92	3	25	4	0	9	0	1	0	0	0	577
15:00	2	565	85	2	8	2	0	14	2	1	0	0	0	681
16:00	1	586	78	2	4	2	0	6	1	3	1	0	0	684
17:00	1	469	34	2	0	1	0	4	1	2	2	0	0	516
18:00	3	499	40	2	2	0	0	4	0	0	0	0	0	550
19:00	3	395	41	2	1	0	0	1	0	0	0	0	0	443
20:00	3	282	20	3	4	0	0	0	0	0	0	0	0	312
21:00	2	241	24	0	0	0	0	1	1	0	0	0	0	269
22:00	6	195	16	2	0	0	0	1	0	0	0	0	0	220
23:00	1	140	13	0	1	0	0	0	0	0	0	0	0	155
Total	34	6240	821	44	103	26	1	53	17	12	3	1	0	7355
Percent	0.5%	84.8%	11.2%	0.6%	1.4%	0.4%	0.0%	0.7%	0.2%	0.2%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	10:00	09:00	08:00	08:00	08:00	06:00	00:00		08:00		08:00
Vol.	2	361	61	6	11	3	1	3	2	1		1		413
PM Peak	22:00	16:00	14:00	12:00	14:00	12:00		15:00	12:00	16:00	17:00			16:00
Vol.	6	586	92	3	25	6		14	2	3	2			684

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	71	5	0	0	0	0	0	0	0	0	0	0	76
01:00	0	41	4	0	0	0	0	0	0	0	0	0	0	45
02:00	0	25	1	0	0	0	0	0	0	0	0	0	0	26
03:00	0	13	3	0	0	0	0	1	0	0	0	0	0	17
04:00	1	22	6	0	1	0	0	0	1	0	0	0	0	31
05:00	0	44	19	0	1	1	0	0	0	0	0	0	0	65
06:00	2	158	30	0	2	1	0	0	1	0	0	0	0	194
07:00	0	257	32	0	13	4	0	2	1	0	0	0	0	309
08:00	2	366	25	3	8	3	0	3	2	0	0	0	0	412
09:00	1	294	43	5	4	4	0	2	1	0	0	0	0	354
10:00	1	295	58	9	10	1	1	3	3	0	0	0	0	381
11:00	2	292	56	1	9	2	0	3	0	0	0	0	0	365
12 PM	3	346	53	4	11	2	0	4	2	1	0	0	0	426
13:00	2	372	72	3	14	2	0	4	3	0	0	0	0	472
14:00	5	395	91	0	15	4	0	2	0	0	0	0	0	512
15:00	5	517	104	3	11	2	0	9	0	0	1	0	0	652
16:00	6	528	50	0	3	0	0	6	0	1	0	0	0	594
17:00	1	354	17	1	1	1	0	1	0	1	2	0	0	379
18:00	1	446	35	0	1	0	0	6	0	0	0	0	0	489
19:00	1	421	26	2	0	0	0	4	0	0	0	0	0	454
20:00	7	322	22	2	4	0	0	1	1	0	0	0	0	359
21:00	2	260	20	0	0	0	0	0	0	0	0	0	0	282
22:00	4	207	16	0	1	0	0	0	0	0	0	0	0	228
23:00	1	144	9	0	3	0	0	0	1	0	0	0	1	159
Total	47	6190	797	33	112	27	1	51	16	3	3	0	1	7281
Percent	0.6%	85.0%	10.9%	0.5%	1.5%	0.4%	0.0%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	10:00	10:00	07:00	07:00	10:00	08:00	10:00					08:00
Vol.	2	366	58	9	13	4	1	3	3					412
PM Peak	20:00	16:00	15:00	12:00	14:00	14:00		15:00	13:00	12:00	17:00		23:00	15:00
Vol.	7	528	104	4	15	4		9	3	1	2		1	652

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INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 1, NB Lane 2, NB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	1	139	38	0	2	0	0	0	0	1	0	0	0	181
01:00	0	66	11	1	2	0	0	0	1	0	0	0	0	81
02:00	0	36	11	1	0	2	0	0	3	0	0	0	0	53
03:00	0	35	17	0	2	0	0	3	0	0	0	0	0	57
04:00	1	34	17	3	3	3	0	0	3	0	0	0	0	64
05:00	1	81	43	1	7	0	0	1	2	1	0	0	0	137
06:00	3	290	64	3	13	5	0	0	5	0	0	0	0	383
07:00	2	550	123	8	22	5	0	3	5	3	0	0	0	721
08:00	3	793	157	9	19	10	1	11	5	2	0	1	0	1011
09:00	2	608	169	13	39	10	0	3	8	0	0	0	0	852
10:00	3	509	139	19	36	12	0	4	7	2	0	0	0	731
11:00	1	532	164	11	34	16	0	6	3	1	0	0	0	768
12 PM	4	598	181	16	47	18	0	6	7	1	0	0	0	878
13:00	2	562	201	19	39	8	1	6	5	2	0	0	0	845
14:00	3	848	271	13	78	18	1	15	8	3	0	0	0	1258
15:00	6	1054	248	5	47	11	2	20	3	2	0	0	0	1398
16:00	3	1225	253	8	38	6	0	18	2	4	1	0	0	1558
17:00	4	1042	162	2	11	1	0	10	1	2	2	0	0	1237
18:00	6	1049	167	5	21	0	0	8	0	0	0	0	0	1256
19:00	5	790	139	5	10	0	0	2	1	0	0	0	0	952
20:00	3	543	93	6	13	2	0	0	1	0	0	0	0	661
21:00	4	470	90	4	4	0	0	1	2	0	0	0	0	575
22:00	7	368	71	3	4	0	0	1	0	0	0	0	0	454
23:00	1	281	56	1	2	1	0	0	2	0	0	0	0	344
Total	65	12503	2885	156	493	128	5	118	74	24	3	1	0	16455
Percent	0.4%	76.0%	17.5%	0.9%	3.0%	0.8%	0.0%	0.7%	0.4%	0.1%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	09:00	10:00	09:00	11:00	08:00	08:00	09:00	07:00		08:00		08:00
Vol.	3	793	169	19	39	16	1	11	8	3		1		1011
PM Peak	22:00	16:00	14:00	13:00	14:00	12:00	15:00	15:00	14:00	16:00	17:00			16:00
Vol.	7	1225	271	19	78	18	2	20	8	4	2			1558

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D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D NB class
Site Code: 10082.00

NB Lane 1, NB Lane 2, NB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	145	31	0	1	0	0	0	0	0	0	0	0	177
01:00	0	67	22	0	2	0	0	0	0	0	0	0	0	91
02:00	0	44	11	0	1	1	0	0	6	0	0	0	0	63
03:00	0	29	11	0	7	0	0	3	1	1	0	0	0	52
04:00	2	33	16	1	2	1	0	0	6	0	0	0	0	61
05:00	0	71	40	1	6	1	0	0	1	0	0	0	0	120
06:00	4	290	91	2	19	5	0	0	3	1	0	0	0	415
07:00	1	572	111	5	34	10	1	2	8	1	0	0	1	746
08:00	2	753	109	6	16	9	1	6	5	1	0	0	0	908
09:00	1	555	139	9	22	12	1	4	4	2	0	0	0	749
10:00	1	529	142	16	38	8	3	5	7	0	0	0	0	749
11:00	5	561	157	16	42	13	3	5	3	0	0	0	0	805
12 PM	3	639	177	10	34	15	1	8	10	1	0	0	0	898
13:00	2	716	197	10	45	9	2	12	12	0	0	0	0	1005
14:00	6	805	266	7	82	7	1	4	1	2	0	0	0	1181
15:00	8	975	277	12	43	13	0	15	3	0	1	0	0	1347
16:00	9	1108	224	7	19	3	0	11	3	1	0	0	0	1385
17:00	7	731	82	2	12	1	0	2	1	1	2	0	0	841
18:00	6	928	166	1	9	0	0	8	1	0	0	0	0	1119
19:00	1	797	133	7	10	0	0	7	0	0	0	0	0	955
20:00	7	607	114	4	10	0	0	1	2	0	0	0	0	745
21:00	3	512	95	4	3	0	0	0	1	0	0	0	0	618
22:00	4	399	70	2	2	1	0	0	1	0	0	0	0	479
23:00	1	283	55	4	6	0	0	0	3	0	0	0	1	353
Total	73	12149	2736	126	465	109	13	93	82	11	3	0	2	15862
Percent	0.5%	76.6%	17.2%	0.8%	2.9%	0.7%	0.1%	0.6%	0.5%	0.1%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	11:00	10:00	11:00	11:00	10:00	08:00	07:00	09:00			07:00	08:00
Vol.	5	753	157	16	42	13	3	6	8	2			1	908
PM Peak	16:00	16:00	15:00	15:00	14:00	12:00	13:00	15:00	13:00	14:00	17:00		23:00	16:00
Vol.	9	1108	277	12	82	15	2	15	12	2	2		1	1385

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D SB volume
Site Code: 10082.00

Start	SB Lane 1				SB Lane 2				SB Lane 3				Combined				06-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	4		41		13		63		12		50		29		154		
12:15	0		30		9		46		6		42		15		118		
12:30	3		28		13		57		6		51		22		136		
12:45	1	8	42	141	12	47	61	227	7	31	64	207	20	86	167	575	
01:00	3		40		9		50		6		56		18		146		
01:15	3		29		6		54		3		63		12		146		
01:30	4		41		6		48		5		63		15		152		
01:45	1	11	38	148	3	24	58	210	4	18	61	243	8	53	157	601	
02:00	0		42		4		60		3		41		7		143		
02:15	0		46		2		59		0		63		2		168		
02:30	1		35		7		60		0		65		8		160		
02:45	0	1	25	148	5	18	71	250	1	4	62	231	6	23	158	629	
03:00	4		30		6		68		3		63		13		161		
03:15	2		34		6		71		3		70		11		175		
03:30	2		34		8		60		6		69		16		163		
03:45	0	8	33	131	6	26	68	267	2	14	58	260	8	48	159	658	
04:00	3		23		4		63		2		67		9		153		
04:15	4		17		7		68		3		65		14		150		
04:30	11		38		14		71		11		68		36		177		
04:45	14	32	28	106	27	52	69	271	13	29	63	263	54	113	160	640	
05:00	12		35		20		62		14		53		46		150		
05:15	26		52		48		84		38		69		112		205		
05:30	48		40		46		79		54		70		148		189		
05:45	64	150	58	185	55	169	76	301	71	177	68	260	190	496	202	746	
06:00	83		25		65		94		77		83		225		202		
06:15	73		25		75		65		102		79		250		169		
06:30	90		35		93		52		103		62		286		149		
06:45	80	326	20	105	93	326	65	276	110	392	61	285	283	1044	146	666	
07:00	71		21		93		60		108		45		272		126		
07:15	66		22		87		61		112		51		265		134		
07:30	81		19		77		63		118		59		276		141		
07:45	77	295	24	86	101	358	48	232	133	471	47	202	311	1124	119	520	
08:00	76		26		70		53		122		46		268		125		
08:15	108		25		83		71		130		41		321		137		
08:30	72		14		57		59		115		41		244		114		
08:45	77	333	22	87	78	288	48	231	127	494	28	156	282	1115	98	474	
09:00	63		18		67		49		110		41		240		108		
09:15	64		20		79		54		114		39		257		113		
09:30	88		16		64		44		96		35		248		95		
09:45	75	290	18	72	51	261	54	201	91	411	28	143	217	962	100	416	
10:00	54		9		69		33		94		26		217		68		
10:15	50		7		57		33		62		24		169		64		
10:30	61		13		64		35		68		32		193		80		
10:45	41	206	6	35	50	240	21	122	65	289	24	106	156	735	51	263	
11:00	48		8		63		24		62		21		173		53		
11:15	45		13		56		26		63		22		164		61		
11:30	51		5		70		19		62		27		183		51		
11:45	44	188	4	30	64	253	30	99	55	242	8	78	163	683	42	207	
Total	1848		1274		2062		2687		2572		2434		6482		6395		
%age	28.5%		19.9%		31.8%		42.0%		39.7%		38.1%						
Day Total	3122				4749				5006				12877				
Peak	07:30		05:00		06:30		05:15		07:30		05:30		07:30		05:15		
Vol.	342		185		366		333		503		300		1176		798		
P.H.F.	0.792		0.797		0.984		0.886		0.945		0.904		0.916		0.973		

Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
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PRECISION DATA INDUSTRIES, LLC
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Email: datarequests@pdillc.com

81573D SB volume
Site Code: 10082.00

Start	SB Lane 1				SB Lane 2				SB Lane 3				Combined			07-May-08
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		A.M.		P.M.	Wed
12:00	2		49		9		47		8		46		19		142	
12:15	5		37		15		57		7		63		27		157	
12:30	3		39		9		48		11		64		23		151	
12:45	2	12	54	179	11	44	51	203	4	30	65	238	17	86	170	620
01:00	2		27		13		53		5		66		20		146	
01:15	5		44		14		64		5		72		24		180	
01:30	3		30		10		51		2		55		15		136	
01:45	3	13	39	140	7	44	52	220	7	19	58	251	17	76	149	611
02:00	3		38		7		50		3		48		13		136	
02:15	1		44		5		63		1		67		7		174	
02:30	2		29		4		60		3		74		9		163	
02:45	1	7	41	152	7	23	73	246	1	8	71	260	9	38	185	658
03:00	4		26		5		67		1		68		10		161	
03:15	3		51		4		72		5		63		12		186	
03:30	5		33		8		54		1		54		14		141	
03:45	1	13	38	148	5	22	69	262	3	10	80	265	9	45	187	675
04:00	4		11		11		76		1		72		16		159	
04:15	5		25		7		73		7		53		19		151	
04:30	7		23		9		69		7		61		23		153	
04:45	8	24	31	90	13	40	72	290	9	24	58	244	30	88	161	624
05:00	14		35		21		91		18		68		53		194	
05:15	25		34		47		94		30		81		102		209	
05:30	46		38		46		86		43		68		135		192	
05:45	73	158	33	140	50	164	84	355	78	169	68	285	201	491	185	780
06:00	73		48		63		87		73		81		209		216	
06:15	81		42		80		80		96		68		257		190	
06:30	100		25		79		67		107		78		286		170	
06:45	97	351	30	145	79	301	83	317	108	384	82	309	284	1036	195	771
07:00	68		31		76		68		114		71		258		170	
07:15	70		17		70		55		122		56		262		128	
07:30	76		20		87		50		124		43		287		113	
07:45	88	302	27	95	100	333	38	211	135	495	43	213	323	1130	108	519
08:00	78		24		86		58		129		55		293		137	
08:15	84		20		85		56		117		48		286		124	
08:30	95		22		80		59		133		41		308		122	
08:45	106	363	18	84	69	320	59	232	111	490	42	186	286	1173	119	502
09:00	73		18		59		67		98		44		230		129	
09:15	70		18		74		57		91		36		235		111	
09:30	76		22		58		53		79		37		213		112	
09:45	65	284	18	76	65	256	50	227	87	355	31	148	217	895	99	451
10:00	60		10		70		36		75		15		205		61	
10:15	57		14		54		40		65		32		176		86	
10:30	55		10		64		45		77		21		196		76	
10:45	45	217	14	48	72	260	27	148	73	290	19	87	190	767	60	283
11:00	40		10		72		24		78		10		190		44	
11:15	39		7		61		27		66		18		166		52	
11:30	42		3		61		14		63		10		166		27	
11:45	48	169	2	22	47	241	21	86	54	261	10	48	149	671	33	156
Total	1913		1319		2048		2797		2535		2534		6496		6650	
%age	29.4 %		19.8 %		31.5 %		42.1 %		39.0 %		38.1 %					
Day Total		3232				4845				5069				13146		
Peak	08:00		12:00		07:30		05:00		07:45		06:00		07:45		05:15	
Vol.	363		179		358		355		514		309		1210		802	
P.H.F.	0.856		0.829		0.895		0.944		0.952		0.942		0.937		0.928	

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D SB class
Site Code: 10082.00

SB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	5	0	0	1	1	0	0	1	0	0	0	0	8
01:00	1	8	0	0	0	1	0	0	1	0	0	0	0	11
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	2	2	0	2	0	0	0	0	0	0	0	8
04:00	2	17	4	1	1	5	0	1	0	1	0	0	0	32
05:00	5	78	29	9	15	7	1	1	2	1	0	0	1	149
06:00	6	220	59	6	13	12	1	3	3	4	0	0	0	327
07:00	6	241	17	5	6	6	0	2	10	0	0	0	2	295
08:00	11	280	17	0	12	2	2	3	3	3	0	0	0	333
09:00	14	219	17	7	14	10	3	4	1	0	0	0	0	289
10:00	8	146	22	11	9	8	2	0	1	0	0	0	0	207
11:00	6	132	23	7	7	3	3	3	2	2	0	0	0	188
12 PM	4	97	17	10	3	3	3	0	4	0	0	0	0	141
13:00	4	103	16	6	10	4	0	1	3	0	0	0	1	148
14:00	2	113	13	8	8	2	2	0	0	0	0	0	0	148
15:00	2	101	10	5	2	5	1	4	1	0	0	0	0	131
16:00	1	83	7	6	5	2	1	1	0	0	0	0	0	106
17:00	3	166	9	2	4	0	0	0	1	0	0	0	0	185
18:00	2	88	9	3	1	0	0	1	1	0	0	0	0	105
19:00	0	80	3	1	2	0	0	0	0	0	0	0	0	86
20:00	0	79	5	2	0	1	0	0	0	0	0	0	0	87
21:00	1	66	3	0	1	0	0	0	1	0	0	0	0	72
22:00	0	32	1	0	0	0	0	0	2	0	0	0	0	35
23:00	0	28	2	0	0	0	0	0	0	0	0	0	0	30
Total	78	2385	285	91	114	74	19	24	37	11	0	0	4	3122
Percent	2.5%	76.4%	9.1%	2.9%	3.7%	2.4%	0.6%	0.8%	1.2%	0.4%	0.0%	0.0%	0.1%	
AM Peak	09:00	08:00	06:00	10:00	05:00	06:00	09:00	09:00	07:00	06:00			07:00	08:00
Vol.	14	280	59	11	15	12	3	4	10	4			2	333
PM Peak	12:00	17:00	12:00	12:00	13:00	15:00	12:00	15:00	12:00				13:00	17:00
Vol.	4	166	17	10	10	5	3	4	4				1	185

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (SB) bewteen
Binney Street and Rogers Street
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Client: VHB/M. Miller

81573D SB class
Site Code: 10082.00

SB Lane 1

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	9	1	0	0	1	0	0	0	1	0	0	0	12
01:00	0	9	0	0	1	1	0	0	1	1	0	0	0	13
02:00	0	4	1	0	0	2	0	0	0	0	0	0	0	7
03:00	0	4	2	2	0	4	0	0	1	0	0	0	0	13
04:00	1	14	2	0	1	4	0	0	2	0	0	0	0	24
05:00	3	92	29	9	10	6	0	2	7	0	0	0	0	158
06:00	15	230	63	7	18	9	3	3	2	1	0	0	0	351
07:00	2	249	24	2	11	2	2	1	8	1	0	0	0	302
08:00	12	315	19	1	5	4	2	1	3	0	0	0	1	363
09:00	11	228	19	4	6	5	2	3	3	2	0	0	1	284
10:00	6	163	21	7	4	4	7	2	3	0	0	0	0	217
11:00	5	108	20	5	12	7	4	5	3	0	0	0	0	169
12 PM	3	138	18	6	8	3	2	0	1	0	0	0	0	179
13:00	4	101	15	4	5	3	3	2	2	1	0	0	0	140
14:00	4	112	14	7	12	3	0	0	0	0	0	0	0	152
15:00	7	117	8	5	7	1	1	2	0	0	0	0	0	148
16:00	2	75	5	3	4	0	0	1	0	0	0	0	0	90
17:00	3	125	7	4	1	0	0	0	0	0	0	0	0	140
18:00	2	127	9	3	1	1	0	1	0	1	0	0	0	145
19:00	0	85	5	2	2	0	0	0	0	1	0	0	0	95
20:00	1	74	2	2	2	1	0	0	2	0	0	0	0	84
21:00	1	69	4	0	0	1	0	1	0	0	0	0	0	76
22:00	1	43	3	0	0	0	0	1	0	0	0	0	0	48
23:00	0	21	0	1	0	0	0	0	0	0	0	0	0	22
Total	83	2512	291	74	110	62	26	25	38	9	0	0	2	3232
Percent	2.6%	77.7%	9.0%	2.3%	3.4%	1.9%	0.8%	0.8%	1.2%	0.3%	0.0%	0.0%	0.1%	
AM Peak	06:00	08:00	06:00	05:00	06:00	06:00	10:00	11:00	07:00	09:00			08:00	08:00
Vol.	15	315	63	9	18	9	7	5	8	2			1	363
PM Peak	15:00	12:00	12:00	14:00	14:00	12:00	13:00	13:00	13:00	13:00				12:00
Vol.	7	138	18	7	12	3	3	2	2	1				179

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Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D SB class
Site Code: 10082.00

SB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	42	4	0	0	1	0	0	0	0	0	0	0	47
01:00	0	22	1	0	1	0	0	0	0	0	0	0	0	24
02:00	1	13	3	0	0	1	0	0	0	0	0	0	0	18
03:00	0	24	1	0	0	1	0	0	0	0	0	0	0	26
04:00	1	39	7	0	2	2	0	0	0	1	0	0	0	52
05:00	0	124	32	1	8	0	0	0	3	1	0	0	0	169
06:00	0	257	61	0	7	0	0	0	1	0	0	0	0	326
07:00	0	297	52	1	5	1	0	2	0	0	0	0	0	358
08:00	0	259	22	2	5	0	0	0	0	0	0	0	0	288
09:00	0	234	21	0	3	2	0	0	0	0	1	0	0	261
10:00	1	203	27	1	7	1	0	0	0	0	0	0	0	240
11:00	0	217	29	0	5	0	0	1	0	0	0	0	0	252
12 PM	1	200	24	1	2	0	0	0	0	0	0	0	0	228
13:00	1	182	18	0	5	0	0	1	3	0	0	0	0	210
14:00	0	226	21	1	1	0	0	0	0	0	0	0	0	249
15:00	0	231	33	1	3	0	0	0	0	0	0	0	0	268
16:00	0	245	23	0	3	0	0	0	0	0	0	0	0	271
17:00	0	286	15	0	0	0	0	0	0	0	0	0	0	301
18:00	0	265	7	0	3	0	0	0	0	1	0	0	0	276
19:00	0	211	18	0	2	0	0	1	0	0	0	0	0	232
20:00	0	213	17	0	1	0	0	0	0	0	0	0	0	231
21:00	0	188	10	0	2	0	0	0	0	0	0	0	0	200
22:00	0	117	5	0	1	0	0	0	0	0	0	0	0	123
23:00	0	96	3	0	0	0	0	0	0	0	0	0	0	99
Total	5	4191	454	8	66	9	0	5	7	3	1	0	0	4749
Percent	0.1%	88.3%	9.6%	0.2%	1.4%	0.2%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	02:00	07:00	06:00	08:00	05:00	04:00		07:00	05:00	04:00	09:00			07:00
Vol.	1	297	61	2	8	2		2	3	1	1			358
PM Peak	12:00	17:00	15:00	12:00	13:00			13:00	13:00	18:00				17:00
Vol.	1	286	33	1	5			1	3	1				301

PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
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Binney Street and Rogers Street
City, State: Cambridge, MA
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81573D SB class
Site Code: 10082.00

SB Lane 2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	37	6	0	1	0	0	0	0	0	0	0	0	44
01:00	0	34	3	0	6	0	0	0	0	1	0	0	0	44
02:00	0	17	5	0	0	1	0	0	0	0	0	0	0	23
03:00	0	16	5	0	0	0	0	0	1	0	0	0	0	22
04:00	0	33	3	0	2	2	0	0	0	0	0	0	0	40
05:00	0	122	36	1	4	0	0	0	1	0	0	0	0	164
06:00	0	226	63	1	8	0	0	3	0	0	0	0	0	301
07:00	0	282	42	0	5	0	0	3	0	0	0	0	0	332
08:00	0	291	22	2	4	0	0	2	0	0	0	0	0	321
09:00	1	222	27	1	3	1	0	1	0	0	0	0	0	256
10:00	0	229	24	1	6	0	0	0	0	0	0	0	0	260
11:00	0	197	33	0	9	0	0	2	0	0	0	0	0	241
12 PM	0	174	22	4	3	0	0	0	0	0	0	0	0	203
13:00	0	191	24	0	2	0	0	3	0	0	0	0	0	220
14:00	0	218	24	0	2	2	0	0	0	0	0	0	0	246
15:00	1	234	24	0	2	1	0	0	0	0	0	0	0	262
16:00	0	264	20	0	4	0	0	1	0	0	1	0	0	290
17:00	0	328	23	1	1	0	0	1	0	0	1	0	0	355
18:00	0	293	21	0	2	0	0	1	0	0	0	0	0	317
19:00	0	194	17	0	0	0	0	0	0	0	0	0	0	211
20:00	0	210	17	0	2	0	0	3	0	0	0	0	0	232
21:00	2	212	13	0	0	0	0	0	0	0	0	0	0	227
22:00	0	135	13	0	0	0	0	0	0	0	0	0	0	148
23:00	0	80	3	0	2	0	0	0	0	1	0	0	0	86
Total	4	4239	490	11	68	7	0	20	2	2	2	0	0	4845
Percent	0.1%	87.5%	10.1%	0.2%	1.4%	0.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	06:00	08:00	11:00	04:00		06:00	03:00	01:00				07:00
Vol.	1	291	63	2	9	2		3	1	1				332
PM Peak	21:00	17:00	13:00	12:00	16:00	14:00		13:00		23:00	16:00			17:00
Vol.	2	328	24	4	4	2		3		1	1			355

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
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81573D SB class
Site Code: 10082.00

SB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	28	3	0	0	0	0	0	0	0	0	0	0	31
01:00	0	17	1	0	0	0	0	0	0	0	0	0	0	18
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
04:00	0	27	1	0	1	0	0	0	0	0	0	0	0	29
05:00	3	139	35	0	0	0	0	0	0	0	0	0	0	177
06:00	7	307	68	0	7	0	0	3	0	0	0	0	0	392
07:00	6	422	41	0	0	0	0	2	0	0	0	0	0	471
08:00	1	449	35	0	4	1	0	3	0	0	0	0	1	494
09:00	2	363	39	0	5	0	0	2	0	0	0	0	0	411
10:00	3	248	35	0	3	0	0	0	0	0	0	0	0	289
11:00	3	203	34	0	2	0	0	0	0	0	0	0	0	242
12 PM	3	176	25	0	2	0	0	1	0	0	0	0	0	207
13:00	2	218	20	0	1	0	0	2	0	0	0	0	0	243
14:00	2	195	29	1	3	1	0	0	0	0	0	0	0	231
15:00	1	239	20	0	0	0	0	0	0	0	0	0	0	260
16:00	0	249	9	0	2	1	0	2	0	0	0	0	0	263
17:00	0	251	7	1	0	0	0	1	0	0	0	0	0	260
18:00	0	267	15	0	1	0	0	1	0	0	0	0	1	285
19:00	3	191	6	0	1	0	0	1	0	0	0	0	0	202
20:00	2	147	6	0	0	0	0	1	0	0	0	0	0	156
21:00	1	136	6	0	0	0	0	0	0	0	0	0	0	143
22:00	0	100	5	0	1	0	0	0	0	0	0	0	0	106
23:00	1	73	3	0	1	0	0	0	0	0	0	0	0	78
Total	40	4461	445	2	34	3	0	19	0	0	0	0	2	5006
Percent	0.8%	89.1%	8.9%	0.0%	0.7%	0.1%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00		06:00	08:00		06:00					08:00	08:00
Vol.	7	449	68		7	1		3					1	494
PM Peak	12:00	18:00	14:00	14:00	14:00	14:00		13:00					18:00	18:00
Vol.	3	267	29	1	3	1		2					1	285

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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81573D SB class
Site Code: 10082.00

SB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	29	1	0	0	0	0	0	0	0	0	0	0	30
01:00	0	16	3	0	0	0	0	0	0	0	0	0	0	19
02:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10
04:00	0	20	4	0	0	0	0	0	0	0	0	0	0	24
05:00	4	133	28	0	4	0	0	0	0	0	0	0	0	169
06:00	6	299	69	0	8	0	0	2	0	0	0	0	0	384
07:00	1	431	52	0	7	0	0	4	0	0	0	0	0	495
08:00	1	447	33	1	2	0	0	6	0	0	0	0	0	490
09:00	3	311	34	0	2	0	0	4	0	0	0	0	1	355
10:00	5	252	26	1	3	0	0	3	0	0	0	0	0	290
11:00	1	224	32	0	3	0	0	1	0	0	0	0	0	261
12 PM	2	203	28	2	3	0	0	0	0	0	0	0	0	238
13:00	2	211	34	0	4	0	0	0	0	0	0	0	0	251
14:00	2	225	29	0	3	0	0	1	0	0	0	0	0	260
15:00	2	239	24	0	0	0	0	0	0	0	0	0	0	265
16:00	0	227	14	0	2	0	0	1	0	0	0	0	0	244
17:00	0	270	14	0	1	0	0	0	0	0	0	0	0	285
18:00	1	289	17	0	1	0	0	1	0	0	0	0	0	309
19:00	0	206	7	0	0	0	0	0	0	0	0	0	0	213
20:00	1	181	4	0	0	0	0	0	0	0	0	0	0	186
21:00	2	140	6	0	0	0	0	0	0	0	0	0	0	148
22:00	0	83	3	0	1	0	0	0	0	0	0	0	0	87
23:00	0	45	3	0	0	0	0	0	0	0	0	0	0	48
Total	33	4497	467	4	44	0	0	23	0	0	0	0	1	5069
Percent	0.7%	88.7%	9.2%	0.1%	0.9%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	08:00	06:00			08:00					09:00	07:00
Vol.	6	447	69	1	8			6					1	495
PM Peak	12:00	18:00	13:00	12:00	13:00			14:00						18:00
Vol.	2	289	34	2	4			1						309

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D SB class
Site Code: 10082.00

SB Lane 1, SB Lane 2, SB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0														
8	0	75	7	0	1	2	0	0	1	0	0	0	0	86
01:00	1	47	2	0	1	1	0	0	1	0	0	0	0	53
02:00	1	18	3	0	0	1	0	0	0	0	0	0	0	23
03:00	0	38	5	2	0	3	0	0	0	0	0	0	0	48
04:00	3	83	12	1	4	7	0	1	0	2	0	0	0	113
05:00	8	341	96	10	23	7	1	1	5	2	0	0	1	495
06:00	13	784	188	6	27	12	1	6	4	4	0	0	0	1045
07:00	12	960	110	6	11	7	0	6	10	0	0	0	2	1124
08:00	12	988	74	2	21	3	2	6	3	3	0	0	1	1115
09:00	16	816	77	7	22	12	3	6	1	0	1	0	0	961
10:00	12	597	84	12	19	9	2	0	1	0	0	0	0	736
11:00	9	552	86	7	14	3	3	4	2	2	0	0	0	682
12 PM	8	473	66	11	7	3	3	1	4	0	0	0	0	576
13:00	7	503	54	6	16	4	0	4	6	0	0	0	1	601
14:00	4	534	63	10	12	3	2	0	0	0	0	0	0	628
15:00	3	571	63	6	5	5	1	4	1	0	0	0	0	659
16:00	1	577	39	6	10	3	1	3	0	0	0	0	0	640
17:00	3	703	31	3	4	0	0	1	1	0	0	0	0	746
18:00	2	620	31	3	5	0	0	2	1	1	0	0	1	666
19:00	3	482	27	1	5	0	0	2	0	0	0	0	0	520
20:00	2	439	28	2	1	1	0	1	0	0	0	0	0	474
21:00	2	390	19	0	3	0	0	0	1	0	0	0	0	415
22:00	0	249	11	0	2	0	0	0	2	0	0	0	0	264
23:00	1	197	8	0	1	0	0	0	0	0	0	0	0	207
Total	123	11037	1184	101	214	86	19	48	44	14	1	0	6	12877
Percent	1.0%	85.7%	9.2%	0.8%	1.7%	0.7%	0.1%	0.4%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	06:00	10:00	06:00	06:00	09:00	06:00	07:00	06:00	09:00		07:00	07:00
Vol.	16	988	188	12	27	12	3	6	10	4	1		2	1124
PM Peak	12:00	17:00	12:00	12:00	13:00	15:00	12:00	13:00	13:00	18:00			13:00	17:00
Vol.	8	703	66	11	16	5	3	4	6	1			1	746

PRECISION
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Land Boulevard (SB) bewteen
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

81573D SB class
Site Code: 10082.00

SB Lane 1, SB Lane 2, SB Lane 3

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/0														
8	0	75	8	0	1	1	0	0	0	1	0	0	0	86
01:00	0	59	6	0	7	1	0	0	1	2	0	0	0	76
02:00	0	29	6	0	0	3	0	0	0	0	0	0	0	38
03:00	0	28	9	2	0	4	0	0	2	0	0	0	0	45
04:00	1	67	9	0	3	6	0	0	2	0	0	0	0	88
05:00	7	347	93	10	18	6	0	2	8	0	0	0	0	491
06:00	21	755	195	8	34	9	3	8	2	1	0	0	0	1036
07:00	3	962	118	2	23	2	2	8	8	1	0	0	0	1129
08:00	13	1053	74	4	11	4	2	9	3	0	0	0	1	1174
09:00	15	761	80	5	11	6	2	8	3	2	0	0	2	895
10:00	11	644	71	9	13	4	7	5	3	0	0	0	0	767
11:00	6	529	85	5	24	7	4	8	3	0	0	0	0	671
12 PM	5	515	68	12	14	3	2	0	1	0	0	0	0	620
13:00	6	503	73	4	11	3	3	5	2	1	0	0	0	611
14:00	6	555	67	7	17	5	0	1	0	0	0	0	0	658
15:00	10	590	56	5	9	2	1	2	0	0	0	0	0	675
16:00	2	566	39	3	10	0	0	3	0	0	1	0	0	624
17:00	3	723	44	5	3	0	0	1	0	0	1	0	0	780
18:00	3	709	47	3	4	1	0	3	0	1	0	0	0	771
19:00	0	485	29	2	2	0	0	0	0	1	0	0	0	519
20:00	2	465	23	2	4	1	0	3	2	0	0	0	0	502
21:00	5	421	23	0	0	1	0	1	0	0	0	0	0	451
22:00	1	261	19	0	1	0	0	1	0	0	0	0	0	283
23:00	0	146	6	1	2	0	0	0	0	1	0	0	0	156
Total	120	11248	1248	89	222	69	26	68	40	11	2	0	3	13146
Percent	0.9%	85.6%	9.5%	0.7%	1.7%	0.5%	0.2%	0.5%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	05:00	06:00	06:00	10:00	08:00	05:00	01:00			09:00	08:00
Vol.	21	1053	195	10	34	9	7	9	8	2			2	1174
PM Peak	15:00	17:00	13:00	12:00	14:00	14:00	13:00	13:00	13:00	13:00	16:00			17:00
Vol.	10	723	73	12	17	5	3	5	2	1	1			780

May 2009 Binney Street Project ATRs

Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 A (EB) volume
Site Code: 10082.00

Start	EB Right Lane				EB Left Lane				Combined				04-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Mon
12:00	15		24		7		64		22		88		
12:15	5		14		8		80		13		94		
12:30	8		23		13		74		21		97		
12:45	5	33	23	84	8	36	59	277	13	69	82	361	
01:00	3		30		3		46		6		76		
01:15	6		37		5		56		11		93		
01:30	3		42		5		48		8		90		
01:45	0	12	47	156	6	19	54	204	6	31	101	360	
02:00	3		48		1		64		4		112		
02:15	6		36		6		62		12		98		
02:30	0		54		2		64		2		118		
02:45	2	11	48	186	7	16	69	259	9	27	117	445	
03:00	2		72		6		74		8		146		
03:15	2		54		4		71		6		125		
03:30	0		63		3		79		3		142		
03:45	3	7	66	255	3	16	64	288	6	23	130	543	
04:00	2		78		5		86		7		164		
04:15	2		66		5		82		7		148		
04:30	8		78		2		105		10		183		
04:45	4	16	64	286	4	16	102	375	8	32	166	661	
05:00	1		76		5		97		6		173		
05:15	6		85		6		135		12		220		
05:30	12		76		4		124		16		200		
05:45	18	37	77	314	9	24	96	452	27	61	173	766	
06:00	16		60		10		107		26		167		
06:15	24		47		12		79		36		126		
06:30	28		59		20		76		48		135		
06:45	38	106	48	214	27	69	78	340	65	175	126	554	
07:00	30		45		23		57		53		102		
07:15	15		36		53		62		68		98		
07:30	26		36		45		56		71		92		
07:45	22	93	29	146	47	168	43	218	69	261	72	364	
08:00	22		20		61		25		83		45		
08:15	28		24		65		29		93		53		
08:30	27		18		63		23		90		41		
08:45	21	98	19	81	77	266	21	98	98	364	40	179	
09:00	18		14		69		30		87		44		
09:15	34		25		66		27		100		52		
09:30	24		9		70		26		94		35		
09:45	16	92	16	64	58	263	23	106	74	355	39	170	
10:00	8		11		68		21		76		32		
10:15	12		19		70		17		82		36		
10:30	15		10		67		11		82		21		
10:45	9	44	9	49	68	273	12	61	77	317	21	110	
11:00	22		11		66		15		88		26		
11:15	19		10		59		13		78		23		
11:30	30		9		64		15		94		24		
11:45	25	96	11	41	74	263	9	52	99	359	20	93	
Total	645		1876		1429		2730		2074		4606		
Percent	31.1%		40.7%		68.9%		59.3%						
Day Total	2521				4159				6680				
Peak	06:15		05:00		08:45		05:15		08:45		05:00		
Vol.	120		314		282		462		379		766		
P.H.F.	0.789		0.924		0.916		0.856		0.948		0.870		

Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

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Office: 508.481.3999 Fax: 508.545.1234
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91863 A (EB) volume
Site Code: 10082.00

Start	EB Right Lane				EB Left Lane				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	12		10		7		78		19		88		
12:15	3		11		2		67		5		78		
12:30	4		8		11		91		15		99		
12:45	0	19	9	38	6	26	79	315	6	45	88	353	
01:00	3		15		5		75		8		90		
01:15	4		12		5		76		9		88		
01:30	1		19		3		76		4		95		
01:45	3	11	15	61	1	14	74	301	4	25	89	362	
02:00	2		13		2		90		4		103		
02:15	0		36		6		80		6		116		
02:30	2		54		1		60		3		114		
02:45	3	7	46	149	4	13	82	312	7	20	128	461	
03:00	1		63		2		85		3		148		
03:15	0		54		2		72		2		126		
03:30	2		65		4		77		6		142		
03:45	0	3	51	233	2	10	81	315	2	13	132	548	
04:00	0		64		1		92		1		156		
04:15	3		63		4		83		7		146		
04:30	7		82		2		99		9		181		
04:45	6	16	69	278	3	10	88	362	9	26	157	640	
05:00	9		66		2		119		11		185		
05:15	8		81		6		131		14		212		
05:30	7		66		4		98		11		164		
05:45	12	36	72	285	7	19	118	466	19	55	190	751	
06:00	30		74		5		112		35		186		
06:15	30		64		9		114		39		178		
06:30	30		59		10		77		40		136		
06:45	25	115	46	243	20	44	68	371	45	159	114	614	
07:00	22		47		38		58		60		105		
07:15	23		37		37		66		60		103		
07:30	14		37		37		39		51		76		
07:45	26	85	34	155	60	172	38	201	86	257	72	356	
08:00	10		30		71		51		81		81		
08:15	18		18		58		36		76		54		
08:30	15		21		74		24		89		45		
08:45	31	74	17	86	75	278	32	143	106	352	49	229	
09:00	23		17		52		25		75		42		
09:15	26		18		59		25		85		43		
09:30	20		24		59		27		79		51		
09:45	7	76	22	81	67	237	25	102	74	313	47	183	
10:00	6		13		71		31		77		44		
10:15	6		11		62		18		68		29		
10:30	1		13		63		16		64		29		
10:45	14	27	12	49	60	256	27	92	74	283	39	141	
11:00	13		11		70		13		83		24		
11:15	13		11		62		17		75		28		
11:30	11		8		78		14		89		22		
11:45	11	48	10	40	74	284	10	54	85	332	20	94	
Total	517		1698		1363		3034		1880		4732		
Percent	27.5%		35.9%		72.5%		64.1%						
Day Total	2215				4397				6612				
Peak	06:00		04:30		11:00		05:00		08:30		05:15		
Vol.	115		298		284		466		355		752		
P.H.F.	0.958		0.909		0.910		0.889		0.837		0.887		

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Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/0 9	1	0	0	9	12	9	**2**	0	0	0	0	0	0	33	37	31
01:00	0	1	0	2	5	1	1	**2**	0	0	0	0	0	12	44	34
02:00	0	0	1	1	5	4	0	0	0	0	0	0	0	11	36	33
03:00	0	0	0	4	0	2	1	0	0	0	0	0	0	7	36	31
04:00	0	4	1	2	7	1	1	0	0	0	0	0	0	16	34	28
05:00	1	4	12	6	10	4	0	0	0	0	0	0	0	37	33	26
06:00	0	14	30	23	**22**	**15**	2	0	0	0	0	0	0	**106**	35	27
07:00	0	14	30	32	15	2	0	0	0	0	0	0	0	93	30	25
08:00	**3**	**18**	36	32	8	1	0	0	0	0	0	0	0	98	28	23
09:00	1	15	**38**	**35**	3	0	0	0	0	0	0	0	0	92	28	23
10:00	1	5	19	18	1	0	0	0	0	0	0	0	0	44	27	23
11:00	**2**	**10**	**36**	34	11	3	0	0	0	0	0	0	0	96	29	25
12 PM	1	5	34	29	13	2	0	0	0	0	0	0	0	84	30	25
13:00	1	6	25	**50**	54	19	1	0	0	0	0	0	0	156	34	29
14:00	0	2	13	44	**91**	**33**	**2**	**1**	0	0	0	0	0	**186**	36	31
15:00	0	7	24	70	113	35	**6**	0	0	0	0	0	0	255	35	30
16:00	0	9	19	74	**132**	**46**	5	**1**	0	0	0	0	0	286	35	31
17:00	**3**	**31**	**61**	**94**	99	23	3	0	0	0	0	0	0	**314**	33	27
18:00	1	10	31	52	85	33	1	1	0	0	0	0	0	214	35	29
19:00	0	9	14	51	56	15	1	0	0	0	0	0	0	146	34	29
20:00	0	2	6	25	37	9	1	1	0	0	0	0	0	81	34	30
21:00	1	1	2	20	33	5	2	0	0	0	0	0	0	64	34	30
22:00	0	2	3	9	24	9	2	0	0	0	0	0	0	49	36	31
23:00	0	0	0	9	18	11	3	0	0	0	0	0	0	41	38	33
Total	16	169	435	725	854	282	34	6	0	0	0	0	0	2521		
%	0.6%	6.7%	17.3%	28.8%	33.9%	11.2%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	09:00	09:00	06:00	06:00	00:00	01:00						06:00		
Vol.	3	18	38	35	22	15	2	2						106		
Midday Peak	11:00	11:00	11:00	13:00	14:00	14:00	14:00	14:00						14:00		
Vol.	2	10	36	50	91	33	2	1						186		
PM Peak	17:00	17:00	17:00	17:00	16:00	16:00	15:00	16:00						17:00		
Vol.	3	31	61	94	132	46	6	1						314		

% iles

15th Percentile : 22 MPH
50th Percentile : 29 MPH
85th Percentile : 34 MPH
95th Percentile : 38 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 1579
Percent in Pace : 62.6%
Number of Vehicles > 30 MPH : 1005
Percent of Vehicles > 30 MPH : 39.9%
Mean Speed(Average) : 28 MPH

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	0	2	**11**	**4**	**1**	**1**	0	0	0	0	0	19	37	34
01:00	0	0	0	1	8	2	0	0	0	0	0	0	0	11	34	32
02:00	0	2	0	3	2	0	0	0	0	0	0	0	0	7	30	24
03:00	0	0	1	2	0	0	0	0	0	0	0	0	0	3	26	25
04:00	0	2	3	7	2	2	0	0	0	0	0	0	0	16	34	27
05:00	2	7	9	13	5	0	0	0	0	0	0	0	0	36	29	24
06:00	**6**	**24**	38	**33**	10	3	1	0	0	0	0	0	0	**115**	29	23
07:00	2	20	39	23	1	0	0	0	0	0	0	0	0	85	27	22
08:00	4	16	**42**	12	0	0	0	0	0	0	0	0	0	74	25	21
09:00	5	23	28	19	1	0	0	0	0	0	0	0	0	76	27	21
10:00	3	2	18	4	0	0	0	0	0	0	0	0	0	27	24	20
11:00	**2**	**12**	16	18	0	0	0	0	0	0	0	0	0	48	27	22
12 M	P 0	8	19	10	1	0	0	0	0	0	0	0	0	38	27	22
13:00	0	9	**23**	28	0	1	0	0	0	0	0	0	0	61	28	24
14:00	0	5	18	**62**	**53**	**11**	0	0	0	0	0	0	0	**149**	33	29
15:00	0	3	24	73	107	19	**6**	**1**	0	0	0	0	0	233	34	30
16:00	**3**	9	18	83	**119**	**40**	5	1	0	0	0	0	0	278	35	30
17:00	2	**15**	**55**	**87**	92	29	4	1	0	0	0	0	0	**285**	34	28
18:00	0	12	23	72	107	24	5	0	0	0	0	0	0	243	34	30
19:00	0	4	12	37	75	22	5	0	0	0	0	0	0	155	35	31
20:00	0	1	2	20	40	19	4	0	0	0	0	0	0	86	37	32
21:00	0	0	4	19	42	12	3	0	**1**	0	0	0	0	81	36	32
22:00	0	0	2	10	28	8	1	0	0	0	0	0	0	49	35	31
23:00	0	0	0	12	14	11	2	1	0	0	0	0	0	40	38	33
Total	29	174	394	650	718	207	37	5	1	0	0	0	0	2215		
%	1.3%	7.9%	17.8%	29.3%	32.4%	9.3%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	06:00	06:00	08:00	06:00	00:00	00:00	00:00	00:00						06:00		
Vol.	6	24	42	33	11	4	1	1						115		
Midday Peak	11:00	11:00	13:00	14:00	14:00	14:00								14:00		
Vol.	2	12	23	62	53	11								149		
PM Peak	16:00	17:00	17:00	17:00	16:00	16:00	15:00	15:00	21:00					17:00		
Vol.	3	15	55	87	119	40	6	1	1					285		

% iles

15th Percentile :	21 MPH
50th Percentile :	28 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	1368
Percent in Pace :	61.8%
Number of Vehicles > 30 MPH :	824
Percent of Vehicles > 30 MPH :	37.2%
Mean Speed(Average) :	28 MPH

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Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/0 9	0	0	1	10	14	9	1	1	0	0	0	0	0	36	37	32
01:00	0	0	0	5	6	4	**3**	1	0	0	0	0	0	19	40	34
02:00	0	0	2	2	6	4	2	0	0	0	0	0	0	16	38	33
03:00	0	1	1	5	6	2	1	0	0	0	0	0	0	16	35	30
04:00	0	0	0	3	7	5	1	0	0	0	0	0	0	16	38	33
05:00	0	0	1	5	7	10	1	0	0	0	0	0	0	24	38	33
06:00	0	0	8	13	33	11	3	1	0	0	0	0	0	69	36	31
07:00	0	3	22	67	**64**	**12**	0	0	0	0	0	0	0	168	33	29
08:00	**2**	**16**	**64**	**123**	51	9	0	1	0	0	0	0	0	**266**	31	26
09:00	1	12	57	123	61	7	0	**2**	0	0	0	0	0	263	32	27
10:00	0	12	71	133	52	5	0	0	0	0	0	0	0	273	31	26
11:00	**1**	8	50	126	70	6	2	0	0	0	0	0	0	263	32	27
12 PM	1	**15**	**62**	**144**	44	11	0	0	0	0	0	0	0	**277**	31	26
13:00	0	0	21	61	76	34	7	**5**	0	0	0	0	0	204	37	31
14:00	0	3	11	61	**101**	**68**	**15**	0	0	0	0	0	0	259	38	32
15:00	0	0	13	103	136	32	4	0	0	0	0	0	0	288	34	30
16:00	0	2	26	125	**180**	**36**	4	**2**	0	0	0	0	0	375	34	30
17:00	**1**	**8**	**75**	**189**	148	30	0	1	0	0	0	0	0	**452**	33	28
18:00	0	2	26	136	135	31	**9**	0	0	**1**	0	0	0	340	34	30
19:00	0	1	5	59	118	32	3	0	0	0	0	0	0	218	35	31
20:00	0	0	1	31	39	22	4	1	0	0	0	0	0	98	37	32
21:00	0	2	4	38	39	16	7	0	0	0	0	0	0	106	36	31
22:00	0	0	3	15	25	15	3	0	0	0	0	0	0	61	37	32
23:00	0	0	0	13	17	16	2	2	0	0	**2**	0	0	52	39	34
Total	6	85	524	1590	1435	427	72	17	0	1	2	0	0	4159		
%	0.1%	2.0%	12.6%	38.2%	34.5%	10.3%	1.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	07:00	07:00	01:00	09:00						08:00		
Vol.	2	16	64	123	64	12	3	2						266		
Midday Peak	11:00	12:00	12:00	12:00	14:00	14:00	14:00	13:00						12:00		
Vol.	1	15	62	144	101	68	15	5						277		
PM Peak	17:00	17:00	17:00	17:00	16:00	16:00	18:00	16:00		18:00	23:00			17:00		
Vol.	1	8	75	189	180	36	9	2		1	2			452		

% iles

15th Percentile :	25 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	3025
Percent in Pace :	72.7%
Number of Vehicles > 30 MPH :	1667
Percent of Vehicles > 30 MPH :	40.1%
Mean Speed(Average) :	29 MPH

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Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	0	7	14	2	**3**	0	0	0	0	0	0	26	38	32
01:00	0	0	1	2	9	2	0	0	0	0	0	0	0	14	34	31
02:00	0	0	2	2	3	3	2	0	0	**1**	0	0	0	13	40	34
03:00	0	1	0	4	2	2	1	0	0	0	0	0	0	10	35	30
04:00	0	0	1	5	3	1	0	0	0	0	0	0	0	10	31	29
05:00	0	1	3	10	4	1	0	0	0	0	0	0	0	19	31	27
06:00	0	1	8	23	11	1	0	0	0	0	0	0	0	44	31	27
07:00	0	14	69	68	19	2	0	0	0	0	0	0	0	172	29	25
08:00	**6**	**30**	**104**	**101**	**36**	1	0	0	0	0	0	0	0	**278**	29	24
09:00	2	22	87	86	33	**7**	0	0	0	0	0	0	0	237	30	25
10:00	5	34	99	101	14	3	0	0	0	0	0	0	0	256	28	24
11:00	4	**30**	94	115	39	2	0	0	0	0	0	0	0	284	29	25
12 PM	1	25	**126**	**124**	36	2	0	**1**	0	0	0	0	0	**315**	29	25
13:00	**9**	25	100	119	47	1	0	0	0	0	0	0	0	301	30	25
14:00	1	15	63	115	**93**	**21**	**3**	1	0	0	0	0	0	312	33	28
15:00	0	2	30	95	125	54	7	1	0	**1**	0	0	0	315	36	31
16:00	**1**	**8**	12	108	154	**60**	**18**	0	**1**	0	0	0	0	362	37	31
17:00	1	7	**42**	**156**	**197**	53	7	2	1	0	0	0	0	**466**	34	30
18:00	0	1	29	148	137	50	5	1	0	0	0	0	0	371	34	30
19:00	0	0	4	50	102	38	6	1	0	0	0	0	0	201	36	32
20:00	0	0	8	29	67	31	6	1	1	0	0	0	0	143	37	32
21:00	0	0	2	21	47	29	2	1	0	0	0	0	0	102	37	32
22:00	0	1	2	19	40	19	8	**3**	0	0	0	0	0	92	38	33
23:00	0	0	0	8	25	18	3	0	0	0	0	0	0	54	38	33
Total	30	217	886	1516	1257	403	71	12	3	2	0	0	0	4397		
%	0.7%	4.9%	20.2%	34.5%	28.6%	9.2%	1.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	09:00	00:00			02:00				08:00		
Vol.	6	30	104	101	36	7	3			1				278		
Midday Peak	13:00	11:00	12:00	12:00	14:00	14:00	14:00	12:00						12:00		
Vol.	9	30	126	124	93	21	3	1						315		
PM Peak	16:00	16:00	17:00	17:00	17:00	16:00	16:00	22:00	16:00	15:00				17:00		
Vol.	1	8	42	156	197	60	18	3	1	1				466		

% iles

15th Percentile : 22 MPH
50th Percentile : 28 MPH
85th Percentile : 34 MPH
95th Percentile : 38 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 2773
Percent in Pace : 63.1%
Number of Vehicles > 30 MPH : 1496
Percent of Vehicles > 30 MPH : 34.0%
Mean Speed(Average) : 28 MPH

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Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Right Lane, EB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/0 9	1	0	1	19	26	18	3	1	0	0	0	0	0	69	37	32
01:00	0	1	0	7	11	5	4	**3**	0	0	0	0	0	31	41	34
02:00	0	0	3	3	11	8	2	0	0	0	0	0	0	27	37	32
03:00	0	1	1	9	6	4	2	0	0	0	0	0	0	23	37	30
04:00	0	4	1	5	14	6	2	0	0	0	0	0	0	32	36	30
05:00	1	4	13	11	17	14	1	0	0	0	0	0	0	61	36	29
06:00	0	14	38	36	55	**26**	**5**	1	0	0	0	0	0	175	35	29
07:00	0	17	52	99	**79**	14	0	0	0	0	0	0	0	261	33	27
08:00	**5**	**34**	**100**	155	59	10	0	1	0	0	0	0	0	**364**	31	26
09:00	2	27	95	**158**	64	7	0	2	0	0	0	0	0	355	31	26
10:00	1	17	90	151	53	5	0	0	0	0	0	0	0	317	30	26
11:00	**3**	18	86	160	81	9	2	0	0	0	0	0	0	359	32	27
12 PM	2	**20**	**96**	**173**	57	13	0	0	0	0	0	0	0	361	31	26
13:00	1	6	46	111	130	53	8	**5**	0	0	0	0	0	360	36	30
14:00	0	5	24	105	**192**	**101**	**17**	1	0	0	0	0	0	**445**	37	32
15:00	0	7	37	173	249	67	**10**	0	0	0	0	0	0	543	34	30
16:00	0	11	45	199	**312**	**82**	9	**3**	0	0	0	0	0	661	34	30
17:00	**4**	**39**	**136**	**283**	247	53	3	1	0	0	0	0	0	**766**	33	28
18:00	1	12	57	188	220	64	10	1	0	**1**	0	0	0	554	34	30
19:00	0	10	19	110	174	47	4	0	0	0	0	0	0	364	34	30
20:00	0	2	7	56	76	31	5	2	0	0	0	0	0	179	36	31
21:00	1	3	6	58	72	21	9	0	0	0	0	0	0	170	35	31
22:00	0	2	6	24	49	24	5	0	0	0	0	0	0	110	37	32
23:00	0	0	0	22	35	27	5	2	0	0	**2**	0	0	93	38	34
Total	22	254	959	2315	2289	709	106	23	0	1	2	0	0	6680		
%	0.3%	3.8%	14.4%	34.7%	34.3%	10.6%	1.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	07:00	06:00	06:00	01:00						08:00		
Vol.	5	34	100	158	79	26	5	3						364		
Midday Peak	11:00	12:00	12:00	12:00	14:00	14:00	14:00	13:00						14:00		
Vol.	3	20	96	173	192	101	17	5						445		
PM Peak	17:00	17:00	17:00	17:00	16:00	16:00	15:00	16:00		18:00	23:00			17:00		
Vol.	4	39	136	283	312	82	10	3		1	2			766		

% iles

15th Percentile :	23 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4604
Percent in Pace :	68.9%
Number of Vehicles > 30 MPH :	2672
Percent of Vehicles > 30 MPH :	40.0%
Mean Speed(Average) :	29 MPH

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Client: VHB/M. Miller

91863 A (EB) speed
Site Code: 10082.00

EB Right Lane, EB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/0 9	0	0	0	9	25	6	**4**	**1**	0	0	0	0	0	45	37	33
01:00	0	0	1	3	17	4	0	0	0	0	0	0	0	25	34	32
02:00	0	2	2	5	5	3	2	0	0	**1**	0	0	0	20	37	31
03:00	0	1	1	6	2	2	1	0	0	0	0	0	0	13	35	29
04:00	0	2	4	12	5	3	0	0	0	0	0	0	0	26	33	28
05:00	2	8	12	23	9	1	0	0	0	0	0	0	0	55	30	25
06:00	6	25	46	56	21	4	1	0	0	0	0	0	0	159	30	24
07:00	2	34	108	91	20	2	0	0	0	0	0	0	0	257	29	24
08:00	**10**	**46**	**146**	**113**	**36**	1	0	0	0	0	0	0	0	**352**	29	24
09:00	7	45	115	105	34	**7**	0	0	0	0	0	0	0	313	29	24
10:00	8	36	117	105	14	3	0	0	0	0	0	0	0	283	28	24
11:00	6	**42**	110	133	39	2	0	0	0	0	0	0	0	332	29	24
12 PM	1	33	**145**	134	37	2	0	**1**	0	0	0	0	0	353	29	25
13:00	**9**	34	123	147	47	2	0	0	0	0	0	0	0	362	29	25
14:00	1	20	81	**177**	**146**	**32**	**3**	1	0	0	0	0	0	**461**	33	28
15:00	0	5	54	168	232	73	13	2	0	**1**	0	0	0	548	35	30
16:00	**4**	17	30	191	273	**100**	**23**	1	**1**	0	0	0	0	640	36	31
17:00	3	**22**	**97**	**243**	**289**	82	11	**3**	1	0	0	0	0	**751**	34	29
18:00	0	13	52	220	244	74	10	1	0	0	0	0	0	614	34	30
19:00	0	4	16	87	177	60	11	1	0	0	0	0	0	356	36	31
20:00	0	1	10	49	107	50	10	1	1	0	0	0	0	229	37	32
21:00	0	0	6	40	89	41	5	1	1	0	0	0	0	183	37	32
22:00	0	1	4	29	68	27	9	3	0	0	0	0	0	141	38	32
23:00	0	0	0	20	39	29	5	1	0	0	0	0	0	94	38	33
Total	59	391	1280	2166	1975	610	108	17	4	2	0	0	0	6612		
%	0.9%	5.9%	19.4%	32.8%	29.9%	9.2%	1.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	09:00	00:00	00:00		02:00				08:00		
Vol.	10	46	146	113	36	7	4	1		1				352		
Midday Peak	13:00	11:00	12:00	14:00	14:00	14:00	14:00	12:00						14:00		
Vol.	9	42	145	177	146	32	3	1						461		
PM Peak	16:00	17:00	17:00	17:00	17:00	16:00	16:00	17:00	16:00	15:00				17:00		
Vol.	4	22	97	243	289	100	23	3	1	1				751		

% iles

15th Percentile : 22 MPH
50th Percentile : 28 MPH
85th Percentile : 34 MPH
95th Percentile : 38 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 4141
Percent in Pace : 62.6%
Number of Vehicles > 30 MPH : 2321
Percent of Vehicles > 30 MPH : 35.1%
Mean Speed(Average) : 28 MPH

PRECISION
D A T A
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Binney Street (EB) between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/09	0	23	7	0	0	0	0	0	1	2	0	0	0	33
01:00	0	7	1	1	0	0	0	0	2	1	0	0	0	12
02:00	0	8	0	2	0	0	0	0	1	0	0	0	0	11
03:00	0	4	1	0	2	0	0	0	0	0	0	0	0	7
04:00	1	9	0	1	0	4	0	0	1	0	0	0	0	16
05:00	0	29	3	0	2	1	0	0	2	0	0	0	0	37
06:00	1	70	15	3	8	4	0	1	3	1	0	0	0	106
07:00	1	74	13	0	3	0	0	1	1	0	0	0	0	93
08:00	0	85	6	3	2	0	1	0	1	0	0	0	0	98
09:00	0	74	14	2	2	0	0	0	0	0	0	0	0	92
10:00	0	33	7	0	3	1	0	0	0	0	0	0	0	44
11:00	0	74	10	4	4	4	0	0	0	0	0	0	0	96
12 M P	0	73	7	0	4	0	0	0	0	0	0	0	0	84
13:00	1	112	25	3	8	5	1	1	0	0	0	0	0	156
14:00	0	115	45	2	15	4	1	2	2	0	0	0	0	186
15:00	0	199	42	4	6	1	0	2	1	0	0	0	0	255
16:00	0	253	25	1	6	0	0	0	1	0	0	0	0	286
17:00	0	280	27	4	2	0	0	0	0	1	0	0	0	314
18:00	0	185	19	4	4	0	0	1	0	1	0	0	0	214
19:00	0	130	6	5	3	0	0	0	1	1	0	0	0	146
20:00	0	72	4	2	0	0	0	0	3	0	0	0	0	81
21:00	0	61	1	1	1	0	0	0	0	0	0	0	0	64
22:00	0	36	5	2	1	1	0	0	4	0	0	0	0	49
23:00	0	38	0	2	0	0	0	0	0	1	0	0	0	41
Total	4	2044	283	46	76	25	3	8	24	8	0	0	0	2521
Percent	0.2%	81.1%	11.2%	1.8%	3.0%	1.0%	0.1%	0.3%	1.0%	0.3%	0.0%	0.0%	0.0%	
AM Peak	04:00	08:00	06:00	06:00	06:00	04:00	08:00	06:00	06:00	00:00				06:00
Vol.	1	85	15	3	8	4	1	1	3	2				106
Midday Peak	13:00	14:00	14:00	11:00	14:00	13:00	13:00	14:00	14:00					14:00
Vol.	1	115	45	4	15	5	1	2	2					186
PM Peak		17:00	15:00	19:00	15:00	15:00		15:00	22:00	17:00				17:00
Vol.		280	42	5	6	1		2	4	1				314

PRECISION
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INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	18	1	0	0	0	0	0	0	0	0	0	0	19
01:00	0	9	0	2	0	0	0	0	0	0	0	0	0	11
02:00	0	5	0	1	0	0	0	0	1	0	0	0	0	7
03:00	0	1	0	0	2	0	0	0	0	0	0	0	0	3
04:00	0	13	1	0	0	1	0	0	1	0	0	0	0	16
05:00	0	28	1	0	0	2	0	0	5	0	0	0	0	36
06:00	0	94	14	1	2	0	0	0	3	1	0	0	0	115
07:00	0	77	3	1	4	0	0	0	0	0	0	0	0	85
08:00	1	69	3	1	0	0	0	0	0	0	0	0	0	74
09:00	1	72	0	0	3	0	0	0	0	0	0	0	0	76
10:00	2	25	0	0	0	0	0	0	0	0	0	0	0	27
11:00	0	45	3	0	0	0	0	0	0	0	0	0	0	48
12 M P	0	32	4	0	1	1	0	0	0	0	0	0	0	38
13:00	0	55	2	1	3	0	0	0	0	0	0	0	0	61
14:00	0	118	16	3	8	2	0	2	0	0	0	0	0	149
15:00	0	180	36	7	7	1	0	1	0	1	0	0	0	233
16:00	2	245	22	6	2	0	0	0	1	0	0	0	0	278
17:00	0	256	16	4	2	3	0	4	0	0	0	0	0	285
18:00	1	220	12	6	2	0	0	1	1	0	0	0	0	243
19:00	0	137	11	6	1	0	0	0	0	0	0	0	0	155
20:00	0	74	9	1	2	0	0	0	0	0	0	0	0	86
21:00	0	74	3	0	1	0	0	0	3	0	0	0	0	81
22:00	0	39	5	2	0	0	0	0	2	1	0	0	0	49
23:00	0	31	4	2	1	0	0	0	2	0	0	0	0	40
Total	7	1917	166	44	41	10	0	8	19	3	0	0	0	2215
Percent	0.3%	86.5%	7.5%	2.0%	1.9%	0.5%	0.0%	0.4%	0.9%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	06:00	06:00	01:00	07:00	05:00			05:00	06:00				06:00
Vol.	1	94	14	2	4	2			5	1				115
Midday Peak		14:00	14:00	14:00	14:00	14:00		14:00						14:00
Vol.		118	16	3	8	2		2						149
PM Peak	16:00	17:00	15:00	15:00	15:00	17:00		17:00	21:00	15:00				17:00
Vol.	2	256	36	7	7	3		4	3	1				285

PRECISION
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Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/0 9	0	27	7	0	1	0	0	0	0	1	0	0	0	36
01:00	0	12	4	0	2	1	0	0	0	0	0	0	0	19
02:00	0	10	4	0	1	1	0	0	0	0	0	0	0	16
03:00	0	11	2	0	3	0	0	0	0	0	0	0	0	16
04:00	0	7	3	0	2	4	0	0	0	0	0	0	0	16
05:00	0	9	5	3	3	2	0	0	1	1	0	0	0	24
06:00	0	45	12	2	5	4	0	1	0	0	0	0	0	69
07:00	0	116	21	4	14	2	2	5	4	0	0	0	0	168
08:00	0	184	30	15	20	7	1	4	4	1	0	0	0	266
09:00	0	165	44	16	26	9	0	1	2	0	0	0	0	263
10:00	1	139	59	23	35	11	0	2	3	0	0	0	0	273
11:00	0	162	50	13	23	6	1	4	4	0	0	0	0	263
12 PM	2	201	40	11	18	4	1	0	0	0	0	0	0	277
13:00	2	97	73	8	18	3	0	2	1	0	0	0	0	204
14:00	0	120	93	10	31	3	0	2	0	0	0	0	0	259
15:00	0	203	44	7	26	5	0	3	0	0	0	0	0	288
16:00	0	309	48	9	8	0	0	1	0	0	0	0	0	375
17:00	0	393	40	8	8	0	0	3	0	0	0	0	0	452
18:00	0	290	32	10	7	0	0	0	1	0	0	0	0	340
19:00	0	183	28	3	2	0	0	1	1	0	0	0	0	218
20:00	0	81	10	3	4	0	0	0	0	0	0	0	0	98
21:00	0	88	13	1	2	0	0	2	0	0	0	0	0	106
22:00	0	50	10	1	0	0	0	0	0	0	0	0	0	61
23:00	0	43	9	0	0	0	0	0	0	0	0	0	0	52
Total	5	2945	681	147	259	62	5	31	21	3	0	0	0	4159
Percent	0.1%	70.8%	16.4%	3.5%	6.2%	1.5%	0.1%	0.7%	0.5%	0.1%	0.0%	0.0%	0.0%	
AM Peak		08:00	09:00	09:00	09:00	09:00	07:00	07:00	07:00	00:00				08:00
Vol.		184	44	16	26	9	2	5	4	1				266
Midday Peak	12:00	12:00	14:00	11:00	14:00	11:00	11:00	11:00	11:00					12:00
Vol.	2	201	93	13	31	6	1	4	4					277
PM Peak		17:00	16:00	18:00	15:00	15:00		15:00	18:00					17:00
Vol.		393	48	10	26	5		3	1					452

PRECISION
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Binney Street (EB) between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/0 9	0	18	7	1	0	0	0	0	0	0	0	0	0	26
01:00	0	12	1	0	1	0	0	0	0	0	0	0	0	14
02:00	0	7	2	0	4	0	0	0	0	0	0	0	0	13
03:00	0	2	3	1	2	0	0	0	2	0	0	0	0	10
04:00	0	6	1	0	1	1	0	0	1	0	0	0	0	10
05:00	0	9	3	1	1	4	0	0	1	0	0	0	0	19
06:00	0	34	3	0	3	4	0	0	0	0	0	0	0	44
07:00	0	130	15	2	12	5	1	3	2	0	0	0	2	172
08:00	3	196	28	17	20	9	0	0	5	0	0	0	0	278
09:00	0	142	33	11	28	15	0	4	4	0	0	0	0	237
10:00	1	140	43	14	35	16	1	1	4	0	0	0	1	256
11:00	0	190	46	8	17	16	0	2	4	0	0	0	1	284
12 PM	2	218	42	16	19	12	0	2	3	0	0	0	1	315
13:00	0	217	38	7	22	5	2	6	4	0	0	0	0	301
14:00	0	203	64	14	17	7	0	4	3	0	0	0	0	312
15:00	0	239	46	9	14	4	0	2	1	0	0	0	0	315
16:00	0	288	53	7	13	0	0	0	1	0	0	0	0	362
17:00	0	393	53	6	11	2	0	1	0	0	0	0	0	466
18:00	0	319	40	6	6	0	0	0	0	0	0	0	0	371
19:00	0	172	23	5	1	0	0	0	0	0	0	0	0	201
20:00	0	116	18	5	4	0	0	0	0	0	0	0	0	143
21:00	0	81	16	2	2	0	0	0	1	0	0	0	0	102
22:00	0	73	16	0	1	0	0	1	1	0	0	0	0	92
23:00	0	45	8	1	0	0	0	0	0	0	0	0	0	54
Total	6	3250	602	133	234	100	4	26	37	0	0	0	5	4397
Percent	0.1%	73.9%	13.7%	3.0%	5.3%	2.3%	0.1%	0.6%	0.8%	0.0%	0.0%	0.0%	0.1%	
AM Peak	08:00	08:00	09:00	08:00	09:00	09:00	07:00	09:00	08:00				07:00	08:00
Vol.	3	196	33	17	28	15	1	4	5				2	278
Midday Peak	12:00	12:00	14:00	12:00	13:00	11:00	13:00	13:00	11:00				11:00	12:00
Vol.	2	218	64	16	22	16	2	6	4				1	315
PM Peak		17:00	16:00	15:00	15:00	15:00		15:00	15:00					17:00
Vol.		393	53	9	14	4		2	1					466

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street (EB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Right Lane, EB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/0 9	0	50	14	0	1	0	0	0	1	3	0	0	0	69
01:00	0	19	5	1	2	1	0	0	2	1	0	0	0	31
02:00	0	18	4	2	1	1	0	0	1	0	0	0	0	27
03:00	0	15	3	0	5	0	0	0	0	0	0	0	0	23
04:00	1	16	3	1	2	8	0	0	1	0	0	0	0	32
05:00	0	38	8	3	5	3	0	0	3	1	0	0	0	61
06:00	1	115	27	5	13	8	0	2	3	1	0	0	0	175
07:00	1	190	34	4	17	2	2	6	5	0	0	0	0	261
08:00	0	269	36	18	22	7	2	4	5	1	0	0	0	364
09:00	0	239	58	18	28	9	0	1	2	0	0	0	0	355
10:00	1	172	66	23	38	12	0	2	3	0	0	0	0	317
11:00	0	236	60	17	27	10	1	4	4	0	0	0	0	359
12 PM	2	274	47	11	22	4	1	0	0	0	0	0	0	361
13:00	3	209	98	11	26	8	1	3	1	0	0	0	0	360
14:00	0	235	138	12	46	7	1	4	2	0	0	0	0	445
15:00	0	402	86	11	32	6	0	5	1	0	0	0	0	543
16:00	0	562	73	10	14	0	0	1	1	0	0	0	0	661
17:00	0	673	67	12	10	0	0	3	0	1	0	0	0	766
18:00	0	475	51	14	11	0	0	1	1	1	0	0	0	554
19:00	0	313	34	8	5	0	0	1	2	1	0	0	0	364
20:00	0	153	14	5	4	0	0	0	3	0	0	0	0	179
21:00	0	149	14	2	3	0	0	2	0	0	0	0	0	170
22:00	0	86	15	3	1	1	0	0	4	0	0	0	0	110
23:00	0	81	9	2	0	0	0	0	0	1	0	0	0	93
Total	9	4989	964	193	335	87	8	39	45	11	0	0	0	6680
Percent	0.1%	74.7%	14.4%	2.9%	5.0%	1.3%	0.1%	0.6%	0.7%	0.2%	0.0%	0.0%	0.0%	
AM Peak	04:00	08:00	09:00	08:00	09:00	09:00	07:00	07:00	07:00	00:00				08:00
Vol.	1	269	58	18	28	9	2	6	5	3				364
Midday Peak	13:00	12:00	14:00	11:00	14:00	11:00	11:00	11:00	11:00					14:00
Vol.	3	274	138	17	46	10	1	4	4					445
PM Peak		17:00	15:00	18:00	15:00	15:00		15:00	22:00	17:00				17:00
Vol.		673	86	14	32	6		5	4	1				766

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Client: VHB/M. Miller

91863 A (EB) class
Site Code: 10082.00

EB Right Lane, EB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	36	8	1	0	0	0	0	0	0	0	0	0	45
01:00	0	21	1	2	1	0	0	0	0	0	0	0	0	25
02:00	0	12	2	1	4	0	0	0	1	0	0	0	0	20
03:00	0	3	3	1	4	0	0	0	2	0	0	0	0	13
04:00	0	19	2	0	1	2	0	0	2	0	0	0	0	26
05:00	0	37	4	1	1	6	0	0	6	0	0	0	0	55
06:00	0	128	17	1	5	4	0	0	3	1	0	0	0	159
07:00	0	207	18	3	16	5	1	3	2	0	0	0	2	257
08:00	4	265	31	18	20	9	0	0	5	0	0	0	0	352
09:00	1	214	33	11	31	15	0	4	4	0	0	0	0	313
10:00	3	165	43	14	35	16	1	1	4	0	0	0	1	283
11:00	0	235	49	8	17	16	0	2	4	0	0	0	1	332
12 PM	2	250	46	16	20	13	0	2	3	0	0	0	1	353
13:00	0	272	40	8	25	5	2	6	4	0	0	0	0	362
14:00	0	321	80	17	25	9	0	6	3	0	0	0	0	461
15:00	0	419	82	16	21	5	0	3	1	1	0	0	0	548
16:00	2	533	75	13	15	0	0	0	2	0	0	0	0	640
17:00	0	649	69	10	13	5	0	5	0	0	0	0	0	751
18:00	1	539	52	12	8	0	0	1	1	0	0	0	0	614
19:00	0	309	34	11	2	0	0	0	0	0	0	0	0	356
20:00	0	190	27	6	6	0	0	0	0	0	0	0	0	229
21:00	0	155	19	2	3	0	0	0	4	0	0	0	0	183
22:00	0	112	21	2	1	0	0	1	3	1	0	0	0	141
23:00	0	76	12	3	1	0	0	0	2	0	0	0	0	94
Total	13	5167	768	177	275	110	4	34	56	3	0	0	5	6612
Percent	0.2%	78.1%	11.6%	2.7%	4.2%	1.7%	0.1%	0.5%	0.8%	0.0%	0.0%	0.0%	0.1%	
AM Peak	08:00	08:00	09:00	08:00	09:00	09:00	07:00	09:00	05:00	06:00			07:00	08:00
Vol.	4	265	33	18	31	15	1	4	6	1			2	352
Midday Peak	12:00	14:00	14:00	14:00	13:00	11:00	13:00	13:00	11:00				11:00	14:00
Vol.	2	321	80	17	25	16	2	6	4				1	461
PM Peak	16:00	17:00	15:00	15:00	15:00	15:00		17:00	21:00	15:00				17:00
Vol.	2	649	82	16	21	5		5	4	1				751

Binney Street (WB) between
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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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91863 A (WB) volume
Site Code: 10082.00

Start	WB Right Lane				WB Left Lane				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	4		39		5		38		9		77		
12:15	1		38		2		40		3		78		
12:30	4		49		3		48		7		97		
12:45	8	17	45	171	0	10	34	160	8	27	79	331	
01:00	7		43		5		37		12		80		
01:15	4		38		1		27		5		65		
01:30	3		43		1		38		4		81		
01:45	2	16	35	159	0	7	35	137	2	23	70	296	
02:00	0		43		0		23		0		66		
02:15	5		38		0		35		5		73		
02:30	2		35		1		30		3		65		
02:45	1	8	37	153	0	1	33	121	1	9	70	274	
03:00	7		40		4		27		11		67		
03:15	2		26		2		21		4		47		
03:30	3		44		4		29		7		73		
03:45	0	12	37	147	0	10	21	98	0	22	58	245	
04:00	3		38		4		28		7		66		
04:15	7		28		4		25		11		53		
04:30	10		44		5		35		15		79		
04:45	9	29	32	142	7	20	27	115	16	49	59	257	
05:00	8		58		7		31		15		89		
05:15	20		58		14		52		34		110		
05:30	26		42		19		46		45		88		
05:45	46	100	47	205	33	73	29	158	79	173	76	363	
06:00	36		41		28		30		64		71		
06:15	53		54		42		37		95		91		
06:30	50		48		52		40		102		88		
06:45	61	200	51	194	50	172	24	131	111	372	75	325	
07:00	45		35		61		25		106		60		
07:15	59		34		56		25		115		59		
07:30	73		36		57		18		130		54		
07:45	69	246	24	129	57	231	26	94	126	477	50	223	
08:00	72		31		62		18		134		49		
08:15	77		26		71		21		148		47		
08:30	80		34		80		15		160		49		
08:45	99	328	34	125	57	270	24	78	156	598	58	203	
09:00	93		25		66		18		159		43		
09:15	61		28		59		21		120		49		
09:30	68		18		59		8		127		26		
09:45	54	276	24	95	59	243	11	58	113	519	35	153	
10:00	41		16		62		10		103		26		
10:15	46		17		50		11		96		28		
10:30	42		17		46		10		88		27		
10:45	34	163	20	70	37	195	9	40	71	358	29	110	
11:00	35		15		49		6		84		21		
11:15	31		12		34		9		65		21		
11:30	43		11		40		6		83		17		
11:45	38	147	6	44	36	159	10	31	74	306	16	75	
Total	1542		1634		1391		1221		2933		2855		
Percent	52.6%		57.2%		47.4%		42.8%						
Day Total	3176				2612				5788				
Peak	08:15		05:00		08:15		12:00		08:15		05:00		
Vol.	349		205		274		160		623		363		
P.H.F.	0.881		0.884		0.856		0.833		0.973		0.825		

Binney Street (WB) between
Second Street and Third Street
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91863 A (WB) volume
Site Code: 10082.00

Start	WB Right Lane				WB Left Lane				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	4		37		3		47		7		84		
12:15	5		50		2		38		7		88		
12:30	6		40		3		52		9		92		
12:45	3	18	40	167	3	11	38	175	6	29	78	342	
01:00	7		32		2		45		9		77		
01:15	2		28		2		58		4		86		
01:30	5		26		3		49		8		75		
01:45	1	15	33	119	3	10	53	205	4	25	86	324	
02:00	8		29		2		40		10		69		
02:15	1		29		0		34		1		63		
02:30	2		34		2		41		4		75		
02:45	2	13	40	132	1	5	37	152	3	18	77	284	
03:00	2		26		1		39		3		65		
03:15	5		39		1		31		6		70		
03:30	4		41		4		33		8		74		
03:45	2	13	37	143	3	9	32	135	5	22	69	278	
04:00	7		47		2		31		9		78		
04:15	2		29		2		32		4		61		
04:30	8		43		5		42		13		85		
04:45	14	31	43	162	8	17	37	142	22	48	80	304	
05:00	8		39		4		48		12		87		
05:15	12		54		8		47		20		101		
05:30	22		51		24		41		46		92		
05:45	39	81	52	196	27	63	41	177	66	144	93	373	
06:00	42		51		35		49		77		100		
06:15	44		56		37		51		81		107		
06:30	53		47		48		36		101		83		
06:45	65	204	45	199	54	174	43	179	119	378	88	378	
07:00	54		43		53		33		107		76		
07:15	49		36		61		22		110		58		
07:30	36		34		65		34		101		68		
07:45	65	204	31	144	60	239	31	120	125	443	62	264	
08:00	69		25		56		15		125		40		
08:15	73		24		73		22		146		46		
08:30	89		24		58		22		147		46		
08:45	80	311	25	98	82	269	23	82	162	580	48	180	
09:00	93		19		65		15		158		34		
09:15	76		28		60		17		136		45		
09:30	74		18		68		15		142		33		
09:45	51	294	20	85	66	259	18	65	117	553	38	150	
10:00	55		17		42		12		97		29		
10:15	44		23		46		15		90		38		
10:30	36		24		46		13		82		37		
10:45	38	173	19	83	43	177	11	51	81	350	30	134	
11:00	35		19		46		9		81		28		
11:15	43		13		43		7		86		20		
11:30	30		5		57		9		87		14		
11:45	29	137	9	46	46	192	9	34	75	329	18	80	
Total	1494		1574		1425		1517		2919		3091		
Percent	51.2%		50.9%		48.8%		49.1%						
Day Total	3068				2942				6010				
Peak	08:30		05:30		08:15		01:00		08:15		05:30		
Vol.	338		210		278		205		613		392		
P.H.F.	0.909		0.938		0.848		0.884		0.946		0.916		

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Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) speed
Site Code: 10082.00

WB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	1	2	5	7	2	0	0	0	0	0	0	0	17	33	29
01:00	2	1	0	6	6	1	0	0	0	0	0	0	0	16	33	25
02:00	0	2	2	2	2	0	0	0	0	0	0	0	0	8	30	25
03:00	0	1	1	4	4	2	0	0	0	0	0	0	0	12	33	29
04:00	0	3	5	10	10	1	0	0	0	0	0	0	0	29	33	27
05:00	1	4	12	24	32	17	**9**	**1**	0	0	0	0	0	100	38	31
06:00	3	10	25	66	**68**	**24**	4	0	0	0	0	0	0	200	34	29
07:00	0	14	51	110	63	8	0	0	0	0	0	0	0	246	32	27
08:00	**7**	**37**	**97**	**127**	54	5	1	0	0	0	0	0	0	**328**	30	25
09:00	3	13	63	117	62	17	1	0	0	0	0	0	0	276	33	27
10:00	1	6	35	67	42	10	2	0	0	0	0	0	0	163	33	28
11:00	0	4	22	57	**51**	12	1	0	0	0	0	0	0	147	34	29
12 PM	0	**9**	**36**	**74**	43	8	1	0	0	0	0	0	0	**171**	32	27
13:00	0	3	30	66	49	11	0	0	0	0	0	0	0	159	33	28
14:00	0	6	21	57	43	**21**	**5**	0	0	0	0	0	0	153	35	29
15:00	0	4	12	60	47	20	4	0	0	0	0	0	0	147	35	30
16:00	**1**	5	13	48	57	18	0	0	0	0	0	0	0	142	34	29
17:00	0	**8**	**41**	**78**	60	16	2	0	0	0	0	0	0	**205**	33	28
18:00	1	1	13	78	**72**	**25**	4	0	0	0	0	0	0	194	34	30
19:00	1	3	18	46	42	16	3	0	0	0	0	0	0	129	34	29
20:00	0	1	13	53	41	15	2	0	0	0	0	0	0	125	34	29
21:00	0	2	4	42	40	5	2	0	0	0	0	0	0	95	34	30
22:00	0	1	4	21	28	9	**7**	0	0	0	0	0	0	70	37	31
23:00	0	0	2	11	22	9	0	0	0	0	0	0	0	44	35	31
Total	20	139	522	1229	945	272	48	1	0	0	0	0	0	3176		
%	0.6%	4.4%	16.4%	38.7%	29.8%	8.6%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	06:00	06:00	05:00	05:00						08:00		
Vol.	7	37	97	127	68	24	9	1						328		
Midday Peak		12:00	12:00	12:00	11:00	14:00	14:00							12:00		
Vol.		9	36	74	51	21	5							171		
PM Peak	16:00	17:00	17:00	17:00	18:00	18:00	22:00							17:00		
Vol.	1	8	41	78	72	25	7							205		

% iles

15th Percentile :	23 MPH
50th Percentile :	28 MPH
85th Percentile :	34 MPH
95th Percentile :	37 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	2174
Percent in Pace :	68.5%
Number of Vehicles > 30 MPH :	1077
Percent of Vehicles > 30 MPH :	33.9%
Mean Speed(Average) :	28 MPH

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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) speed
Site Code: 10082.00

WB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	0	1	1	5	6	5	0	0	0	0	0	0	0	18	36	31
01:00	0	0	0	6	6	3	0	0	0	0	0	0	0	15	35	31
02:00	0	0	2	4	2	5	0	0	0	0	0	0	0	13	37	31
03:00	0	0	1	3	3	4	2	0	0	0	0	0	0	13	38	33
04:00	0	0	8	4	12	3	3	1	0	0	0	0	0	31	38	31
05:00	1	5	13	25	14	**18**	3	**2**	0	0	0	0	0	81	37	30
06:00	1	5	27	80	62	18	**10**	1	0	0	0	0	0	204	34	29
07:00	11	21	50	69	41	11	1	0	0	0	0	0	0	204	32	25
08:00	2	**32**	79	**124**	**65**	9	0	0	0	0	0	0	0	**311**	32	26
09:00	**12**	30	**90**	92	56	12	2	0	0	0	0	0	0	294	32	25
10:00	0	7	30	74	45	16	1	0	0	0	0	0	0	173	33	28
11:00	1	5	33	48	**40**	10	0	0	0	0	0	0	0	137	33	28
12 PM	2	**12**	**40**	62	33	**16**	**2**	0	0	0	0	0	0	**167**	33	27
13:00	**3**	4	25	52	29	4	2	0	0	0	0	0	0	119	32	27
14:00	1	6	17	**66**	27	12	1	**1**	**1**	0	0	0	0	132	33	28
15:00	**1**	**4**	18	48	49	19	3	1	0	0	0	0	0	143	35	29
16:00	0	2	**25**	61	61	12	1	0	0	0	0	0	0	162	34	29
17:00	0	3	24	65	**79**	16	**9**	0	0	0	0	0	0	196	34	30
18:00	0	1	20	**79**	66	**25**	5	**3**	0	0	0	0	0	**199**	35	30
19:00	0	3	15	59	42	19	4	2	0	0	0	0	0	144	35	30
20:00	0	1	12	33	31	20	1	0	0	0	0	0	0	98	36	30
21:00	0	2	9	37	26	9	2	0	0	0	0	0	0	85	34	29
22:00	0	4	9	26	30	8	6	0	0	0	0	0	0	83	35	30
23:00	1	0	6	10	15	8	5	1	0	0	0	0	0	46	38	31
Total	36	148	554	1132	840	282	63	12	1	0	0	0	0	3068		
%	1.2%	4.8%	18.1%	36.9%	27.4%	9.2%	2.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	09:00	08:00	08:00	05:00	06:00	05:00						08:00		
Vol.	12	32	90	124	65	18	10	2						311		
Midday Peak	13:00	12:00	12:00	14:00	11:00	12:00	12:00	14:00	14:00					12:00		
Vol.	3	12	40	66	40	16	2	1	1					167		
PM Peak	15:00	15:00	16:00	18:00	17:00	18:00	17:00	18:00						18:00		
Vol.	1	4	25	79	79	25	9	3						199		

% iles

15th Percentile : 22 MPH
50th Percentile : 28 MPH
85th Percentile : 34 MPH
95th Percentile : 38 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 1972
Percent in Pace : 64.3%
Number of Vehicles > 30 MPH : 1030
Percent of Vehicles > 30 MPH : 33.6%
Mean Speed(Average) : 28 MPH

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91863 A (WB) speed
Site Code: 10082.00

WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	0	2	5	2	0	**1**	0	0	0	0	0	10	35	33
01:00	0	0	0	6	1	0	0	0	0	0	0	0	0	7	29	27
02:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	25	25
03:00	0	0	0	3	5	2	0	0	0	0	0	0	0	10	34	32
04:00	0	0	6	8	4	2	0	0	0	0	0	0	0	20	32	27
05:00	0	0	3	24	31	11	**4**	0	0	0	0	0	0	73	36	31
06:00	**1**	4	20	66	47	**29**	4	1	0	0	0	0	0	172	36	30
07:00	0	**7**	36	119	**64**	4	0	0	**1**	0	0	0	0	231	32	28
08:00	1	6	**60**	**140**	53	10	0	0	0	0	0	0	0	**270**	31	27
09:00	0	7	52	118	57	8	0	0	0	0	0	0	**1**	243	32	27
10:00	0	1	23	81	69	20	1	0	0	0	0	0	0	195	34	29
11:00	0	0	**25**	62	**64**	6	**2**	0	0	0	0	0	0	159	33	29
12 PM	0	**6**	24	**81**	42	7	0	0	0	0	0	0	0	**160**	32	28
13:00	0	4	19	67	36	**10**	1	0	0	0	0	0	0	137	33	28
14:00	0	2	15	38	54	10	2	0	0	0	0	0	0	121	34	30
15:00	0	0	11	27	45	**15**	0	0	0	0	0	0	0	98	34	30
16:00	0	**1**	12	39	50	12	1	0	0	0	0	0	0	115	34	30
17:00	0	1	**13**	**78**	53	10	2	**1**	0	0	0	0	0	**158**	33	29
18:00	0	1	11	51	**55**	9	**4**	0	0	0	0	0	0	131	34	30
19:00	0	0	7	38	39	9	1	0	0	0	0	0	0	94	34	30
20:00	0	0	7	39	22	9	1	0	0	0	0	0	0	78	34	29
21:00	0	0	6	31	16	5	0	0	0	0	0	0	0	58	33	29
22:00	0	0	1	9	25	5	0	0	0	0	0	0	0	40	34	31
23:00	0	0	4	9	10	6	2	0	0	0	0	0	0	31	36	31
Total	2	40	355	1137	847	201	25	3	1	0	0	0	1	2612		
%	0.1%	1.5%	13.6%	43.5%	32.4%	7.7%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	06:00	07:00	08:00	08:00	07:00	06:00	05:00	00:00	07:00				09:00	08:00		
Vol.	1	7	60	140	64	29	4	1	1				1	270		
Midday Peak		12:00	11:00	12:00	11:00	13:00	11:00							12:00		
Vol.		6	25	81	64	10	2							160		
PM Peak		16:00	17:00	17:00	18:00	15:00	18:00	17:00						17:00		
Vol.		1	13	78	55	15	4	1						158		

% iles

15th Percentile : 24 MPH
50th Percentile : 28 MPH
85th Percentile : 34 MPH
95th Percentile : 37 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 1984
Percent in Pace : 76.0%
Number of Vehicles > 30 MPH : 908
Percent of Vehicles > 30 MPH : 34.8%
Mean Speed(Average) : 29 MPH

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WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	0	0	2	5	4	0	0	0	0	0	0	0	0	11	31	28
01:00	0	0	1	4	4	1	0	0	0	0	0	0	0	10	32	30
02:00	0	0	1	0	4	0	0	0	0	0	0	0	0	5	32	29
03:00	0	0	3	0	2	4	0	0	0	0	0	0	0	9	37	31
04:00	0	0	2	10	3	0	2	0	0	0	0	0	0	17	31	29
05:00	0	2	5	26	22	7	1	0	0	0	0	0	0	63	34	29
06:00	0	1	14	58	**76**	**18**	**7**	0	0	0	0	0	0	174	34	30
07:00	1	**13**	52	106	59	7	1	0	0	0	0	0	0	239	32	27
08:00	2	6	**67**	**137**	49	5	3	0	0	0	0	0	0	**269**	31	27
09:00	**3**	13	60	113	60	9	1	0	0	0	0	0	0	259	32	27
10:00	0	6	15	92	48	16	0	0	0	0	0	0	0	177	33	28
11:00	0	1	36	98	**49**	7	1	0	0	0	0	0	0	192	32	28
12 PM	**1**	**5**	26	90	41	**10**	**2**	0	0	0	0	0	0	175	33	28
13:00	0	5	**43**	**105**	42	8	2	0	0	0	0	0	0	**205**	32	27
14:00	0	5	29	70	40	7	1	0	0	0	0	0	0	152	33	28
15:00	0	1	12	53	58	9	2	0	0	0	0	0	0	135	34	30
16:00	0	**3**	**18**	55	49	11	**5**	1	0	0	0	0	0	142	34	29
17:00	0	1	15	**80**	62	18	1	0	0	0	0	0	0	177	34	29
18:00	0	0	13	66	**72**	**25**	2	0	**1**	0	0	0	0	**179**	35	30
19:00	0	0	8	46	49	13	3	1	0	0	0	0	0	120	34	30
20:00	0	1	5	34	33	6	3	0	0	0	0	0	0	82	34	30
21:00	0	1	3	18	34	6	3	0	0	0	0	0	0	65	34	31
22:00	0	1	5	9	30	5	1	0	0	0	0	0	0	51	34	31
23:00	0	1	4	6	18	3	0	**2**	0	0	0	0	0	34	34	31
Total	7	66	439	1281	908	195	41	4	1	0	0	0	0	2942		
%	0.2%	2.2%	14.9%	43.5%	30.9%	6.6%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	07:00	08:00	08:00	06:00	06:00	06:00							08:00		
Vol.	3	13	67	137	76	18	7							269		
Midday Peak	12:00	12:00	13:00	13:00	11:00	12:00	12:00							13:00		
Vol.	1	5	43	105	49	10	2							205		
PM Peak		16:00	16:00	17:00	18:00	18:00	16:00	23:00	18:00					18:00		
Vol.		3	18	80	72	25	5	2	1					179		

% iles

15th Percentile : 24 MPH
50th Percentile : 28 MPH
85th Percentile : 33 MPH
95th Percentile : 37 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 2189
Percent in Pace : 74.4%
Number of Vehicles > 30 MPH : 967
Percent of Vehicles > 30 MPH : 32.9%
Mean Speed(Average) : 28 MPH

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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Email: datarequests@pdillc.com

Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) speed
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	1	2	7	12	4	0	**1**	0	0	0	0	0	27	35	31
01:00	2	1	0	12	7	1	0	0	0	0	0	0	0	23	32	26
02:00	0	2	2	3	2	0	0	0	0	0	0	0	0	9	30	25
03:00	0	1	1	7	9	4	0	0	0	0	0	0	0	22	35	30
04:00	0	3	11	18	14	3	0	0	0	0	0	0	0	49	33	27
05:00	1	4	15	48	63	28	**13**	1	0	0	0	0	0	173	37	31
06:00	4	14	45	132	115	**53**	8	1	0	0	0	0	0	372	35	29
07:00	0	21	87	229	**127**	12	0	0	**1**	0	0	0	0	477	32	27
08:00	**8**	**43**	**157**	**267**	107	15	1	0	0	0	0	0	0	**598**	31	26
09:00	3	20	115	235	119	25	1	0	0	0	0	0	**1**	519	32	27
10:00	1	7	58	148	111	30	3	0	0	0	0	0	0	358	34	28
11:00	0	4	47	119	**115**	18	3	0	0	0	0	0	0	306	33	29
12 PM	0	**15**	**60**	**155**	85	15	1	0	0	0	0	0	0	**331**	32	27
13:00	0	7	49	133	85	21	1	0	0	0	0	0	0	296	33	28
14:00	0	8	36	95	97	**31**	**7**	0	0	0	0	0	0	274	34	29
15:00	0	4	23	87	92	**35**	4	0	0	0	0	0	0	245	35	30
16:00	**1**	6	25	87	107	30	1	0	0	0	0	0	0	257	34	30
17:00	0	**9**	**54**	**156**	113	26	4	**1**	0	0	0	0	0	**363**	33	28
18:00	1	2	24	129	**127**	34	**8**	0	0	0	0	0	0	325	34	30
19:00	1	3	25	84	81	25	4	0	0	0	0	0	0	223	34	29
20:00	0	1	20	92	63	24	3	0	0	0	0	0	0	203	34	29
21:00	0	2	10	73	56	10	2	0	0	0	0	0	0	153	33	29
22:00	0	1	5	30	53	14	7	0	0	0	0	0	0	110	36	31
23:00	0	0	6	20	32	15	2	0	0	0	0	0	0	75	36	31
Total	22	179	877	2366	1792	473	73	4	1	0	0	0	1	5788		
%	0.4%	3.1%	15.2%	40.9%	31.0%	8.2%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	07:00	06:00	05:00	00:00	07:00				09:00	08:00		
Vol.	8	43	157	267	127	53	13	1	1				1	598		
Midday Peak		12:00	12:00	12:00	11:00	14:00	14:00							12:00		
Vol.		15	60	155	115	31	7							331		
PM Peak	16:00	17:00	17:00	17:00	18:00	15:00	18:00	17:00						17:00		
Vol.	1	9	54	156	127	35	8	1						363		

% iles

15th Percentile :	23 MPH
50th Percentile :	28 MPH
85th Percentile :	34 MPH
95th Percentile :	37 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4158
Percent in Pace :	71.8%
Number of Vehicles > 30 MPH :	1985
Percent of Vehicles > 30 MPH :	34.3%
Mean Speed(Average) :	28 MPH

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Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) speed
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	0	1	3	10	10	5	0	0	0	0	0	0	0	29	35	30
01:00	0	0	1	10	10	4	0	0	0	0	0	0	0	25	34	30
02:00	0	0	3	4	6	5	0	0	0	0	0	0	0	18	36	31
03:00	0	0	4	3	5	8	2	0	0	0	0	0	0	22	38	32
04:00	0	0	10	14	15	3	5	1	0	0	0	0	0	48	38	30
05:00	1	7	18	51	36	25	4	**2**	0	0	0	0	0	144	36	29
06:00	1	6	41	138	**138**	**36**	**17**	1	0	0	0	0	0	378	34	30
07:00	12	34	102	175	100	18	2	0	0	0	0	0	0	443	32	26
08:00	4	38	146	**261**	114	14	3	0	0	0	0	0	0	**580**	31	26
09:00	**15**	**43**	**150**	205	116	21	3	0	0	0	0	0	0	553	32	26
10:00	0	13	45	166	93	32	1	0	0	0	0	0	0	350	33	28
11:00	1	6	**69**	146	**89**	17	1	0	0	0	0	0	0	329	33	28
12 PM	**3**	**17**	66	152	74	**26**	**4**	0	0	0	0	0	0	**342**	33	27
13:00	3	9	68	**157**	71	12	4	0	0	0	0	0	0	324	32	27
14:00	1	11	46	136	67	19	2	**1**	**1**	0	0	0	0	284	33	28
15:00	**1**	**5**	30	101	107	28	5	1	0	0	0	0	0	278	34	29
16:00	0	5	**43**	116	110	23	6	1	0	0	0	0	0	304	34	29
17:00	0	4	39	**145**	**141**	34	**10**	0	0	0	0	0	0	373	34	30
18:00	0	1	33	145	138	**50**	7	**3**	**1**	0	0	0	0	**378**	35	30
19:00	0	3	23	105	91	32	7	3	0	0	0	0	0	264	35	30
20:00	0	2	17	67	64	26	4	0	0	0	0	0	0	180	35	30
21:00	0	3	12	55	60	15	5	0	0	0	0	0	0	150	34	30
22:00	0	5	14	35	60	13	7	0	0	0	0	0	0	134	34	30
23:00	1	1	10	16	33	11	5	3	0	0	0	0	0	80	37	31
Total	43	214	993	2413	1748	477	104	16	2	0	0	0	0	6010		
%	0.7%	3.6%	16.5%	40.1%	29.1%	7.9%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	09:00	08:00	06:00	06:00	06:00	05:00						08:00		
Vol.	15	43	150	261	138	36	17	2						580		
Midday Peak	12:00	12:00	11:00	13:00	11:00	12:00	12:00	14:00	14:00					12:00		
Vol.	3	17	69	157	89	26	4	1	1					342		
PM Peak	15:00	15:00	16:00	17:00	17:00	18:00	17:00	18:00	18:00					18:00		
Vol.	1	5	43	145	141	50	10	3	1					378		

% iles

15th Percentile :	23 MPH
50th Percentile :	28 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4161
Percent in Pace :	69.2%
Number of Vehicles > 30 MPH :	1997
Percent of Vehicles > 30 MPH :	33.2%
Mean Speed(Average) :	28 MPH

PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
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Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) class
Site Code: 10082.00

WB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	14	2	0	0	1	0	0	0	0	0	0	0	17
01:00	2	11	0	1	0	1	0	0	1	0	0	0	0	16
02:00	0	4	1	1	1	1	0	0	0	0	0	0	0	8
03:00	0	4	3	2	1	1	0	1	0	0	0	0	0	12
04:00	0	13	3	0	3	8	0	1	0	1	0	0	0	29
05:00	0	43	25	11	10	8	0	0	2	1	0	0	0	100
06:00	1	135	29	13	12	8	0	1	1	0	0	0	0	200
07:00	1	181	22	13	14	4	0	2	7	2	0	0	0	246
08:00	2	255	38	4	13	11	0	2	3	0	0	0	0	328
09:00	1	206	29	10	23	4	0	3	0	0	0	0	0	276
10:00	0	117	18	9	8	7	1	1	2	0	0	0	0	163
11:00	3	96	25	5	11	3	1	2	1	0	0	0	0	147
12 M	P 1	120	21	10	7	5	2	2	2	1	0	0	0	171
13:00	0	122	17	8	5	2	0	1	4	0	0	0	0	159
14:00	0	105	24	10	7	2	0	3	2	0	0	0	0	153
15:00	0	110	20	10	5	0	0	1	1	0	0	0	0	147
16:00	0	111	11	12	4	0	0	2	1	1	0	0	0	142
17:00	0	174	15	4	7	1	0	3	0	1	0	0	0	205
18:00	0	163	14	9	5	0	0	1	1	1	0	0	0	194
19:00	1	106	12	5	3	0	0	0	2	0	0	0	0	129
20:00	0	121	4	0	0	0	0	0	0	0	0	0	0	125
21:00	0	81	7	2	2	0	0	0	2	1	0	0	0	95
22:00	1	61	6	0	1	0	0	0	1	0	0	0	0	70
23:00	0	41	3	0	0	0	0	0	0	0	0	0	0	44
Total	13	2394	349	139	142	67	4	26	33	9	0	0	0	3176
Percent	0.4%	75.4%	11.0%	4.4%	4.5%	2.1%	0.1%	0.8%	1.0%	0.3%	0.0%	0.0%	0.0%	
AM Peak	01:00	08:00	08:00	06:00	09:00	08:00		09:00	07:00	07:00				08:00
Vol.	2	255	38	13	23	11		3	7	2				328
Midday Peak	11:00	13:00	11:00	12:00	11:00	12:00	12:00	14:00	13:00	12:00				12:00
Vol.	3	122	25	10	11	5	2	3	4	1				171
PM Peak	19:00	17:00	15:00	16:00	17:00	17:00		17:00	19:00	16:00				17:00
Vol.	1	174	20	12	7	1		3	2	1				205

PRECISION
D A T A
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Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) class
Site Code: 10082.00

WB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	16	1	0	1	0	0	0	0	0	0	0	0	18
01:00	1	13	0	1	0	0	0	0	0	0	0	0	0	15
02:00	0	11	1	0	1	0	0	0	0	0	0	0	0	13
03:00	0	4	2	2	1	4	0	0	0	0	0	0	0	13
04:00	0	13	7	1	3	6	0	0	0	1	0	0	0	31
05:00	0	43	16	11	3	4	0	2	1	1	0	0	0	81
06:00	1	128	35	14	14	5	0	4	3	0	0	0	0	204
07:00	2	154	19	6	12	4	0	2	4	1	0	0	0	204
08:00	0	247	28	9	10	9	0	3	3	2	0	0	0	311
09:00	2	218	31	13	16	8	2	2	2	0	0	0	0	294
10:00	0	129	15	13	7	5	3	0	1	0	0	0	0	173
11:00	0	97	18	2	9	4	5	1	0	1	0	0	0	137
12 M P	0	119	26	11	4	4	0	1	2	0	0	0	0	167
13:00	1	81	17	2	11	4	0	2	1	0	0	0	0	119
14:00	1	101	17	7	4	0	0	1	1	0	0	0	0	132
15:00	1	110	18	5	7	1	0	0	1	0	0	0	0	143
16:00	2	128	9	9	11	1	0	2	0	0	0	0	0	162
17:00	1	165	13	7	6	1	0	2	0	1	0	0	0	196
18:00	2	169	13	11	3	0	0	1	0	0	0	0	0	199
19:00	1	127	8	4	2	0	0	0	1	0	0	0	1	144
20:00	1	91	4	0	0	0	0	0	1	1	0	0	0	98
21:00	2	73	6	2	1	0	0	0	0	1	0	0	0	85
22:00	2	69	6	0	0	1	0	1	3	1	0	0	0	83
23:00	0	38	5	0	0	1	0	0	2	0	0	0	0	46
Total	20	2344	315	130	126	62	10	24	26	10	0	0	1	3068
Percent	0.7%	76.4%	10.3%	4.2%	4.1%	2.0%	0.3%	0.8%	0.8%	0.3%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	06:00	06:00	09:00	08:00	09:00	06:00	07:00	08:00				08:00
Vol.	2	247	35	14	16	9	2	4	4	2				311
Midday Peak	13:00	12:00	12:00	12:00	13:00	11:00	11:00	13:00	12:00	11:00				12:00
Vol.	1	119	26	11	11	4	5	2	2	1				167
PM Peak	16:00	18:00	15:00	18:00	16:00	15:00		16:00	22:00	17:00			19:00	18:00
Vol.	2	169	18	11	11	1	2		3	1			1	199

PRECISION
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Binney Street (WB) between
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Client: VHB/M. Miller

91863 A (WB) class
Site Code: 10082.00

WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/0 9	0	8	2	0	0	0	0	0	0	0	0	0	0	10
01:00	0	6	0	0	0	0	0	0	1	0	0	0	0	7
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	8	0	1	0	1	0	0	0	0	0	0	0	10
04:00	0	12	0	2	1	5	0	0	0	0	0	0	0	20
05:00	0	49	15	2	5	2	0	0	0	0	0	0	0	73
06:00	1	122	29	4	11	3	0	2	0	0	0	0	0	172
07:00	0	184	23	4	14	2	1	2	1	0	0	0	0	231
08:00	0	227	20	5	12	4	1	1	0	0	0	0	0	270
09:00	0	196	15	5	19	6	0	0	2	0	0	0	0	243
10:00	0	140	31	10	7	4	0	2	1	0	0	0	0	195
11:00	0	107	30	8	10	4	0	0	0	0	0	0	0	159
12 PM	0	126	10	5	13	5	0	1	0	0	0	0	0	160
13:00	0	108	14	7	5	2	0	0	1	0	0	0	0	137
14:00	0	94	15	7	5	0	0	0	0	0	0	0	0	121
15:00	0	73	12	5	4	3	1	0	0	0	0	0	0	98
16:00	0	103	7	4	1	0	0	0	0	0	0	0	0	115
17:00	0	140	11	3	4	0	0	0	0	0	0	0	0	158
18:00	1	114	8	5	2	0	0	1	0	0	0	0	0	131
19:00	0	84	4	3	3	0	0	0	0	0	0	0	0	94
20:00	0	73	5	0	0	0	0	0	0	0	0	0	0	78
21:00	0	55	2	1	0	0	0	0	0	0	0	0	0	58
22:00	0	37	3	0	0	0	0	0	0	0	0	0	0	40
23:00	0	25	5	0	0	0	0	0	1	0	0	0	0	31
Total	2	2092	261	81	116	41	3	9	7	0	0	0	0	2612
Percent	0.1%	80.1%	10.0%	3.1%	4.4%	1.6%	0.1%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	08:00	09:00	09:00	07:00	06:00	09:00					08:00
Vol.	1	227	29	5	19	6	1	2	2					270
Midday Peak		12:00	11:00	11:00	12:00	12:00		12:00	13:00					12:00
Vol.		126	30	8	13	5		1	1					160
PM Peak	18:00	17:00	15:00	15:00	15:00	15:00	15:00	18:00	23:00					17:00
Vol.	1	140	12	5	4	3	1	1	1					158

PRECISION
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91863 A (WB) class
Site Code: 10082.00

WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/0 9	0	9	1	0	1	0	0	0	0	0	0	0	0	11
01:00	0	7	0	0	1	1	0	0	1	0	0	0	0	10
02:00	0	3	0	0	1	1	0	0	0	0	0	0	0	5
03:00	0	6	1	0	0	2	0	0	0	0	0	0	0	9
04:00	0	10	3	0	0	3	0	0	1	0	0	0	0	17
05:00	0	39	12	2	6	2	0	2	0	0	0	0	0	63
06:00	1	125	29	8	6	5	0	0	0	0	0	0	0	174
07:00	0	176	24	6	15	8	1	5	4	0	0	0	0	239
08:00	0	222	24	8	8	5	1	1	0	0	0	0	0	269
09:00	1	188	28	10	18	10	0	1	2	1	0	0	0	259
10:00	1	127	19	11	13	4	0	0	2	0	0	0	0	177
11:00	0	135	30	7	15	3	0	0	2	0	0	0	0	192
12 PM	0	131	16	8	12	4	1	2	1	0	0	0	0	175
13:00	1	146	28	10	9	2	0	1	7	1	0	0	0	205
14:00	0	112	20	8	9	0	0	2	1	0	0	0	0	152
15:00	0	106	20	6	3	0	0	0	0	0	0	0	0	135
16:00	0	122	12	3	4	1	0	0	0	0	0	0	0	142
17:00	0	158	11	4	3	1	0	0	0	0	0	0	0	177
18:00	0	163	13	3	0	0	0	0	0	0	0	0	0	179
19:00	0	104	8	1	5	0	0	1	1	0	0	0	0	120
20:00	0	75	7	0	0	0	0	0	0	0	0	0	0	82
21:00	0	64	1	0	0	0	0	0	0	0	0	0	0	65
22:00	1	47	3	0	0	0	0	0	0	0	0	0	0	51
23:00	0	31	2	0	0	0	0	0	1	0	0	0	0	34
Total	5	2306	312	95	129	52	3	15	23	2	0	0	0	2942
Percent	0.2%	78.4%	10.6%	3.2%	4.4%	1.8%	0.1%	0.5%	0.8%	0.1%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	09:00	09:00	09:00	07:00	07:00	07:00	09:00				08:00
Vol.	1	222	29	10	18	10	1	5	4	1				269
Midday Peak	13:00	13:00	11:00	13:00	11:00	12:00	12:00	12:00	13:00	13:00				13:00
Vol.	1	146	30	10	15	4	1	2	7	1				205
PM Peak	22:00	18:00	15:00	15:00	19:00	16:00		19:00	19:00					18:00
Vol.	1	163	20	6	5	1		1	1					179

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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Email: datarequests@pdillc.com

Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) class
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/0 9	0	22	4	0	0	1	0	0	0	0	0	0	0	27
01:00	2	17	0	1	0	1	0	0	2	0	0	0	0	23
02:00	0	5	1	1	1	1	0	0	0	0	0	0	0	9
03:00	0	12	3	3	1	2	0	1	0	0	0	0	0	22
04:00	0	25	3	2	4	13	0	1	0	1	0	0	0	49
05:00	0	92	40	13	15	10	0	0	2	1	0	0	0	173
06:00	2	257	58	17	23	11	0	3	1	0	0	0	0	372
07:00	1	365	45	17	28	6	1	4	8	2	0	0	0	477
08:00	2	482	58	9	25	15	1	3	3	0	0	0	0	598
09:00	1	402	44	15	42	10	0	3	2	0	0	0	0	519
10:00	0	257	49	19	15	11	1	3	3	0	0	0	0	358
11:00	3	203	55	13	21	7	1	2	1	0	0	0	0	306
12 PM	1	246	31	15	20	10	2	3	2	1	0	0	0	331
13:00	0	230	31	15	10	4	0	1	5	0	0	0	0	296
14:00	0	199	39	17	12	2	0	3	2	0	0	0	0	274
15:00	0	183	32	15	9	3	1	1	1	0	0	0	0	245
16:00	0	214	18	16	5	0	0	2	1	1	0	0	0	257
17:00	0	314	26	7	11	1	0	3	0	1	0	0	0	363
18:00	1	277	22	14	7	0	0	2	1	1	0	0	0	325
19:00	1	190	16	8	6	0	0	0	2	0	0	0	0	223
20:00	0	194	9	0	0	0	0	0	0	0	0	0	0	203
21:00	0	136	9	3	2	0	0	0	2	1	0	0	0	153
22:00	1	98	9	0	1	0	0	0	1	0	0	0	0	110
23:00	0	66	8	0	0	0	0	0	1	0	0	0	0	75
Total	15	4486	610	220	258	108	7	35	40	9	0	0	0	5788
Percent	0.3%	77.5%	10.5%	3.8%	4.5%	1.9%	0.1%	0.6%	0.7%	0.2%	0.0%	0.0%	0.0%	
AM Peak	01:00	08:00	06:00	06:00	09:00	08:00	07:00	07:00	07:00	07:00				08:00
Vol.	2	482	58	17	42	15	1	4	8	2				598
Midday Peak	11:00	12:00	11:00	14:00	11:00	12:00	12:00	12:00	13:00	12:00				12:00
Vol.	3	246	55	17	21	10	2	3	5	1				331
PM Peak	18:00	17:00	15:00	16:00	17:00	15:00	15:00	17:00	19:00	16:00				17:00
Vol.	1	314	32	16	11	3	1	3	2	1				363

PRECISION
D A T A
INDUSTRIES, LLC
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Email: datarequests@pdillc.com

Binney Street (WB) between
Second Street and Third Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 A (WB) class
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	25	2	0	2	0	0	0	0	0	0	0	0	29
01:00	1	20	0	1	1	1	0	0	1	0	0	0	0	25
02:00	0	14	1	0	2	1	0	0	0	0	0	0	0	18
03:00	0	10	3	2	1	6	0	0	0	0	0	0	0	22
04:00	0	23	10	1	3	9	0	0	1	1	0	0	0	48
05:00	0	82	28	13	9	6	0	4	1	1	0	0	0	144
06:00	2	253	64	22	20	10	0	4	3	0	0	0	0	378
07:00	2	330	43	12	27	12	1	7	8	1	0	0	0	443
08:00	0	469	52	17	18	14	1	4	3	2	0	0	0	580
09:00	3	406	59	23	34	18	2	3	4	1	0	0	0	553
10:00	1	256	34	24	20	9	3	0	3	0	0	0	0	350
11:00	0	232	48	9	24	7	5	1	2	1	0	0	0	329
12 PM	0	250	42	19	16	8	1	3	3	0	0	0	0	342
13:00	2	227	45	12	20	6	0	3	8	1	0	0	0	324
14:00	1	213	37	15	13	0	0	3	2	0	0	0	0	284
15:00	1	216	38	11	10	1	0	0	1	0	0	0	0	278
16:00	2	250	21	12	15	2	0	2	0	0	0	0	0	304
17:00	1	323	24	11	9	2	0	2	0	1	0	0	0	373
18:00	2	332	26	14	3	0	0	1	0	0	0	0	0	378
19:00	1	231	16	5	7	0	0	1	2	0	0	0	1	264
20:00	1	166	11	0	0	0	0	0	1	1	0	0	0	180
21:00	2	137	7	2	1	0	0	0	0	1	0	0	0	150
22:00	3	116	9	0	0	1	0	1	3	1	0	0	0	134
23:00	0	69	7	0	0	1	0	0	3	0	0	0	0	80
Total	25	4650	627	225	255	114	13	39	49	12	0	0	1	6010
Percent	0.4%	77.4%	10.4%	3.7%	4.2%	1.9%	0.2%	0.6%	0.8%	0.2%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	06:00	09:00	09:00	09:00	09:00	07:00	07:00	08:00				08:00
Vol.	3	469	64	23	34	18	2	7	8	2				580
Midday Peak	13:00	12:00	11:00	12:00	11:00	12:00	11:00	12:00	13:00	11:00				12:00
Vol.	2	250	48	19	24	8	5	3	8	1				342
PM Peak	22:00	18:00	15:00	18:00	16:00	16:00		16:00	22:00	17:00			19:00	18:00
Vol.	3	332	38	14	15	2	2		3	1			1	378

Third Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

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91863 B volume
Site Code: 10082.00

Start	NB				SB				Combined				04-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Mon
12:00	*		57		*		34		*		91		
12:15	*		65		*		41		*		106		
12:30	*		45		*		36		*		81		
12:45	*	0	47	214	*	0	57	168	*	0	104	382	
01:00	*		61		*		48		*		109		
01:15	*		50		*		42		*		92		
01:30	*		54		*		46		*		100		
01:45	*	0	51	216	*	0	43	179	*	0	94	395	
02:00	*		58		*		54		*		112		
02:15	*		73		*		52		*		125		
02:30	*		73		*		56		*		129		
02:45	*	0	65	269	*	0	49	211	*	0	114	480	
03:00	*		91		*		37		*		128		
03:15	*		114		*		48		*		162		
03:30	*		116		*		43		*		159		
03:45	*	0	108	429	*	0	42	170	*	0	150	599	
04:00	*		135		*		41		*		176		
04:15	*		133		*		48		*		181		
04:30	*		125		*		51		*		176		
04:45	*	0	132	525	*	0	54	194	*	0	186	719	
05:00	*		153		*		53		*		206		
05:15	*		182		*		47		*		229		
05:30	*		146		*		40		*		186		
05:45	*	0	135	616	*	0	43	183	*	0	178	799	
06:00	*		109		*		42		*		151		
06:15	*		121		*		42		*		163		
06:30	*		90		*		44		*		134		
06:45	*	0	83	403	*	0	49	177	*	0	132	580	
07:00	*		75		*		39		*		114		
07:15	40		55		80		32		120		87		
07:30	31		61		101		25		132		86		
07:45	30	101	40	231	114	295	32	128	144	396	72	359	
08:00	32		41		115		28		147		69		
08:15	34		35		107		24		141		59		
08:30	37		32		116		20		153		52		
08:45	56	159	21	129	111	449	15	87	167	608	36	216	
09:00	47		27		120		22		167		49		
09:15	45		24		132		14		177		38		
09:30	49		32		96		19		145		51		
09:45	33	174	26	109	84	432	15	70	117	606	41	179	
10:00	36		29		61		16		97		45		
10:15	48		23		45		16		93		39		
10:30	33		14		45		14		78		28		
10:45	52	169	23	89	51	202	24	70	103	371	47	159	
11:00	35		27		43		9		78		36		
11:15	40		14		41		13		81		27		
11:30	61		18		35		10		96		28		
11:45	45	181	11	70	51	170	8	40	96	351	19	110	
Total	784		3300		1548		1677		2332		4977		
Percent	33.6%		66.3%		66.4%		33.7%						
Day Total	4084				3225				7309				
Peak	08:45		05:00		08:30		02:00		08:30		04:45		
Vol.	197		616		479		211		664		807		
P.H.F.	0.879		0.846		0.907		0.942		0.938		0.881		

Third Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
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91863 B volume
Site Code: 10082.00

Start	NB				SB				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	23		70		8		32		31		102		
12:15	19		64		8		62		27		126		
12:30	11		55		7		50		18		105		
12:45	13	66	51	240	2	25	41	185	15	91	92	425	
01:00	6		52		1		44		7		96		
01:15	10		53		3		31		13		84		
01:30	6		55		2		44		8		99		
01:45	4	26	43	203	3	9	52	171	7	35	95	374	
02:00	8		59		3		49		11		108		
02:15	10		73		4		46		14		119		
02:30	3		62		0		26		3		88		
02:45	2	23	67	261	0	7	50	171	2	30	117	432	
03:00	3		95		1		48		4		143		
03:15	6		95		0		46		6		141		
03:30	1		115		3		51		4		166		
03:45	0	10	114	419	4	8	59	204	4	18	173	623	
04:00	6		141		1		47		7		188		
04:15	1		141		2		37		3		178		
04:30	7		147		6		43		13		190		
04:45	4	18	140	569	7	16	59	186	11	34	199	755	
05:00	2		166		5		49		7		215		
05:15	9		144		20		54		29		198		
05:30	13		145		32		58		45		203		
05:45	17	41	138	593	36	93	48	209	53	134	186	802	
06:00	19		127		49		43		68		170		
06:15	15		117		83		42		98		159		
06:30	23		114		102		39		125		153		
06:45	15	72	90	448	103	337	46	170	118	409	136	618	
07:00	26		74		100		36		126		110		
07:15	31		70		93		33		124		103		
07:30	30		52		107		32		137		84		
07:45	29	116	57	253	107	407	32	133	136	523	89	386	
08:00	45		50		105		34		150		84		
08:15	38		43		125		23		163		66		
08:30	29		39		119		15		148		54		
08:45	47	159	37	169	128	477	21	93	175	636	58	262	
09:00	43		30		120		22		163		52		
09:15	47		33		112		25		159		58		
09:30	37		31		115		17		152		48		
09:45	40	167	28	122	102	449	17	81	142	616	45	203	
10:00	39		28		68		19		107		47		
10:15	39		16		64		22		103		38		
10:30	39		27		52		18		91		45		
10:45	59	176	12	83	48	232	14	73	107	408	26	156	
11:00	59		32		37		19		96		51		
11:15	42		17		39		16		81		33		
11:30	71		15		36		7		107		22		
11:45	53	225	14	78	48	160	13	55	101	385	27	133	
Total	1099		3438		2220		1731		3319		5169		
Percent	33.1%		66.5%		66.9%		33.5%						
Day Total	4537				3951				8488				
Peak	10:45		04:30		08:15		04:45		08:15		04:45		
Vol.	231		597		492		220		649		815		
P.H.F.	0.813		0.899		0.961		0.932		0.927		0.948		

Third Street between
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91863 B volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	30		90		7		0		37		90		
12:15	7		87		4		0		11		87		
12:30	11		78		5		0		16		78		
12:45	15	63	84	339	4	20	0	0	19	83	84	339	
01:00	10		88		3		0		13		88		
01:15	3		84		5		0		8		84		
01:30	5		83		0		0		5		83		
01:45	5	23	83	338	3	11	0	0	8	34	83	338	
02:00	4		73		1		0		5		73		
02:15	4		84		1		0		5		84		
02:30	5		92		2		0		7		92		
02:45	4	17	93	342	3	7	0	0	7	24	93	342	
03:00	4		102		1		0		5		102		
03:15	3		108		1		26		4		134		
03:30	4		112		2		40		6		152		
03:45	3	14	115	437	0	4	33	99	3	18	148	536	
04:00	2		120		3		52		5		172		
04:15	4		123		2		51		6		174		
04:30	5		150		5		50		10		200		
04:45	5	16	152	545	9	19	55	208	14	35	207	753	
05:00	4		136		12		57		16		193		
05:15	8		158		19		67		27		225		
05:30	14		127		26		53		40		180		
05:45	12	38	115	536	34	91	61	238	46	129	176	774	
06:00	19		143		45		57		64		200		
06:15	13		104		85		58		98		162		
06:30	23		112		71		73		94		185		
06:45	12	67	101	460	105	306	63	251	117	373	164	711	
07:00	34		69		81		52		115		121		
07:15	28		62		107		42		135		104		
07:30	25		82		96		26		121		108		
07:45	45	132	60	273	119	403	32	152	164	535	92	425	
08:00	35		40		114		29		149		69		
08:15	40		35		127		27		167		62		
08:30	37		40		138		19		175		59		
08:45	37	149	39	154	124	503	19	94	161	652	58	248	
09:00	43		34		127		20		170		54		
09:15	36		36		118		21		154		57		
09:30	94		46		25		24		119		70		
09:45	104	277	40	156	0	270	16	81	104	547	56	237	
10:00	95		25		0		18		95		43		
10:15	86		37		0		18		86		55		
10:30	69		33		0		23		69		56		
10:45	80	330	21	116	0	0	23	82	80	330	44	198	
11:00	94		36		0		15		94		51		
11:15	78		27		0		15		78		42		
11:30	75		23		0		8		75		31		
11:45	94	341	12	98	0	0	11	49	94	341	23	147	
Total	1467		3794		1634		1254		3101		5048		
Percent	47.3%		75.2%		52.7%		24.8%						
Day Total	5261				2888				8149				
Peak	09:30		04:30		08:15		06:00		08:15		04:30		
Vol.	379		596		516		251		673		825		
P.H.F.	0.911		0.943		0.935		0.860		0.961		0.917		

Third Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 B volume
Site Code: 10082.00

Start	NB				SB				Combined				07-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	24		*		10		*		34		*		
12:15	17		*		2		*		19		*		
12:30	11		*		2		*		13		*		
12:45	11	63	*	0	5	19	*	0	16	82	*	0	
01:00	9		*		2		*		11		*		
01:15	7		*		3		*		10		*		
01:30	5		*		3		*		8		*		
01:45	2	23	*	0	5	13	*	0	7	36	*	0	
02:00	4		*		3		*		7		*		
02:15	2		*		3		*		5		*		
02:30	9		*		2		*		11		*		
02:45	5	20	*	0	1	9	*	0	6	29	*	0	
03:00	4		*		1		*		5		*		
03:15	1		*		3		*		4		*		
03:30	4		*		3		*		7		*		
03:45	1	10	*	0	4	11	*	0	5	21	*	0	
04:00	2		*		1		*		3		*		
04:15	5		*		2		*		7		*		
04:30	2		*		9		*		11		*		
04:45	2	11	*	0	2	14	*	0	4	25	*	0	
05:00	1		*		10		*		11		*		
05:15	5		*		16		*		21		*		
05:30	11		*		23		*		34		*		
05:45	12	29	*	0	37	86	*	0	49	115	*	0	
06:00	10		*		46		*		56		*		
06:15	15		*		62		*		77		*		
06:30	15		*		75		*		90		*		
06:45	19	59	*	0	94	277	*	0	113	336	*	0	
07:00	28		*		94		*		122		*		
07:15	30		*		111		*		141		*		
07:30	27		*		109		*		136		*		
07:45	41	126	*	0	95	409	*	0	136	535	*	0	
08:00	46		*		116		*		162		*		
08:15	41		*		112		*		153		*		
08:30	37		*		121		*		158		*		
08:45	56	180	*	0	103	452	*	0	159	632	*	0	
09:00	48		*		119		*		167		*		
09:15	42		*		98		*		140		*		
09:30	*	*	*	*	*	*	*	*	*	*	*	*	
09:45	*	*	*	*	*	*	*	*	*	*	*	*	
10:00	*	*	*	*	*	*	*	*	*	*	*	*	
10:15	*	*	*	*	*	*	*	*	*	*	*	*	
10:30	*	*	*	*	*	*	*	*	*	*	*	*	
10:45	*	*	*	*	*	*	*	*	*	*	*	*	
11:00	*	*	*	*	*	*	*	*	*	*	*	*	
11:15	*	*	*	*	*	*	*	*	*	*	*	*	
11:30	*	*	*	*	*	*	*	*	*	*	*	*	
11:45	*	*	*	*	*	*	*	*	*	*	*	*	
Total	611		0		1507		0		2118		0		
Percent	28.8%		0.0%		71.2%		0.0%						
Day Total		521			1290				1811				
Peak	08:30				08:15				08:15				
Vol.	183				455				637				
P.H.F.	0.817				0.940				0.954				

PRECISION
D A T A
INDUSTRIES, LLC
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Third Street between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 B speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	4	**40**	**81**	32	2	0	0	0	0	0	0	0	0	159	26	22
09:00	**15**	33	81	**35**	**10**	0	0	0	0	0	0	0	0	**174**	27	21
10:00	19	33	74	35	8	0	0	0	0	0	0	0	0	169	27	21
11:00	**12**	29	78	58	4	0	0	0	0	0	0	0	0	181	27	22
12 M	P 7	43	107	49	8	0	0	0	0	0	0	0	0	214	27	22
13:00	4	29	121	53	9	0	0	0	0	0	0	0	0	216	27	23
14:00	6	**61**	**124**	**64**	**12**	**1**	**1**	0	0	0	0	0	0	**269**	27	22
15:00	27	77	197	**117**	9	**2**	0	0	0	0	0	0	0	429	27	22
16:00	39	114	250	105	16	1	0	0	0	0	0	0	0	525	27	21
17:00	**77**	**204**	**265**	61	7	2	0	0	0	0	0	0	0	**616**	24	19
18:00	13	87	191	95	**17**	0	0	0	0	0	0	0	0	403	27	22
19:00	4	35	109	65	17	1	0	0	0	0	0	0	0	231	28	23
20:00	2	12	51	53	11	0	0	0	0	0	0	0	0	129	29	24
21:00	1	17	61	26	3	1	0	0	0	0	0	0	0	109	27	23
22:00	2	11	48	23	5	0	0	0	0	0	0	0	0	89	27	23
23:00	1	14	31	18	5	1	0	0	0	0	0	0	0	70	28	23
Total	233	839	1869	889	143	9	1	0	0	0	0	0	0	3983		
%	5.8%	21.1%	46.9%	22.3%	3.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	09:00	09:00									09:00		
Vol.	15	40	81	35	10									174		
Midday Peak	11:00	14:00	14:00	14:00	14:00	14:00	14:00							14:00		
Vol.	12	61	124	64	12	1	1							269		
PM Peak	17:00	17:00	17:00	15:00	18:00	15:00								17:00		
Vol.	77	204	265	117	17	2								616		

% iles

15th Percentile :	17 MPH
50th Percentile :	22 MPH
85th Percentile :	27 MPH
95th Percentile :	29 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	2758
Percent in Pace :	69.2%
Number of Vehicles > 25 MPH :	864
Percent of Vehicles > 25 MPH :	21.7%
Mean Speed(Average) :	22 MPH

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91863 B speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	2	29	25	8	**2**	0	0	0	0	0	0	0	66	29	25
01:00	1	1	12	9	3	0	0	0	0	0	0	0	0	26	28	24
02:00	1	5	6	7	4	0	0	0	0	0	0	0	0	23	30	24
03:00	0	0	2	7	1	0	0	0	0	0	0	0	0	10	28	26
04:00	1	2	4	9	0	2	0	0	0	0	0	0	0	18	28	25
05:00	2	5	19	10	5	0	0	0	0	0	0	0	0	41	29	23
06:00	2	8	34	21	7	0	0	0	0	0	0	0	0	72	28	24
07:00	2	24	49	29	**10**	2	0	0	0	0	0	0	0	116	28	23
08:00	5	**46**	77	26	5	0	0	0	0	0	0	0	0	159	26	21
09:00	**9**	30	**80**	**40**	7	1	0	0	0	0	0	0	0	**167**	27	22
10:00	4	27	98	39	8	0	0	0	0	0	0	0	0	176	27	23
11:00	**11**	36	97	**70**	**11**	0	0	0	0	0	0	0	0	225	28	23
12 PM	10	**60**	128	36	4	**2**	0	0	0	0	0	0	0	240	25	21
13:00	4	41	105	48	5	0	0	0	0	0	0	0	0	203	27	22
14:00	8	43	**138**	69	2	1	0	0	0	0	0	0	0	**261**	27	22
15:00	31	55	218	102	13	0	0	0	0	0	0	0	0	419	27	22
16:00	32	126	**286**	**111**	**14**	0	0	0	0	0	0	0	0	569	26	21
17:00	**185**	**163**	204	38	3	0	0	0	0	0	0	0	0	**593**	23	16
18:00	29	123	206	83	5	**2**	0	0	0	0	0	0	0	448	26	21
19:00	9	48	128	63	4	1	0	0	0	0	0	0	0	253	27	22
20:00	2	19	81	62	5	0	0	0	0	0	0	0	0	169	28	23
21:00	3	17	47	48	6	1	0	0	0	0	0	0	0	122	28	24
22:00	0	9	42	28	3	1	0	0	0	0	0	0	0	83	28	24
23:00	1	2	23	38	13	1	0	0	0	0	0	0	0	78	30	26
Total	352	892	2113	1018	146	16	0	0	0	0	0	0	0	4537		
%	7.8%	19.7%	46.6%	22.4%	3.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	09:00	09:00	07:00	00:00								09:00		
Vol.	9	46	80	40	10	2								167		
Midday Peak	11:00	12:00	14:00	11:00	11:00	12:00								14:00		
Vol.	11	60	138	70	11	2								261		
PM Peak	17:00	17:00	16:00	16:00	16:00	18:00								17:00		
Vol.	185	163	286	111	14	2								593		

% iles

15th Percentile : 16 MPH
50th Percentile : 22 MPH
85th Percentile : 27 MPH
95th Percentile : 29 MPH

Stats

10 MPH Pace Speed : 20-29 MPH
Number in Pace : 3131
Percent in Pace : 69.0%
Number of Vehicles > 25 MPH : 976
Percent of Vehicles > 25 MPH : 21.5%
Mean Speed(Average) : 21 MPH

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91863 B speed
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NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	1	4	18	**31**	9	0	0	0	0	0	0	0	0	63	29	25
01:00	0	2	8	6	6	1	0	0	0	0	0	0	0	23	32	26
02:00	0	1	4	7	2	**3**	0	0	0	0	0	0	0	17	34	28
03:00	0	3	2	7	2	0	0	0	0	0	0	0	0	14	29	24
04:00	0	1	5	10	0	0	0	0	0	0	0	0	0	16	28	25
05:00	2	6	17	12	1	0	0	0	0	0	0	0	0	38	27	22
06:00	1	11	27	24	4	0	0	0	0	0	0	0	0	67	28	23
07:00	5	21	66	28	**10**	2	0	0	0	0	0	0	0	132	28	23
08:00	15	**32**	72	27	3	0	0	0	0	0	0	0	0	149	26	21
09:00	**17**	23	**218**	18	1	0	0	0	0	0	0	0	0	**277**	24	21
10:00	0	0	330	0	0	0	0	0	0	0	0	0	0	330	24	22
11:00	0	0	341	0	0	0	0	0	0	0	0	0	0	341	24	22
12 M P	0	0	339	0	0	0	0	0	0	0	0	0	0	339	24	22
13:00	0	0	338	0	0	0	0	0	0	0	0	0	0	338	24	22
14:00	0	0	**342**	0	0	0	0	0	0	0	0	0	0	**342**	24	22
15:00	37	37	**216**	102	36	8	1	0	0	0	0	0	0	437	28	23
16:00	26	75	191	**200**	**42**	**10**	1	0	0	0	0	0	0	**545**	29	24
17:00	**76**	**88**	209	122	38	3	0	0	0	0	0	0	0	536	28	21
18:00	27	45	212	137	33	6	0	0	0	0	0	0	0	460	28	23
19:00	14	35	87	104	27	5	1	0	0	0	0	0	0	273	29	24
20:00	1	14	49	57	26	7	0	0	0	0	0	0	0	154	31	26
21:00	3	10	50	54	32	7	0	0	0	0	0	0	0	156	32	26
22:00	4	5	36	39	24	7	0	**1**	0	0	0	0	0	116	32	26
23:00	0	1	23	49	21	2	**2**	0	0	0	0	0	0	98	32	27
Total	229	414	3200	1034	317	61	5	1	0	0	0	0	0	5261		
%	4.4%	7.9%	60.8%	19.7%	6.0%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	09:00	00:00	07:00	02:00								09:00		
Vol.	17	32	218	31	10	3								277		
Midday Peak			14:00											14:00		
Vol.			342											342		
PM Peak	17:00	17:00	15:00	16:00	16:00	16:00	23:00	22:00						16:00		
Vol.	76	88	216	200	42	10	2	1						545		

% iles

15th Percentile :	20 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	4234
Percent in Pace :	80.5%
Number of Vehicles > 25 MPH :	1211
Percent of Vehicles > 25 MPH :	23.0%
Mean Speed(Average) :	23 MPH

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NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/07/09	1	2	10	25	**21**	4	0	0	0	0	0	0	0	63	33	28
01:00	0	0	8	7	6	2	0	0	0	0	0	0	0	23	33	27
02:00	0	1	7	9	2	0	0	**1**	0	0	0	0	0	20	29	26
03:00	0	1	0	5	3	1	0	0	0	0	0	0	0	10	31	28
04:00	0	1	3	5	2	0	0	0	0	0	0	0	0	11	29	26
05:00	0	4	6	14	3	2	0	0	0	0	0	0	0	29	30	26
06:00	2	7	15	19	8	6	**2**	0	0	0	0	0	0	59	33	26
07:00	**13**	15	41	33	16	**8**	0	0	0	0	0	0	0	126	31	23
08:00	9	**32**	**73**	**40**	21	5	0	0	0	0	0	0	0	**180**	29	23
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 M P	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	25	63	163	157	82	28	2	1	0	0	0	0	0	521		
%	4.8%	12.1%	31.3%	30.1%	15.7%	5.4%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	08:00	00:00	07:00	06:00	02:00						08:00		
Vol.	13	32	73	40	21	8	2	1						180		
Midday Peak Vol.																
PM Peak Vol.																

% iles

15th Percentile :	19 MPH
50th Percentile :	25 MPH
85th Percentile :	32 MPH
95th Percentile :	35 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	320
Percent in Pace :	61.4%
Number of Vehicles > 25 MPH :	238
Percent of Vehicles > 25 MPH :	45.7%
Mean Speed(Average) :	25 MPH

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SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	132	**156**	**146**	**13**	**2**	0	0	0	0	0	0	0	0	**449**	23	16
09:00	**152**	149	126	5	0	0	0	0	0	0	0	0	0	432	22	15
10:00	55	63	71	13	0	0	0	0	0	0	0	0	0	202	23	17
11:00	37	57	60	**14**	**2**	0	0	0	0	0	0	0	0	170	24	18
12 M	P 56	49	59	4	0	0	0	0	0	0	0	0	0	168	23	16
13:00	**57**	43	67	12	0	0	0	0	0	0	0	0	0	179	23	16
14:00	47	**69**	**83**	12	0	0	0	0	0	0	0	0	0	**211**	23	18
15:00	29	67	63	**11**	0	0	0	0	0	0	0	0	0	170	23	18
16:00	**54**	46	**86**	6	**2**	0	0	0	0	0	0	0	0	**194**	23	17
17:00	50	65	65	3	0	0	0	0	0	0	0	0	0	183	23	16
18:00	33	**69**	65	10	0	0	0	0	0	0	0	0	0	177	23	18
19:00	25	45	47	10	1	0	0	0	0	0	0	0	0	128	24	18
20:00	14	30	39	4	0	0	0	0	0	0	0	0	0	87	23	18
21:00	12	29	27	2	0	0	0	0	0	0	0	0	0	70	23	18
22:00	15	24	25	5	1	0	0	0	0	0	0	0	0	70	23	18
23:00	6	17	15	2	0	0	0	0	0	0	0	0	0	40	23	18
Total	774	978	1044	126	8	0	0	0	0	0	0	0	0	2930		
%	26.4%	33.4%	35.6%	4.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	08:00	08:00									08:00		
Vol.	152	156	146	13	2									449		
Midday Peak	13:00	14:00	14:00	11:00	11:00									14:00		
Vol.	57	69	83	14	2									211		
PM Peak	16:00	18:00	16:00	15:00	16:00									16:00		
Vol.	54	69	86	11	2									194		

% iles

15th Percentile : 8 MPH
50th Percentile : 18 MPH
85th Percentile : 23 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 2022
Percent in Pace : 69.0%
Number of Vehicles > 25 MPH : 108
Percent of Vehicles > 25 MPH : 3.7%
Mean Speed(Average) : 17 MPH

PRECISION DATA INDUSTRIES, LLC
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Third Street between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 B speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	3	13	9	0	0	0	0	0	0	0	0	0	0	25	22	18
01:00	0	3	4	2	0	0	0	0	0	0	0	0	0	9	25	21
02:00	1	2	4	0	0	0	0	0	0	0	0	0	0	7	22	20
03:00	0	1	7	0	0	0	0	0	0	0	0	0	0	8	23	21
04:00	2	6	6	2	0	0	0	0	0	0	0	0	0	16	24	20
05:00	21	39	21	10	**2**	0	0	0	0	0	0	0	0	93	24	18
06:00	99	108	111	**19**	0	0	0	0	0	0	0	0	0	337	23	16
07:00	100	136	**152**	18	1	0	0	0	0	0	0	0	0	407	23	17
08:00	169	**159**	137	12	0	0	0	0	0	0	0	0	0	**477**	22	15
09:00	**186**	128	132	3	0	0	0	0	0	0	0	0	0	449	22	15
10:00	87	71	65	8	1	0	0	0	0	0	0	0	0	232	22	15
11:00	35	56	62	7	0	0	0	0	0	0	0	0	0	160	23	17
12 PM	**55**	**59**	64	7	0	0	0	0	0	0	0	0	0	**185**	23	16
13:00	41	52	**72**	6	0	0	0	0	0	0	0	0	0	171	23	17
14:00	34	58	71	**8**	0	0	0	0	0	0	0	0	0	171	23	18
15:00	**56**	59	79	9	1	0	0	0	0	0	0	0	0	204	23	17
16:00	39	57	80	9	1	0	0	0	0	0	0	0	0	186	23	18
17:00	49	**63**	**89**	7	1	0	0	0	0	0	0	0	0	**209**	23	17
18:00	41	48	78	3	0	0	0	0	0	0	0	0	0	170	23	17
19:00	24	56	49	4	0	0	0	0	0	0	0	0	0	133	23	18
20:00	12	49	22	10	0	0	0	0	0	0	0	0	0	93	23	18
21:00	12	33	27	9	0	0	0	0	0	0	0	0	0	81	24	18
22:00	4	33	27	7	**2**	0	0	0	0	0	0	0	0	73	24	20
23:00	4	15	24	**11**	1	0	0	0	0	0	0	0	0	55	26	21
Total	1074	1304	1392	171	10	0	0	0	0	0	0	0	0	3951		
%	27.2%	33.0%	35.2%	4.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	07:00	06:00	05:00									08:00		
Vol.	186	159	152	19	2									477		
Midday Peak	12:00	12:00	13:00	14:00										12:00		
Vol.	55	59	72	8										185		
PM Peak	15:00	17:00	17:00	23:00	22:00									17:00		
Vol.	56	63	89	11	2									209		

% iles

15th Percentile :	8 MPH
50th Percentile :	18 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	2696
Percent in Pace :	68.2%
Number of Vehicles > 25 MPH :	146
Percent of Vehicles > 25 MPH :	3.7%
Mean Speed(Average) :	17 MPH

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Client: VHB/M. Miller

91863 B speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	4	5	8	3	0	0	0	0	0	0	0	0	0	20	24	19
01:00	0	6	3	2	0	0	0	0	0	0	0	0	0	11	22	19
02:00	0	3	3	0	1	0	0	0	0	0	0	0	0	7	22	21
03:00	0	3	0	1	0	0	0	0	0	0	0	0	0	4	17	18
04:00	3	6	8	1	1	0	0	0	0	0	0	0	0	19	23	20
05:00	17	33	34	7	0	0	0	0	0	0	0	0	0	91	23	18
06:00	84	106	105	9	**2**	0	0	0	0	0	0	0	0	306	23	16
07:00	106	126	156	**13**	2	0	0	0	0	0	0	0	0	403	23	17
08:00	**169**	**171**	**159**	4	0	0	0	0	0	0	0	0	0	**503**	22	15
09:00	82	99	84	4	1	0	0	0	0	0	0	0	0	270	22	16
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
12 M	P 0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
15:00	22	26	35	14	2	0	0	0	0	0	0	0	0	99	25	19
16:00	41	**62**	84	**17**	**4**	0	0	0	0	0	0	0	0	208	24	18
17:00	47	58	**128**	5	0	0	0	0	0	0	0	0	0	238	23	18
18:00	**64**	59	111	17	0	0	0	0	0	0	0	0	0	**251**	24	17
19:00	25	60	60	7	0	0	0	0	0	0	0	0	0	152	23	18
20:00	13	36	36	8	1	0	0	0	0	0	0	0	0	94	24	19
21:00	11	35	33	1	1	0	0	0	0	0	0	0	0	81	23	18
22:00	11	34	29	8	0	0	0	0	0	0	0	0	0	82	24	19
23:00	2	19	23	4	1	0	0	0	0	0	0	0	0	49	24	20
Total	701	947	1099	125	16	0	0	0	0	0	0	0	0	2888		
%	24.3%	32.8%	38.1%	4.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	07:00	06:00									08:00		
Vol.	169	171	159	13	2									503		
Midday Peak																
Vol.																
PM Peak	18:00	16:00	17:00	16:00	16:00									18:00		
Vol.	64	62	128	17	4									251		

% iles

15th Percentile : 9 MPH
50th Percentile : 18 MPH
85th Percentile : 23 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 2046
Percent in Pace : 70.8%
Number of Vehicles > 25 MPH : 116
Percent of Vehicles > 25 MPH : 4.0%
Mean Speed(Average) : 17 MPH

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91863 B speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/07/09																
01:00	2	4	12	1	0	0	0	0	0	0	0	0	0	19	23	20
02:00	0	8	5	0	0	0	0	0	0	0	0	0	0	13	22	19
03:00	3	1	4	1	0	0	0	0	0	0	0	0	0	9	23	15
04:00	1	2	5	2	1	0	0	0	0	0	0	0	0	11	25	22
05:00	2	4	7	1	0	0	0	0	0	0	0	0	0	14	23	20
06:00	10	29	38	9	0	0	0	0	0	0	0	0	0	86	24	19
07:00	69	99	95	12	**2**	0	0	0	0	0	0	0	0	277	23	17
08:00	96	135	**154**	**22**	2	0	0	0	0	0	0	0	0	409	23	17
09:00	**166**	**153**	125	7	1	0	0	0	0	0	0	0	0	**452**	22	15
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 M	P *	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	349	435	445	55	6	0	0	0	0	0	0	0	0	1290		
%	27.1%	33.7%	34.5%	4.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	07:00	07:00	06:00									08:00		
Vol.	166	153	154	22	2									452		
Midday Peak Vol.																
PM Peak Vol.																

% iles

15th Percentile :	8 MPH
50th Percentile :	18 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	880
Percent in Pace :	68.2%
Number of Vehicles > 25 MPH :	50
Percent of Vehicles > 25 MPH :	3.9%
Mean Speed(Average) :	17 MPH

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Third Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	0	137	17	2	3	0	0	0	0	0	0	0	0	159
09:00	1	144	21	4	3	1	0	0	0	0	0	0	0	174
10:00	0	130	29	1	8	0	0	1	0	0	0	0	0	169
11:00	1	143	28	0	7	0	0	2	0	0	0	0	0	181
12 PM	1	170	32	0	10	0	0	1	0	0	0	0	0	214
13:00	0	175	33	0	7	0	0	1	0	0	0	0	0	216
14:00	0	202	53	3	10	0	0	1	0	0	0	0	0	269
15:00	0	347	68	0	10	0	0	4	0	0	0	0	0	429
16:00	1	462	49	0	11	0	0	2	0	0	0	0	0	525
17:00	2	561	46	0	3	0	0	3	0	0	1	0	0	616
18:00	0	367	28	2	5	0	0	1	0	0	0	0	0	403
19:00	0	205	25	0	0	0	0	0	0	1	0	0	0	231
20:00	0	111	13	0	5	0	0	0	0	0	0	0	0	129
21:00	0	100	6	1	2	0	0	0	0	0	0	0	0	109
22:00	0	76	11	0	2	0	0	0	0	0	0	0	0	89
23:00	0	61	8	0	1	0	0	0	0	0	0	0	0	70
Total	6	3391	467	13	87	1	0	16	0	1	1	0	0	3983
Percent	0.2%	85.1%	11.7%	0.3%	2.2%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	09:00	09:00	08:00	09:00								09:00
Vol.	1	144	21	4	3	1								174
Midday Peak	11:00	14:00	14:00	14:00	12:00			11:00						14:00
Vol.	1	202	53	3	10			2						269
PM Peak	17:00	17:00	15:00	18:00	16:00			15:00		19:00	17:00			17:00
Vol.	2	561	68	2	11			4		1	1			616

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91863 B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	54	11	0	1	0	0	0	0	0	0	0	0	66
01:00	0	22	4	0	0	0	0	0	0	0	0	0	0	26
02:00	0	22	1	0	0	0	0	0	0	0	0	0	0	23
03:00	0	6	3	0	1	0	0	0	0	0	0	0	0	10
04:00	0	10	6	0	2	0	0	0	0	0	0	0	0	18
05:00	0	30	9	0	2	0	0	0	0	0	0	0	0	41
06:00	0	55	16	0	1	0	0	0	0	0	0	0	0	72
07:00	0	92	18	0	6	0	0	0	0	0	0	0	0	116
08:00	0	130	18	3	6	1	0	1	0	0	0	0	0	159
09:00	0	137	25	1	3	0	0	1	0	0	0	0	0	167
10:00	0	130	37	1	7	1	0	0	0	0	0	0	0	176
11:00	0	161	50	2	12	0	0	0	0	0	0	0	0	225
12 PM	0	190	36	1	10	1	0	2	0	0	0	0	0	240
13:00	0	156	40	2	5	0	0	0	0	0	0	0	0	203
14:00	0	187	60	2	11	0	0	0	0	1	0	0	0	261
15:00	0	323	76	2	14	0	0	3	0	1	0	0	0	419
16:00	2	483	75	1	7	0	0	1	0	0	0	0	0	569
17:00	0	553	33	0	5	0	0	1	0	1	0	0	0	593
18:00	0	415	27	0	4	0	0	1	0	0	1	0	0	448
19:00	0	229	22	0	2	0	0	0	0	0	0	0	0	253
20:00	0	155	7	0	7	0	0	0	0	0	0	0	0	169
21:00	0	100	18	1	3	0	0	0	0	0	0	0	0	122
22:00	0	65	16	0	2	0	0	0	0	0	0	0	0	83
23:00	0	59	17	0	2	0	0	0	0	0	0	0	0	78
Total	2	3764	625	16	113	3	0	10	0	3	1	0	0	4537
Percent	0.0%	83.0%	13.8%	0.4%	2.5%	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak		09:00	09:00	08:00	07:00	08:00		08:00						09:00
Vol.		137	25	3	6	1		1						167
Midday Peak		12:00	14:00	11:00	11:00	12:00		12:00		14:00				14:00
Vol.		190	60	2	12	1		2		1				261
PM Peak	16:00	17:00	15:00	15:00	15:00			15:00		15:00	18:00			17:00
Vol.	2	553	76	2	14			3		1	1			593

PRECISION
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91863 B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	46	14	0	3	0	0	0	0	0	0	0	0	63
01:00	0	17	6	0	0	0	0	0	0	0	0	0	0	23
02:00	0	11	6	0	0	0	0	0	0	0	0	0	0	17
03:00	0	8	4	0	2	0	0	0	0	0	0	0	0	14
04:00	0	9	6	0	1	0	0	0	0	0	0	0	0	16
05:00	0	25	12	0	1	0	0	0	0	0	0	0	0	38
06:00	0	42	22	0	3	0	0	0	0	0	0	0	0	67
07:00	0	90	37	0	5	0	0	0	0	0	0	0	0	132
08:00	0	121	21	2	4	0	0	0	1	0	0	0	0	149
09:00	0	254	18	0	5	0	0	0	0	0	0	0	0	277
10:00	0	330	0	0	0	0	0	0	0	0	0	0	0	330
11:00	0	341	0	0	0	0	0	0	0	0	0	0	0	341
12 M P	0	339	0	0	0	0	0	0	0	0	0	0	0	339
13:00	0	338	0	0	0	0	0	0	0	0	0	0	0	338
14:00	0	342	0	0	0	0	0	0	0	0	0	0	0	342
15:00	0	229	177	1	26	0	0	3	0	0	1	0	0	437
16:00	1	176	322	1	38	0	0	7	0	0	0	0	0	545
17:00	0	296	223	0	14	0	0	3	0	0	0	0	0	536
18:00	0	247	193	1	14	0	0	4	0	1	0	0	0	460
19:00	0	112	139	3	18	0	0	1	0	0	0	0	0	273
20:00	0	49	96	2	5	0	0	2	0	0	0	0	0	154
21:00	1	49	98	1	7	0	0	0	0	0	0	0	0	156
22:00	0	25	86	0	5	0	0	0	0	0	0	0	0	116
23:00	0	17	73	0	8	0	0	0	0	0	0	0	0	98
Total	2	3513	1553	11	159	0	0	20	1	1	1	0	0	5261
Percent	0.0%	66.8%	29.5%	0.2%	3.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		09:00	07:00	08:00	07:00				08:00					09:00
Vol.		254	37	2	5				1					277
Midday Peak		14:00												14:00
Vol.		342												342
PM Peak	16:00	17:00	16:00	19:00	16:00			16:00		18:00	15:00			16:00
Vol.	1	296	322	3	38			7		1	1			545

PRECISION DATA INDUSTRIES, LLC
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Email: datarequests@pdillc.com

Third Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 B class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/09	0	13	48	0	2	0	0	0	0	0	0	0	0	63
01:00	0	4	19	0	0	0	0	0	0	0	0	0	0	23
02:00	0	4	15	0	1	0	0	0	0	0	0	0	0	20
03:00	0	0	7	0	3	0	0	0	0	0	0	0	0	10
04:00	0	3	7	0	1	0	0	0	0	0	0	0	0	11
05:00	0	10	15	0	4	0	0	0	0	0	0	0	0	29
06:00	0	21	30	0	8	0	0	0	0	0	0	0	0	59
07:00	0	56	49	0	21	0	0	0	0	0	0	0	0	126
08:00	0	80	83	1	14	0	0	2	0	0	0	0	0	180
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 M P	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	191	273	1	54	0	0	2	0	0	0	0	0	521
Percent	0.0%	36.7%	52.4%	0.2%	10.4%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	08:00	08:00	07:00			08:00						08:00
Vol.		80	83	1	21			2						180
Midday Peak Vol.														
PM Peak Vol.														

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91863 B class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/09	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	0	411	26	2	7	0	0	3	0	0	0	0	0	449
09:00	0	399	26	2	5	0	0	0	0	0	0	0	0	432
10:00	1	173	23	1	4	0	0	0	0	0	0	0	0	202
11:00	0	142	23	0	4	0	0	1	0	0	0	0	0	170
12 M P	1	141	21	0	4	1	0	0	0	0	0	0	0	168
13:00	1	150	21	1	4	1	0	1	0	0	0	0	0	179
14:00	1	183	21	0	5	1	0	0	0	0	0	0	0	211
15:00	0	154	13	0	3	0	0	0	0	0	0	0	0	170
16:00	2	183	8	0	1	0	0	0	0	0	0	0	0	194
17:00	1	178	2	0	2	0	0	0	0	0	0	0	0	183
18:00	0	173	4	0	0	0	0	0	0	0	0	0	0	177
19:00	0	123	5	0	0	0	0	0	0	0	0	0	0	128
20:00	0	84	3	0	0	0	0	0	0	0	0	0	0	87
21:00	0	64	5	0	1	0	0	0	0	0	0	0	0	70
22:00	0	66	4	0	0	0	0	0	0	0	0	0	0	70
23:00	0	38	2	0	0	0	0	0	0	0	0	0	0	40
Total	7	2662	207	6	40	3	0	5	0	0	0	0	0	2930
Percent	0.2%	90.9%	7.1%	0.2%	1.4%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	08:00	08:00	08:00			08:00						08:00
Vol.		411	26	2	7			3						449
Midday Peak	12:00	14:00	11:00	13:00	14:00	12:00		11:00						14:00
Vol.	1	183	23	1	5	1		1						211
PM Peak	16:00	16:00	15:00		15:00									16:00
Vol.	2	183	13		3									194

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Client: VHB/M. Miller

91863 B class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	20	4	0	1	0	0	0	0	0	0	0	0	25
01:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
02:00	0	5	1	0	0	1	0	0	0	0	0	0	0	7
03:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
04:00	0	13	2	0	1	0	0	0	0	0	0	0	0	16
05:00	1	77	11	0	3	1	0	0	0	0	0	0	0	93
06:00	1	288	42	1	4	0	0	1	0	0	0	0	0	337
07:00	0	378	20	0	7	0	0	2	0	0	0	0	0	407
08:00	1	454	21	0	1	0	0	0	0	0	0	0	0	477
09:00	0	421	17	0	7	0	0	4	0	0	0	0	0	449
10:00	0	200	26	0	3	1	0	2	0	0	0	0	0	232
11:00	1	141	13	1	2	2	0	0	0	0	0	0	0	160
12 M	P 2	161	18	0	3	1	0	0	0	0	0	0	0	185
13:00	0	151	15	1	3	0	0	1	0	0	0	0	0	171
14:00	0	150	20	0	1	0	0	0	0	0	0	0	0	171
15:00	0	186	15	0	2	1	0	0	0	0	0	0	0	204
16:00	0	169	16	0	1	0	0	0	0	0	0	0	0	186
17:00	0	204	5	0	0	0	0	0	0	0	0	0	0	209
18:00	0	162	7	0	1	0	0	0	0	0	0	0	0	170
19:00	0	126	7	0	0	0	0	0	0	0	0	0	0	133
20:00	0	89	4	0	0	0	0	0	0	0	0	0	0	93
21:00	0	76	4	0	1	0	0	0	0	0	0	0	0	81
22:00	0	70	3	0	0	0	0	0	0	0	0	0	0	73
23:00	0	53	2	0	0	0	0	0	0	0	0	0	0	55
Total	6	3610	274	3	41	7	0	10	0	0	0	0	0	3951
Percent	0.2%	91.4%	6.9%	0.1%	1.0%	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	08:00	06:00	06:00	07:00	02:00		09:00						08:00
Vol.	1	454	42	1	7	1		4						477
Midday Peak	12:00	12:00	14:00	11:00	12:00	11:00		13:00						12:00
Vol.	2	161	20	1	3	2		1						185
PM Peak		17:00	16:00		15:00	15:00								17:00
Vol.		204	16		2	1								209

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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	18	2	0	0	0	0	0	0	0	0	0	0	20
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
03:00	0	2	0	1	1	0	0	0	0	0	0	0	0	4
04:00	0	16	2	0	1	0	0	0	0	0	0	0	0	19
05:00	0	75	15	1	0	0	0	0	0	0	0	0	0	91
06:00	0	258	41	0	6	0	0	1	0	0	0	0	0	306
07:00	1	373	22	1	5	0	0	1	0	0	0	0	0	403
08:00	2	469	23	1	6	0	0	0	1	0	1	0	0	503
09:00	0	252	10	2	4	1	0	1	0	0	0	0	0	270
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 M P	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	1	82	12	1	3	0	0	0	0	0	0	0	0	99
16:00	1	191	13	0	3	0	0	0	0	0	0	0	0	208
17:00	1	227	7	0	2	0	0	1	0	0	0	0	0	238
18:00	0	237	11	1	1	0	0	1	0	0	0	0	0	251
19:00	1	138	12	0	0	0	0	0	0	0	1	0	0	152
20:00	0	88	6	0	0	0	0	0	0	0	0	0	0	94
21:00	0	71	9	0	1	0	0	0	0	0	0	0	0	81
22:00	0	75	6	0	0	0	0	1	0	0	0	0	0	82
23:00	0	45	4	0	0	0	0	0	0	0	0	0	0	49
Total	7	2635	195	8	33	1	0	6	1	0	2	0	0	2888
Percent	0.2%	91.2%	6.8%	0.3%	1.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	09:00	06:00	09:00		06:00	08:00		08:00			08:00
Vol.	2	469	41	2	6	1	1		1	1				503
Midday Peak														
Vol.														
PM Peak	15:00	18:00	16:00	15:00	15:00			17:00			19:00			18:00
Vol.	1	237	13	1	3			1			1			251

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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/07/09	0	17	2	0	0	0	0	0	0	0	0	0	0	19
01:00	0	11	2	0	0	0	0	0	0	0	0	0	0	13
02:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
03:00	0	10	0	0	0	1	0	0	0	0	0	0	0	11
04:00	0	12	0	0	2	0	0	0	0	0	0	0	0	14
05:00	1	68	15	1	1	0	0	0	0	0	0	0	0	86
06:00	0	226	43	0	6	0	0	1	1	0	0	0	0	277
07:00	0	370	35	1	2	0	0	1	0	0	0	0	0	409
08:00	3	407	26	1	10	1	0	3	0	0	1	0	0	452
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	1128	125	3	21	2	0	5	1	0	1	0	0	1290
Percent	0.3%	87.4%	9.7%	0.2%	1.6%	0.2%	0.0%	0.4%	0.1%	0.0%	0.1%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	05:00	08:00	03:00		08:00	06:00		08:00			08:00
Vol.	3	407	43	1	10	1	3		1	1				452
Midday Peak Vol.														
PM Peak Vol.														

Second Street between
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91863 C volume
Site Code: 10082.00

Start	NB				SB				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	0		26		0		11		0		37		
12:15	0		21		1		15		1		36		
12:30	2		21		0		12		2		33		
12:45	2	4	17	85	0	1	12	50	2	5	29	135	
01:00	1		9		1		18		2		27		
01:15	0		14		0		8		0		22		
01:30	0		17		1		12		1		29		
01:45	1	2	19	59	0	2	13	51	1	4	32	110	
02:00	0		14		0		15		0		29		
02:15	0		14		1		8		1		22		
02:30	2		14		0		12		2		26		
02:45	0	2	12	54	1	2	11	46	1	4	23	100	
03:00	0		23		0		3		0		26		
03:15	1		21		1		8		2		29		
03:30	1		20		0		9		1		29		
03:45	0	2	19	83	0	1	12	32	0	3	31	115	
04:00	0		15		0		28		0		43		
04:15	0		22		1		16		1		38		
04:30	0		35		1		13		1		48		
04:45	0	0	37	109	0	2	14	71	0	2	51	180	
05:00	0		48		3		17		3		65		
05:15	2		75		3		21		5		96		
05:30	2		73		4		18		6		91		
05:45	4	8	37	233	0	10	12	68	4	18	49	301	
06:00	10		49		8		10		18		59		
06:15	7		39		15		18		22		57		
06:30	19		27		10		17		29		44		
06:45	12	48	18	133	16	49	9	54	28	97	27	187	
07:00	8		24		12		12		20		36		
07:15	10		13		7		8		17		21		
07:30	15		12		17		8		32		20		
07:45	10	43	12	61	14	50	5	33	24	93	17	94	
08:00	16		12		19		8		35		20		
08:15	19		6		19		4		38		10		
08:30	17		10		16		4		33		14		
08:45	16	68	7	35	23	77	7	23	39	145	14	58	
09:00	19		7		14		7		33		14		
09:15	20		4		14		6		34		10		
09:30	14		5		20		2		34		7		
09:45	16	69	2	18	15	63	0	15	31	132	2	33	
10:00	13		1		7		4		20		5		
10:15	12		1		4		3		16		4		
10:30	13		4		6		3		19		7		
10:45	15	53	4	10	9	26	6	16	24	79	10	26	
11:00	13		2		8		2		21		4		
11:15	14		3		6		2		20		5		
11:30	17		1		6		1		23		2		
11:45	24	68	0	6	10	30	0	5	34	98	0	11	
Total	367		886		313		464		680		1350		
Percent	54.0%		65.6%		46.0%		34.4%						
Day Total	1253					777			2030				
Peak	08:30		05:15		08:00		04:00		08:00		04:45		
Vol.	72		234		77	7	1		145		303		
P.H.F.	0.900		0.780		0.837		0.634		0.929		0.789		

Second Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 C volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	2		20		3		8		5		28		
12:15	0		18		0		15		0		33		
12:30	3		12		0		16		3		28		
12:45	0	5	13	63	0	3	8	47	0	8	21	110	
01:00	1		15		0		14		1		29		
01:15	1		9		1		7		2		16		
01:30	1		12		0		11		1		23		
01:45	0	3	9	45	1	2	11	43	1	5	20	88	
02:00	0		13		1		9		1		22		
02:15	0		11		0		13		0		24		
02:30	0		9		0		11		0		20		
02:45	2	2	23	56	0	1	11	44	2	3	34	100	
03:00	0		20		1		9		1		29		
03:15	1		19		0		12		1		31		
03:30	0		14		1		11		1		25		
03:45	0	1	21	74	1	3	8	40	1	4	29	114	
04:00	0		20		1		20		1		40		
04:15	1		36		0		13		1		49		
04:30	0		31		0		17		0		48		
04:45	0	1	32	119	0	1	17	67	0	2	49	186	
05:00	1		53		3		13		4		66		
05:15	2		62		2		20		4		82		
05:30	2		54		3		17		5		71		
05:45	4	9	52	221	6	14	13	63	10	23	65	284	
06:00	5		55		5		15		10		70		
06:15	5		43		12		8		17		51		
06:30	9		26		11		15		20		41		
06:45	8	27	13	137	14	42	12	50	22	69	25	187	
07:00	4		18		8		20		12		38		
07:15	9		24		10		8		19		32		
07:30	14		14		16		10		30		24		
07:45	17	44	9	65	13	47	15	53	30	91	24	118	
08:00	12		13		18		5		30		18		
08:15	22		5		16		5		38		10		
08:30	19		6		17		6		36		12		
08:45	11	64	13	37	19	70	9	25	30	134	22	62	
09:00	23		6		23		9		46		15		
09:15	12		4		22		4		34		8		
09:30	14		6		15		4		29		10		
09:45	13	62	3	19	15	75	1	18	28	137	4	37	
10:00	23		8		12		3		35		11		
10:15	10		4		9		2		19		6		
10:30	14		1		13		5		27		6		
10:45	17	64	7	20	11	45	2	12	28	109	9	32	
11:00	11		2		3		1		14		3		
11:15	15		3		7		5		22		8		
11:30	24		2		6		2		30		4		
11:45	17	67	1	8	9	25	3	11	26	92	4	19	
Total	349		864		328		473		677		1337		
Percent	51.6%		64.6%		48.4%		35.4%						
Day Total	1213					801			2014				
Peak	08:15		05:15		08:30		04:00		08:15		05:15		
Vol.	75		223		81	6	7		150		288		
P.H.F.	0.815		0.899		0.880		0.838		0.815		0.878		

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Second Street between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 C speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	2	0	2	0	0	0	0	0	0	0	0	0	4	25	20
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2	26	26
03:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2	25	24
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	1	4	1	2	0	0	0	0	0	0	0	0	0	8	25	19
06:00	**19**	10	16	3	0	0	0	0	0	0	0	0	0	48	23	15
07:00	9	21	10	3	0	0	0	0	0	0	0	0	0	43	23	17
08:00	11	**32**	21	4	0	0	0	0	0	0	0	0	0	68	23	18
09:00	12	19	**33**	**5**	0	0	0	0	0	0	0	0	0	**69**	24	19
10:00	20	14	19	0	0	0	0	0	0	0	0	0	0	53	22	15
11:00	18	25	23	2	0	0	0	0	0	0	0	0	0	68	22	17
12 PM	**24**	**29**	**25**	6	1	0	0	0	0	0	0	0	0	**85**	23	17
13:00	14	22	15	**8**	0	0	0	0	0	0	0	0	0	59	24	17
14:00	16	16	14	6	**2**	0	0	0	0	0	0	0	0	54	24	17
15:00	11	18	41	13	0	0	0	0	0	0	0	0	0	83	25	20
16:00	13	32	45	18	1	0	0	0	0	0	0	0	0	109	25	20
17:00	**36**	**80**	**86**	**28**	**3**	0	0	0	0	0	0	0	0	**233**	24	19
18:00	22	46	56	9	0	0	0	0	0	0	0	0	0	133	23	18
19:00	14	20	20	7	0	0	0	0	0	0	0	0	0	61	24	18
20:00	7	11	12	5	0	0	0	0	0	0	0	0	0	35	24	19
21:00	1	9	5	1	2	0	0	0	0	0	0	0	0	18	24	20
22:00	3	3	1	2	1	0	0	0	0	0	0	0	0	10	25	19
23:00	1	2	2	1	0	0	0	0	0	0	0	0	0	6	21	20
Total	254	415	446	128	10	0	0	0	0	0	0	0	0	1253		
%	20.3%	33.1%	35.6%	10.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	06:00	08:00	09:00	09:00										09:00		
Vol.	19	32	33	5										69		
Midday Peak	12:00	12:00	12:00	13:00	14:00									12:00		
Vol.	24	29	25	8	2									85		
PM Peak	17:00	17:00	17:00	17:00	17:00									17:00		
Vol.	36	80	86	28	3									233		

% iles

15th Percentile :	11 MPH
50th Percentile :	19 MPH
85th Percentile :	24 MPH
95th Percentile :	27 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	861
Percent in Pace :	68.7%
Number of Vehicles > 25 MPH :	112
Percent of Vehicles > 25 MPH :	8.9%
Mean Speed(Average) :	18 MPH

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Client: VHB/M. Miller

91863 C speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	1	3	1	0	0	0	0	0	0	0	0	0	0	5	17	16
01:00	1	0	2	0	0	0	0	0	0	0	0	0	0	3	21	14
02:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
04:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20	20
05:00	3	3	2	1	0	0	0	0	0	0	0	0	0	9	21	17
06:00	9	10	5	**3**	0	0	0	0	0	0	0	0	0	27	23	17
07:00	15	14	15	0	0	0	0	0	0	0	0	0	0	44	22	15
08:00	**19**	23	**21**	1	0	0	0	0	0	0	0	0	0	**64**	22	16
09:00	15	**26**	18	3	0	0	0	0	0	0	0	0	0	62	22	17
10:00	19	23	20	1	1	0	0	0	0	0	0	0	0	64	22	16
11:00	21	**27**	**17**	**2**	0	0	0	0	0	0	0	0	0	**67**	22	16
12 PM	**27**	24	11	1	0	0	0	0	0	0	0	0	0	63	20	14
13:00	13	23	9	0	0	0	0	0	0	0	0	0	0	45	20	15
14:00	17	25	13	1	0	0	0	0	0	0	0	0	0	56	21	16
15:00	14	27	20	12	**1**	0	0	0	0	0	0	0	0	74	25	18
16:00	22	39	41	16	1	0	0	0	0	0	0	0	0	119	24	19
17:00	**32**	**70**	**91**	**26**	1	**1**	0	0	0	0	0	0	0	**221**	24	19
18:00	19	38	67	13	0	0	0	0	0	0	0	0	0	137	24	19
19:00	16	21	25	3	0	0	0	0	0	0	0	0	0	65	23	17
20:00	8	16	9	4	0	0	0	0	0	0	0	0	0	37	23	18
21:00	2	8	8	1	0	0	0	0	0	0	0	0	0	19	22	19
22:00	2	7	7	3	1	0	0	0	0	0	0	0	0	20	25	20
23:00	1	2	0	4	1	0	0	0	0	0	0	0	0	8	28	23
Total	277	431	403	95	6	1	0	0	0	0	0	0	0	1213		
%	22.8%	35.5%	33.2%	7.8%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	08:00	06:00										08:00		
Vol.	19	26	21	3										64		
Midday Peak	12:00	11:00	11:00	11:00										11:00		
Vol.	27	27	17	2										67		
PM Peak	17:00	17:00	17:00	17:00	15:00	17:00								17:00		
Vol.	32	70	91	26	1	1								221		

% iles

15th Percentile :	10 MPH
50th Percentile :	18 MPH
85th Percentile :	23 MPH
95th Percentile :	27 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	834
Percent in Pace :	68.8%
Number of Vehicles > 25 MPH :	83
Percent of Vehicles > 25 MPH :	6.8%
Mean Speed(Average) :	17 MPH

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91863 C speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
01:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	20	10
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
05:00	1	8	1	0	0	0	0	0	0	0	0	0	0	10	18	17
06:00	12	22	13	**2**	0	0	0	0	0	0	0	0	0	49	22	16
07:00	9	23	16	2	0	0	0	0	0	0	0	0	0	50	22	18
08:00	**22**	**34**	**21**	0	0	0	0	0	0	0	0	0	0	**77**	21	16
09:00	12	31	18	1	**1**	0	0	0	0	0	0	0	0	63	22	17
10:00	7	14	5	0	0	0	0	0	0	0	0	0	0	26	20	16
11:00	6	15	9	0	0	0	0	0	0	0	0	0	0	30	21	17
12 PM	**10**	**32**	7	1	0	0	0	0	0	0	0	0	0	50	19	16
13:00	7	25	**17**	**2**	0	0	0	0	0	0	0	0	0	**51**	22	18
14:00	5	27	11	2	**1**	0	0	0	0	0	0	0	0	46	22	18
15:00	4	17	10	1	0	0	0	0	0	0	0	0	0	32	22	18
16:00	10	**40**	16	**5**	0	0	0	0	0	0	0	0	0	**71**	22	18
17:00	**15**	32	18	3	0	0	0	0	0	0	0	0	0	68	22	17
18:00	9	25	**19**	1	0	0	0	0	0	0	0	0	0	54	22	18
19:00	9	14	10	0	0	0	0	0	0	0	0	0	0	33	22	17
20:00	4	14	5	0	0	0	0	0	0	0	0	0	0	23	21	17
21:00	1	10	4	0	0	0	0	0	0	0	0	0	0	15	21	18
22:00	5	5	5	1	0	0	0	0	0	0	0	0	0	16	23	18
23:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5	20	18
Total	152	394	208	21	2	0	0	0	0	0	0	0	0	777		
%	19.6%	50.7%	26.8%	2.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	06:00	09:00									08:00		
Vol.	22	34	21	2	1									77		
Midday Peak	12:00	12:00	13:00	13:00	14:00									13:00		
Vol.	10	32	17	2	1									51		
PM Peak	17:00	16:00	18:00	16:00										16:00		
Vol.	15	40	19	5										71		

% iles

15th Percentile :	11 MPH
50th Percentile :	17 MPH
85th Percentile :	22 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	602
Percent in Pace :	77.5%
Number of Vehicles > 25 MPH :	18
Percent of Vehicles > 25 MPH :	2.3%
Mean Speed(Average) :	17 MPH

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91863 C speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	0	1	1	1	0	0	0	0	0	0	0	0	0	3	25	23
01:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
02:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:00	1	1	0	1	0	0	0	0	0	0	0	0	0	3	25	18
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
05:00	2	9	3	0	0	0	0	0	0	0	0	0	0	14	20	17
06:00	13	10	16	3	0	0	0	0	0	0	0	0	0	42	23	16
07:00	7	11	**25**	**4**	0	0	0	0	0	0	0	0	0	47	24	20
08:00	11	**35**	22	2	0	0	0	0	0	0	0	0	0	70	22	18
09:00	**15**	35	23	1	**1**	0	0	0	0	0	0	0	0	**75**	22	17
10:00	14	16	14	0	1	0	0	0	0	0	0	0	0	45	22	16
11:00	9	9	6	**1**	0	0	0	0	0	0	0	0	0	25	21	16
12 PM	**23**	18	6	0	0	0	0	0	0	0	0	0	0	**47**	19	12
13:00	10	**24**	9	0	0	0	0	0	0	0	0	0	0	43	21	16
14:00	17	14	**11**	1	**1**	0	0	0	0	0	0	0	0	44	22	15
15:00	2	23	14	1	0	0	0	0	0	0	0	0	0	40	22	19
16:00	9	**38**	17	**3**	0	0	0	0	0	0	0	0	0	**67**	22	18
17:00	**13**	28	**22**	0	0	0	0	0	0	0	0	0	0	63	22	17
18:00	6	32	12	0	0	0	0	0	0	0	0	0	0	50	21	17
19:00	11	28	14	0	0	0	0	0	0	0	0	0	0	53	21	17
20:00	5	17	2	1	0	0	0	0	0	0	0	0	0	25	19	16
21:00	6	8	4	0	0	0	0	0	0	0	0	0	0	18	20	16
22:00	5	6	1	0	0	0	0	0	0	0	0	0	0	12	18	15
23:00	2	5	3	1	0	0	0	0	0	0	0	0	0	11	21	18
Total	183	370	225	20	3	0	0	0	0	0	0	0	0	801		
%	22.8%	46.2%	28.1%	2.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	07:00	07:00	09:00									09:00		
Vol.	15	35	25	4	1									75		
Midday Peak	12:00	13:00	14:00	11:00	14:00									12:00		
Vol.	23	24	11	1	1									47		
PM Peak	17:00	16:00	17:00	16:00										16:00		
Vol.	13	38	22	3										67		

% iles

15th Percentile :	10 MPH
50th Percentile :	17 MPH
85th Percentile :	22 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	595
Percent in Pace :	74.3%
Number of Vehicles > 25 MPH :	19
Percent of Vehicles > 25 MPH :	2.4%
Mean Speed(Average) :	17 MPH

PRECISION
D A T A
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91863 C class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	3	1	0	0	0	0	0	0	0	0	0	0	4
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
06:00	0	32	14	0	1	1	0	0	0	0	0	0	0	48
07:00	2	37	4	0	0	0	0	0	0	0	0	0	0	43
08:00	2	61	4	0	1	0	0	0	0	0	0	0	0	68
09:00	0	56	7	3	2	1	0	0	0	0	0	0	0	69
10:00	2	32	11	4	3	0	0	1	0	0	0	0	0	53
11:00	0	53	7	6	2	0	0	0	0	0	0	0	0	68
12 M P	0	67	12	4	2	0	0	0	0	0	0	0	0	85
13:00	0	51	7	1	0	0	0	0	0	0	0	0	0	59
14:00	1	38	8	3	4	0	0	0	0	0	0	0	0	54
15:00	0	63	10	4	6	0	0	0	0	0	0	0	0	83
16:00	0	89	15	3	1	0	0	1	0	0	0	0	0	109
17:00	0	215	13	3	2	0	0	0	0	0	0	0	0	233
18:00	2	119	8	2	2	0	0	0	0	0	0	0	0	133
19:00	0	57	3	0	1	0	0	0	0	0	0	0	0	61
20:00	0	30	3	1	1	0	0	0	0	0	0	0	0	35
21:00	0	16	2	0	0	0	0	0	0	0	0	0	0	18
22:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
23:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
Total	9	1045	133	34	28	2	0	2	0	0	0	0	0	1253
Percent	0.7%	83.4%	10.6%	2.7%	2.2%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	06:00	09:00	09:00	06:00								09:00
Vol.	2	61	14	3	2	1								69
Midday Peak	14:00	12:00	12:00	11:00	14:00									12:00
Vol.	1	67	12	6	4									85
PM Peak	18:00	17:00	16:00	15:00	15:00			16:00						17:00
Vol.	2	215	15	4	6			1						233

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Second Street between
Binney Street and Rogers Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 C class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	4	1	0	0	0	0	0	0	0	0	0	0	5
01:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
06:00	0	18	7	0	1	1	0	0	0	0	0	0	0	27
07:00	0	39	4	1	0	0	0	0	0	0	0	0	0	44
08:00	0	60	2	0	2	0	0	0	0	0	0	0	0	64
09:00	1	48	9	1	3	0	0	0	0	0	0	0	0	62
10:00	0	45	11	4	4	0	0	0	0	0	0	0	0	64
11:00	0	52	10	3	2	0	0	0	0	0	0	0	0	67
12 M	P 1	53	4	3	2	0	0	0	0	0	0	0	0	63
13:00	0	37	4	3	1	0	0	0	0	0	0	0	0	45
14:00	1	39	7	3	4	2	0	0	0	0	0	0	0	56
15:00	0	57	9	3	4	0	0	1	0	0	0	0	0	74
16:00	0	101	15	3	0	0	0	0	0	0	0	0	0	119
17:00	0	202	14	4	1	0	0	0	0	0	0	0	0	221
18:00	0	131	3	3	0	0	0	0	0	0	0	0	0	137
19:00	0	60	4	0	1	0	0	0	0	0	0	0	0	65
20:00	1	32	2	2	0	0	0	0	0	0	0	0	0	37
21:00	0	17	1	1	0	0	0	0	0	0	0	0	0	19
22:00	0	20	0	0	0	0	0	0	0	0	0	0	0	20
23:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
Total	4	1037	109	34	25	3	0	1	0	0	0	0	0	1213
Percent	0.3%	85.5%	9.0%	2.8%	2.1%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	09:00	07:00	09:00	06:00								08:00
Vol.	1	60	9	1	3	1								64
Midday Peak	12:00	12:00	11:00	11:00	14:00	14:00								11:00
Vol.	1	53	10	3	4	2								67
PM Peak	20:00	17:00	16:00	17:00	15:00			15:00						17:00
Vol.	1	202	15	4	4			1						221

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Second Street between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 C class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	0	0	0	1	0	0	0	0	0	0	0	2
05:00	0	7	2	0	0	1	0	0	0	0	0	0	0	10
06:00	1	39	4	0	4	1	0	0	0	0	0	0	0	49
07:00	0	43	4	1	2	0	0	0	0	0	0	0	0	50
08:00	1	69	4	1	1	1	0	0	0	0	0	0	0	77
09:00	0	51	7	1	3	0	0	1	0	0	0	0	0	63
10:00	0	19	5	1	1	0	0	0	0	0	0	0	0	26
11:00	0	28	1	0	0	1	0	0	0	0	0	0	0	30
12 M P	0	40	6	1	2	1	0	0	0	0	0	0	0	50
13:00	0	49	1	1	0	0	0	0	0	0	0	0	0	51
14:00	0	39	4	0	3	0	0	0	0	0	0	0	0	46
15:00	0	28	3	0	0	1	0	0	0	0	0	0	0	32
16:00	1	66	3	1	0	0	0	0	0	0	0	0	0	71
17:00	0	65	3	0	0	0	0	0	0	0	0	0	0	68
18:00	0	49	3	1	1	0	0	0	0	0	0	0	0	54
19:00	0	30	2	1	0	0	0	0	0	0	0	0	0	33
20:00	0	22	1	0	0	0	0	0	0	0	0	0	0	23
21:00	0	14	0	1	0	0	0	0	0	0	0	0	0	15
22:00	1	15	0	0	0	0	0	0	0	0	0	0	0	16
23:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Total	4	683	55	10	17	7	0	1	0	0	0	0	0	777
Percent	0.5%	87.9%	7.1%	1.3%	2.2%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	09:00	07:00	06:00	04:00		09:00						08:00
Vol.	1	69	7	1	4	1		1						77
Midday Peak		13:00	12:00	12:00	14:00	11:00								13:00
Vol.		49	6	1	3	1								51
PM Peak	16:00	16:00	15:00	16:00	18:00	15:00								16:00
Vol.	1	66	3	1	1	1								71

PRECISION
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Second Street between
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Client: VHB/M. Miller

91863 C class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	2	1	0	0	0	0	0	0	0	0	0	0	3
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	1	0	1	0	0	0	0	0	0	0	0	3
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	11	3	0	0	0	0	0	0	0	0	0	0	14
06:00	0	34	4	1	3	0	0	0	0	0	0	0	0	42
07:00	0	40	5	0	2	0	0	0	0	0	0	0	0	47
08:00	0	63	5	1	1	0	0	0	0	0	0	0	0	70
09:00	2	66	5	1	0	1	0	0	0	0	0	0	0	75
10:00	0	38	3	1	1	2	0	0	0	0	0	0	0	45
11:00	0	23	1	1	0	0	0	0	0	0	0	0	0	25
12 M	P 1	41	3	0	2	0	0	0	0	0	0	0	0	47
13:00	0	38	2	1	1	1	0	0	0	0	0	0	0	43
14:00	0	41	2	0	1	0	0	0	0	0	0	0	0	44
15:00	0	37	3	0	0	0	0	0	0	0	0	0	0	40
16:00	0	63	4	0	0	0	0	0	0	0	0	0	0	67
17:00	0	59	4	0	0	0	0	0	0	0	0	0	0	63
18:00	0	47	0	2	0	1	0	0	0	0	0	0	0	50
19:00	2	49	1	1	0	0	0	0	0	0	0	0	0	53
20:00	0	25	0	0	0	0	0	0	0	0	0	0	0	25
21:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
22:00	1	11	0	0	0	0	0	0	0	0	0	0	0	12
23:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
Total	6	722	47	9	12	5	0	0	0	0	0	0	0	801
Percent	0.7%	90.1%	5.9%	1.1%	1.5%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	07:00	06:00	06:00	09:00								09:00
Vol.	2	66	5	1	3	1								75
Midday Peak	12:00	12:00	12:00	11:00	12:00	13:00								12:00
Vol.	1	41	3	1	2	1								47
PM Peak	19:00	16:00	16:00	18:00		18:00								16:00
Vol.	2	63	4	2		1								67

First Street between
Rogers Street and Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

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91863 D volume
Site Code: 10082.00

Start	NB				SB				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	8		34		2		42		10		76		
12:15	3		41		1		42		4		83		
12:30	1		29		2		58		3		87		
12:45	2	14	31	135	5	10	51	193	7	24	82	328	
01:00	2		25		2		65		4		90		
01:15	1		36		1		49		2		85		
01:30	2		25		0		50		2		75		
01:45	1	6	24	110	2	5	40	204	3	11	64	314	
02:00	0		37		1		42		1		79		
02:15	2		20		2		40		4		60		
02:30	1		37		2		46		3		83		
02:45	1	4	22	116	2	7	39	167	3	11	61	283	
03:00	0		41		5		55		5		96		
03:15	0		39		0		42		0		81		
03:30	1		45		1		47		2		92		
03:45	1	2	40	165	1	7	46	190	2	9	86	355	
04:00	2		40		2		68		4		108		
04:15	1		42		4		39		5		81		
04:30	1		60		1		63		2		123		
04:45	0	4	43	185	1	8	58	228	1	12	101	413	
05:00	8		69		3		77		11		146		
05:15	6		82		4		74		10		156		
05:30	5		87		8		70		13		157		
05:45	4	23	50	288	6	21	69	290	10	44	119	578	
06:00	9		65		7		65		16		130		
06:15	7		46		24		54		31		100		
06:30	13		39		25		54		38		93		
06:45	21	50	44	194	31	87	50	223	52	137	94	417	
07:00	26		34		29		46		55		80		
07:15	33		26		34		44		67		70		
07:30	30		27		44		30		74		57		
07:45	36	125	27	114	57	164	29	149	93	289	56	263	
08:00	32		17		49		31		81		48		
08:15	38		23		58		35		96		58		
08:30	36		10		73		37		109		47		
08:45	44	150	14	64	72	252	29	132	116	402	43	196	
09:00	38		12		54		31		92		43		
09:15	36		24		50		32		86		56		
09:30	40		14		64		20		104		34		
09:45	30	144	18	68	59	227	16	99	89	371	34	167	
10:00	49		11		49		13		98		24		
10:15	30		13		45		15		75		28		
10:30	28		8		45		7		73		15		
10:45	37	144	17	49	55	194	11	46	92	338	28	95	
11:00	21		5		48		9		69		14		
11:15	26		8		36		7		62		15		
11:30	44		5		45		7		89		12		
11:45	34	125	5	23	48	177	7	30	82	302	12	53	
Total	791		1511		1159		1951		1950		3462		
Percent	40.6%		43.6%		59.4%		56.4%						
Day Total	2302				3110				5412				
Peak	08:45		05:00		08:15		05:00		08:15		05:00		
Vol.	158		288		257		290		413		578		
P.H.F.	0.898		0.828		0.880		0.942		0.890		0.920		

First Street between
Rogers Street and Binney Street
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91863 D volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	4		24		4		36		8		60		
12:15	0		28		3		49		3		77		
12:30	2		44		3		48		5		92		
12:45	3	9	31	127	2	12	57	190	5	21	88	317	
01:00	4		30		3		48		7		78		
01:15	4		30		3		42		7		72		
01:30	1		30		0		47		1		77		
01:45	2	11	28	118	0	6	49	186	2	17	77	304	
02:00	1		32		2		45		3		77		
02:15	3		34		0		32		3		66		
02:30	1		33		1		53		2		86		
02:45	1	6	34	133	1	4	44	174	2	10	78	307	
03:00	0		40		2		47		2		87		
03:15	0		28		1		38		1		66		
03:30	0		45		2		58		2		103		
03:45	2	2	59	172	2	7	56	199	4	9	115	371	
04:00	0		49		2		55		2		104		
04:15	2		36		1		46		3		82		
04:30	1		49		2		75		3		124		
04:45	1	4	40	174	4	9	69	245	5	13	109	419	
05:00	2		71		0		77		2		148		
05:15	2		84		1		75		3		159		
05:30	5		91		9		74		14		165		
05:45	6	15	83	329	8	18	57	283	14	33	140	612	
06:00	5		90		9		84		14		174		
06:15	9		91		20		69		29		160		
06:30	14		72		34		59		48		131		
06:45	16	44	40	293	22	85	60	272	38	129	100	565	
07:00	25		31		38		46		63		77		
07:15	21		32		38		44		59		76		
07:30	32		32		51		37		83		69		
07:45	33	111	24	119	55	182	42	169	88	293	66	288	
08:00	35		30		55		33		90		63		
08:15	37		24		60		30		97		54		
08:30	35		16		75		38		110		54		
08:45	41	148	16	86	65	255	25	126	106	403	41	212	
09:00	33		12		69		30		102		42		
09:15	32		17		61		31		93		48		
09:30	30		9		71		20		101		29		
09:45	35	130	10	48	59	260	15	96	94	390	25	144	
10:00	39		13		59		6		98		19		
10:15	25		6		51		25		76		31		
10:30	23		12		49		13		72		25		
10:45	27	114	13	44	44	203	10	54	71	317	23	98	
11:00	25		3		47		7		72		10		
11:15	37		10		35		14		72		24		
11:30	31		8		51		6		82		14		
11:45	29	122	11	32	53	186	6	33	82	308	17	65	
Total	716		1675		1227		2027		1943		3702		
Percent	36.9%		45.2%		63.1%		54.8%						
Day Total	2391				3254				5645				
Peak	08:00		05:	30	08:	30	04:	30	08:	15	05:30		
Vol.	148		355		270		296		415		639		
P.H.F.	0.902		0.	975	0.	900	0.	961	0.	943	0.918		

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91863 D speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	1	2	2	8	1	0	0	0	0	0	0	0	0	14	28	24
01:00	1	2	0	3	0	0	0	0	0	0	0	0	0	6	26	20
02:00	0	1	1	1	1	0	0	0	0	0	0	0	0	4	29	26
03:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2	26	26
04:00	0	0	0	4	0	0	0	0	0	0	0	0	0	4	27	26
05:00	1	2	9	6	5	0	0	0	0	0	0	0	0	23	31	25
06:00	7	5	12	23	1	**2**	0	0	0	0	0	0	0	50	28	22
07:00	**21**	15	47	32	9	1	0	0	0	0	0	0	0	125	28	21
08:00	18	**23**	**58**	42	9	0	0	0	0	0	0	0	0	**150**	28	22
09:00	17	22	36	**58**	**10**	1	0	0	0	0	0	0	0	144	28	22
10:00	13	15	66	43	7	0	0	0	0	0	0	0	0	144	28	22
11:00	**13**	22	52	33	5	0	0	0	0	0	0	0	0	125	27	21
12 PM	11	**26**	**66**	24	8	0	0	0	0	0	0	0	0	**135**	27	21
13:00	9	13	46	34	8	0	0	0	0	0	0	0	0	110	28	23
14:00	6	11	45	**44**	**9**	**1**	0	0	0	0	0	0	0	116	29	24
15:00	10	16	63	58	18	0	0	0	0	0	0	0	0	165	29	24
16:00	4	16	74	74	15	**2**	0	0	0	0	0	0	0	185	29	24
17:00	**25**	**37**	**108**	**93**	**24**	1	0	0	0	0	0	0	0	**288**	28	23
18:00	10	25	79	64	14	2	0	0	0	0	0	0	0	194	28	23
19:00	11	7	46	36	14	0	0	0	0	0	0	0	0	114	29	23
20:00	7	8	23	23	3	0	0	0	0	0	0	0	0	64	28	22
21:00	12	6	23	24	3	0	0	0	0	0	0	0	0	68	28	21
22:00	5	5	11	23	4	1	0	0	0	0	0	0	0	49	29	24
23:00	4	2	3	10	4	0	0	0	0	0	0	0	0	23	30	22
Total	206	281	870	762	172	11	0	0	0	0	0	0	0	2302		
%	8.9%	12.2%	37.8%	33.1%	7.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	09:00	09:00	06:00								08:00		
Vol.	21	23	58	58	10	2								150		
Midday Peak	11:00	12:00	12:00	14:00	14:00	14:00								12:00		
Vol.	13	26	66	44	9	1								135		
PM Peak	17:00	17:00	17:00	17:00	17:00	16:00								17:00		
Vol.	25	37	108	93	24	2								288		

% iles

15th Percentile :	17 MPH
50th Percentile :	23 MPH
85th Percentile :	28 MPH
95th Percentile :	31 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	1632
Percent in Pace :	70.9%
Number of Vehicles > 25 MPH :	792
Percent of Vehicles > 25 MPH :	34.4%
Mean Speed(Average) :	23 MPH

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

First Street between
Rogers Street and Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 D speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	1	3	3	2	0	0	0	0	0	0	0	0	0	9	25	20
01:00	1	2	6	2	0	0	0	0	0	0	0	0	0	11	24	21
02:00	0	0	2	4	0	0	0	0	0	0	0	0	0	6	27	26
03:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2	30	22
04:00	0	1	2	1	0	0	0	0	0	0	0	0	0	4	21	21
05:00	0	2	10	3	0	0	0	0	0	0	0	0	0	15	25	22
06:00	4	7	17	9	6	1	0	0	0	0	0	0	0	44	29	23
07:00	10	15	41	38	7	0	0	0	0	0	0	0	0	111	28	22
08:00	**18**	**18**	**50**	**53**	**9**	0	0	0	0	0	0	0	0	**148**	28	22
09:00	15	18	49	41	5	**2**	0	0	0	0	0	0	0	130	28	22
10:00	6	9	34	47	17	1	0	0	0	0	0	0	0	114	30	25
11:00	12	**15**	49	35	9	**2**	0	0	0	0	0	0	0	122	28	22
12 PM	9	8	**52**	43	10	2	**2**	**1**	0	0	0	0	0	127	29	24
13:00	**15**	12	34	45	12	0	0	0	0	0	0	0	0	118	29	23
14:00	8	14	38	**59**	**13**	0	0	1	0	0	0	0	0	**133**	29	24
15:00	8	10	59	66	27	2	0	0	0	0	0	0	0	172	30	25
16:00	8	17	53	62	30	4	0	0	0	0	0	0	0	174	31	25
17:00	**12**	**21**	72	**154**	**62**	**7**	**1**	0	0	0	0	0	0	**329**	31	26
18:00	12	20	**120**	102	35	4	0	0	0	0	0	0	0	293	29	24
19:00	8	9	44	44	12	1	1	0	0	0	0	0	0	119	29	24
20:00	9	4	20	40	10	3	0	0	0	0	0	0	0	86	29	24
21:00	7	3	10	19	7	2	0	0	0	0	0	0	0	48	30	23
22:00	2	2	14	20	4	2	0	0	0	0	0	0	0	44	29	25
23:00	2	4	7	11	7	1	0	0	0	0	0	0	0	32	31	25
Total	167	215	786	900	283	34	4	2	0	0	0	0	0	2391		
%	7.0%	9.0%	32.9%	37.6%	11.8%	1.4%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	09:00								08:00		
Vol.	18	18	50	53	9	2								148		
Midday Peak	13:00	11:00	12:00	14:00	14:00	11:00	12:00	12:00						14:00		
Vol.	15	15	52	59	13	2	2	1						133		
PM Peak	17:00	17:00	18:00	17:00	17:00	17:00	17:00							17:00		
Vol.	12	21	120	154	62	7	1							329		

% iles

15th Percentile : 19 MPH
50th Percentile : 25 MPH
85th Percentile : 29 MPH
95th Percentile : 33 MPH

Stats

10 MPH Pace Speed : 20-29 MPH
Number in Pace : 1686
Percent in Pace : 70.5%
Number of Vehicles > 25 MPH : 1043
Percent of Vehicles > 25 MPH : 43.6%
Mean Speed(Average) : 24 MPH

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First Street between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 D speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	1	3	5	1	0	0	0	0	0	0	0	0	0	10	23	20
01:00	0	3	1	1	0	0	0	0	0	0	0	0	0	5	24	19
02:00	1	2	2	2	0	0	0	0	0	0	0	0	0	7	25	21
03:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7	26	24
04:00	0	5	2	1	0	0	0	0	0	0	0	0	0	8	21	19
05:00	0	3	10	8	0	0	0	0	0	0	0	0	0	21	27	23
06:00	4	22	30	20	**11**	0	0	0	0	0	0	0	0	87	29	23
07:00	14	44	54	46	6	0	0	0	0	0	0	0	0	164	27	21
08:00	**23**	**76**	**95**	49	8	0	**1**	0	0	0	0	0	0	**252**	26	21
09:00	17	53	91	**62**	4	0	0	0	0	0	0	0	0	227	27	21
10:00	32	46	84	25	7	0	0	0	0	0	0	0	0	194	25	20
11:00	15	46	70	**38**	**6**	**2**	0	0	0	0	0	0	0	177	27	21
12 PM	**23**	**68**	73	27	2	0	0	0	0	0	0	0	0	193	24	19
13:00	15	57	**104**	23	5	0	0	0	0	0	0	0	0	**204**	24	20
14:00	12	37	76	36	4	2	0	0	0	0	0	0	0	167	27	21
15:00	16	44	83	38	**7**	**2**	0	0	0	0	0	0	0	190	27	21
16:00	34	60	81	**46**	6	1	0	0	0	0	0	0	0	228	26	20
17:00	**56**	**72**	**122**	34	6	0	0	0	0	0	0	0	0	**290**	24	19
18:00	22	72	88	37	3	1	0	0	0	0	0	0	0	223	25	20
19:00	11	43	68	23	3	1	0	0	0	0	0	0	0	149	25	21
20:00	21	37	58	15	0	1	0	0	0	0	0	0	0	132	24	19
21:00	6	20	54	19	0	0	0	0	0	0	0	0	0	99	25	21
22:00	3	6	22	13	2	0	0	0	0	0	0	0	0	46	27	22
23:00	0	7	14	7	2	0	0	0	0	0	0	0	0	30	26	22
Total	326	827	1290	574	82	10	1	0	0	0	0	0	0	3110		
%	10.5%	26.6%	41.5%	18.5%	2.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	06:00		08:00							08:00		
Vol.	23	76	95	62	11		1							252		
Midday Peak	12:00	12:00	13:00	11:00	11:00	11:00								13:00		
Vol.	23	68	104	38	6	2								204		
PM Peak	17:00	17:00	17:00	16:00	15:00	15:00								17:00		
Vol.	56	72	122	46	7	2								290		

% iles

15th Percentile : 15 MPH
50th Percentile : 21 MPH
85th Percentile : 26 MPH
95th Percentile : 29 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 2117
Percent in Pace : 68.1%
Number of Vehicles > 25 MPH : 552
Percent of Vehicles > 25 MPH : 17.7%
Mean Speed(Average) : 20 MPH

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Client: VHB/M. Miller

91863 D speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	2	1	3	6	0	0	0	0	0	0	0	0	0	12	27	21
01:00	0	0	3	3	0	0	0	0	0	0	0	0	0	6	26	24
02:00	1	0	2	1	0	0	0	0	0	0	0	0	0	4	21	17
03:00	0	4	3	0	0	0	0	0	0	0	0	0	0	7	21	18
04:00	1	5	2	1	0	0	0	0	0	0	0	0	0	9	21	18
05:00	1	1	13	3	0	0	0	0	0	0	0	0	0	18	24	22
06:00	10	23	37	13	2	0	0	0	0	0	0	0	0	85	25	20
07:00	19	52	80	23	7	**1**	0	0	0	0	0	0	0	182	25	20
08:00	25	**88**	84	**42**	**16**	0	0	0	0	0	0	0	0	255	27	20
09:00	**41**	78	**98**	38	5	0	0	0	0	0	0	0	0	**260**	25	19
10:00	15	34	87	51	15	1	0	0	0	0	0	0	0	203	28	22
11:00	**16**	**45**	**89**	29	7	0	0	0	0	0	0	0	0	186	26	21
12 M	P 13	44	81	47	5	0	0	0	0	0	0	0	0	**190**	27	21
13:00	10	45	67	50	11	**2**	**1**	0	0	0	0	0	0	186	28	22
14:00	7	22	64	**60**	**19**	2	0	0	0	0	0	0	0	174	29	24
15:00	20	53	72	42	12	0	0	0	0	0	0	0	0	199	27	21
16:00	23	53	98	58	13	0	0	0	0	0	0	0	0	245	27	21
17:00	**29**	55	**108**	**73**	**15**	**3**	0	0	0	0	0	0	0	**283**	28	22
18:00	22	**70**	105	59	15	1	0	0	0	0	0	0	0	272	27	21
19:00	10	44	77	34	4	0	0	0	0	0	0	0	0	169	26	21
20:00	10	24	65	24	3	0	0	0	0	0	0	0	0	126	26	21
21:00	9	15	36	28	7	1	0	0	0	0	0	0	0	96	28	22
22:00	1	8	24	16	3	1	**1**	0	0	0	0	0	0	54	28	24
23:00	3	5	11	10	4	0	0	0	0	0	0	0	0	33	29	23
Total	288	769	1309	711	163	12	2	0	0	0	0	0	0	3254		
%	8.9%	23.6%	40.2%	21.9%	5.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	09:00	08:00	08:00	07:00								09:00		
Vol.	41	88	98	42	16	1								260		
Midday Peak	11:00	11:00	11:00	14:00	14:00	13:00	13:00							12:00		
Vol.	16	45	89	60	19	2	1							190		
PM Peak	17:00	18:00	17:00	17:00	17:00	17:00	22:00							17:00		
Vol.	29	70	108	73	15	3	1							283		

% iles

15th Percentile : 16 MPH
50th Percentile : 22 MPH
85th Percentile : 27 MPH
95th Percentile : 30 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 2078
Percent in Pace : 63.9%
Number of Vehicles > 25 MPH : 745
Percent of Vehicles > 25 MPH : 22.9%
Mean Speed(Average) : 21 MPH

PRECISION
D A T A
INDUSTRIES, LLC
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First Street between
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91863 D class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	14	0	0	0	0	0	0	0	0	0	0	0	14
01:00	0	4	1	0	0	1	0	0	0	0	0	0	0	6
02:00	0	3	0	0	0	1	0	0	0	0	0	0	0	4
03:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	3	0	0	0	0	0	0	0	4
05:00	1	11	2	2	3	3	0	0	1	0	0	0	0	23
06:00	0	38	5	2	3	1	0	1	0	0	0	0	0	50
07:00	4	98	12	4	2	2	0	2	1	0	0	0	0	125
08:00	0	123	7	8	7	5	0	0	0	0	0	0	0	150
09:00	0	117	13	6	4	3	0	0	1	0	0	0	0	144
10:00	0	109	15	7	8	4	0	1	0	0	0	0	0	144
11:00	2	92	19	2	6	3	0	1	0	0	0	0	0	125
12 M P	0	109	13	4	5	3	0	1	0	0	0	0	0	135
13:00	1	86	13	4	4	2	0	0	0	0	0	0	0	110
14:00	0	94	13	0	7	1	0	1	0	0	0	0	0	116
15:00	0	139	12	2	8	1	0	3	0	0	0	0	0	165
16:00	0	160	14	3	6	0	0	1	1	0	0	0	0	185
17:00	2	258	16	5	3	0	0	4	0	0	0	0	0	288
18:00	2	170	11	5	5	1	0	0	0	0	0	0	0	194
19:00	0	104	4	2	4	0	0	0	0	0	0	0	0	114
20:00	0	60	4	0	0	0	0	0	0	0	0	0	0	64
21:00	1	65	1	0	0	0	0	1	0	0	0	0	0	68
22:00	2	44	2	1	0	0	0	0	0	0	0	0	0	49
23:00	0	20	3	0	0	0	0	0	0	0	0	0	0	23
Total	15	1920	180	57	76	34	0	16	4	0	0	0	0	2302
Percent	0.7%	83.4%	7.8%	2.5%	3.3%	1.5%	0.0%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	09:00	08:00	08:00	08:00		07:00	05:00					08:00
Vol.	4	123	13	8	7	5		2	1					150
Midday Peak	11:00	12:00	11:00	12:00	14:00	11:00		11:00						12:00
Vol.	2	109	19	4	7	3		1						135
PM Peak	17:00	17:00	17:00	17:00	15:00	15:00		17:00	16:00					17:00
Vol.	2	258	16	5	8	1		4	1					288

PRECISION
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91863 D class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	8	0	1	0	0	0	0	0	0	0	0	0	9
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	0	0	1	1	0	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	3	0	0	1	0	0	0	0	4
05:00	0	7	3	1	1	3	0	0	0	0	0	0	0	15
06:00	0	33	5	2	2	2	0	0	0	0	0	0	0	44
07:00	1	84	14	4	7	1	0	0	0	0	0	0	0	111
08:00	0	131	3	5	6	1	0	1	1	0	0	0	0	148
09:00	5	108	6	5	4	2	0	0	0	0	0	0	0	130
10:00	0	83	15	4	10	2	0	0	0	0	0	0	0	114
11:00	2	84	23	2	7	2	0	1	1	0	0	0	0	122
12 M P	1	97	16	3	9	1	0	0	0	0	0	0	0	127
13:00	1	90	18	7	1	0	0	1	0	0	0	0	0	118
14:00	1	96	21	4	7	3	0	0	1	0	0	0	0	133
15:00	1	137	16	6	8	3	0	0	1	0	0	0	0	172
16:00	1	143	19	3	6	1	0	1	0	0	0	0	0	174
17:00	1	283	31	4	8	0	0	2	0	0	0	0	0	329
18:00	5	250	24	8	6	0	0	0	0	0	0	0	0	293
19:00	0	105	8	5	1	0	0	0	0	0	0	0	0	119
20:00	1	74	8	2	1	0	0	0	0	0	0	0	0	86
21:00	1	44	3	0	0	0	0	0	0	0	0	0	0	48
22:00	0	36	7	0	0	0	0	1	0	0	0	0	0	44
23:00	1	27	4	0	0	0	0	0	0	0	0	0	0	32
Total	22	1937	244	67	85	24	0	7	5	0	0	0	0	2391
Percent	0.9%	81.0%	10.2%	2.8%	3.6%	1.0%	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	07:00	08:00	07:00	04:00		08:00	04:00					08:00
Vol.	5	131	14	5	7	3		1	1					148
Midday Peak	11:00	12:00	11:00	13:00	12:00	14:00		11:00	11:00					14:00
Vol.	2	97	23	7	9	3		1	1					133
PM Peak	18:00	17:00	17:00	18:00	15:00	15:00		17:00	15:00					17:00
Vol.	5	283	31	8	8	3		2	1					329

PRECISION
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91863 D class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	10	0	0	0	0	0	0	0	0	0	0	0	10
01:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	5	0	0	1	1	0	0	0	0	0	0	0	7
03:00	0	3	0	2	1	1	0	0	0	0	0	0	0	7
04:00	0	0	0	1	1	6	0	0	0	0	0	0	0	8
05:00	0	12	2	1	4	2	0	0	0	0	0	0	0	21
06:00	1	55	13	8	6	2	0	2	0	0	0	0	0	87
07:00	1	129	14	3	11	5	0	0	1	0	0	0	0	164
08:00	1	205	25	2	10	7	0	2	0	0	0	0	0	252
09:00	0	188	17	1	17	3	0	1	0	0	0	0	0	227
10:00	3	150	24	3	9	3	0	1	1	0	0	0	0	194
11:00	1	133	31	3	7	2	0	0	0	0	0	0	0	177
12 M	P 4	157	19	1	9	2	0	1	0	0	0	0	0	193
13:00	0	178	14	2	5	3	0	0	2	0	0	0	0	204
14:00	2	146	14	0	3	1	0	1	0	0	0	0	0	167
15:00	1	160	20	3	6	0	0	0	0	0	0	0	0	190
16:00	2	203	14	2	5	1	0	1	0	0	0	0	0	228
17:00	3	270	11	1	5	0	0	0	0	0	0	0	0	290
18:00	4	202	7	0	8	2	0	0	0	0	0	0	0	223
19:00	0	139	3	2	5	0	0	0	0	0	0	0	0	149
20:00	0	127	5	0	0	0	0	0	0	0	0	0	0	132
21:00	0	99	0	0	0	0	0	0	0	0	0	0	0	99
22:00	0	42	2	0	2	0	0	0	0	0	0	0	0	46
23:00	0	30	0	0	0	0	0	0	0	0	0	0	0	30
Total	23	2648	235	35	115	41	0	9	4	0	0	0	0	3110
Percent	0.7%	85.1%	7.6%	1.1%	3.7%	1.3%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	08:00	06:00	09:00	08:00		06:00	07:00					08:00
Vol.	1	205	25	8	17	7		2	1					252
Midday Peak	12:00	13:00	11:00	11:00	12:00	13:00		12:00	13:00					13:00
Vol.	4	178	31	3	9	3		1	2					204
PM Peak	18:00	17:00	15:00	15:00	18:00	18:00		16:00						17:00
Vol.	4	270	20	3	8	2		1						290

PRECISION DATA INDUSTRIES, LLC
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First Street between
Rogers Street and Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 D class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	11	1	0	0	0	0	0	0	0	0	0	0	12
01:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	3	0	1	2	1	0	0	0	0	0	0	0	7
04:00	0	3	0	0	0	5	0	0	0	1	0	0	0	9
05:00	0	12	1	2	2	1	0	0	0	0	0	0	0	18
06:00	0	64	6	3	7	3	0	2	0	0	0	0	0	85
07:00	0	151	18	2	8	2	0	1	0	0	0	0	0	182
08:00	0	209	23	5	11	5	0	1	1	0	0	0	0	255
09:00	2	214	18	5	17	3	0	1	0	0	0	0	0	260
10:00	1	165	24	2	10	1	0	0	0	0	0	0	0	203
11:00	1	140	26	2	15	2	0	0	0	0	0	0	0	186
12 PM	1	142	30	2	11	2	0	2	0	0	0	0	0	190
13:00	3	143	26	2	9	1	0	1	0	0	0	0	1	186
14:00	2	137	24	5	6	0	0	0	0	0	0	0	0	174
15:00	0	163	22	5	9	0	0	0	0	0	0	0	0	199
16:00	3	204	27	5	4	2	0	0	0	0	0	0	0	245
17:00	0	255	21	0	5	1	0	1	0	0	0	0	0	283
18:00	1	242	18	4	5	1	0	1	0	0	0	0	0	272
19:00	0	157	8	1	3	0	0	0	0	0	0	0	0	169
20:00	0	117	9	0	0	0	0	0	0	0	0	0	0	126
21:00	0	92	4	0	0	0	0	0	0	0	0	0	0	96
22:00	1	47	5	0	1	0	0	0	0	0	0	0	0	54
23:00	0	31	2	0	0	0	0	0	0	0	0	0	0	33
Total	15	2712	313	46	125	30	0	10	1	1	0	0	1	3254
Percent	0.5%	83.3%	9.6%	1.4%	3.8%	0.9%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	08:00	08:00	09:00	04:00		06:00	08:00	04:00				09:00
Vol.	2	214	23	5	17	5		2	1	1				260
Midday Peak	13:00	13:00	12:00	14:00	11:00	11:00		12:00					13:00	12:00
Vol.	3	143	30	5	15	2		2					1	190
PM Peak	16:00	17:00	16:00	15:00	15:00	16:00		17:00						17:00
Vol.	3	255	27	5	9	2		1						283

Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 E (NB) volume
Site Code: 10082.00

Start	NB (Left Lane)				NB (Right Lane)				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	22		107		15		98		37		205		
12:15	0		117		1		101		1		218		
12:30	0		115		1		81		1		196		
12:45	0	22	127	466	1	18	90	370	1	40	217	836	
01:00	1		89		2		98		3		187		
01:15	0		100		2		105		2		205		
01:30	1		102		1		80		2		182		
01:45	0	2	95	386	0	5	83	366	0	7	178	752	
02:00	0		124		1		106		1		230		
02:15	1		118		6		105		7		223		
02:30	0		115		0		101		0		216		
02:45	1	2	139	496	2	9	109	421	3	11	248	917	
03:00	0		157		1		113		1		270		
03:15	1		145		1		106		2		251		
03:30	0		193		0		149		0		342		
03:45	15	16	177	672	15	17	156	524	30	33	333	1196	
04:00	8		190		9		129		17		319		
04:15	3		184		12		157		15		341		
04:30	12		199		12		163		24		362		
04:45	6	29	181	754	9	42	168	617	15	71	349	1371	
05:00	12		208		13		151		25		359		
05:15	24		218		12		153		36		371		
05:30	21		183		12		180		33		363		
05:45	45	102	165	774	24	61	160	644	69	163	325	1418	
06:00	51		174		24		162		75		336		
06:15	65		182		33		131		98		313		
06:30	88		143		52		97		140		240		
06:45	120	324	164	663	58	167	125	515	178	491	289	1178	
07:00	113		125		90		117		203		242		
07:15	130		119		88		88		218		207		
07:30	149		115		110		83		259		198		
07:45	146	538	94	453	99	387	89	377	245	925	183	830	
08:00	149		101		125		57		274		158		
08:15	173		102		126		46		299		148		
08:30	155		83		203		41		358		124		
08:45	140	617	96	382	169	623	50	194	309	1240	146	576	
09:00	167		84		128		55		295		139		
09:15	138		126		101		71		239		197		
09:30	148		77		96		54		244		131		
09:45	128	581	86	373	77	402	50	230	205	983	136	603	
10:00	127		67		75		61		202		128		
10:15	109		80		86		51		195		131		
10:30	114		68		77		46		191		114		
10:45	115	465	70	285	59	297	60	218	174	762	130	503	
11:00	100		109		62		72		162		181		
11:15	106		96		79		69		185		165		
11:30	118		82		87		72		205		154		
11:45	131	455	75	362	93	321	74	287	224	776	149	649	
Total	3153		6066		2349		4763		5502		10829		
Percent	57.3%		56.0%		42.7%		44.0%						
Day Total	9219				7112						16331		
Peak	08:15		04:30		08:15		05:15		08:15		04:45		
Vol.	635		806		626		655		1261		1442		
P.H.F.	0.918		0.924		0.771		0.910		0.881		0.972		

Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
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91863 E (NB) volume
Site Code: 10082.00

Start	NB (Left Lane)				NB (Right Lane)				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	74		100		66		99		140		199		
12:15	42		124		49		101		91		225		
12:30	43		122		24		90		67		212		
12:45	31	190	99	445	25	164	91	381	56	354	190	826	
01:00	34		118		25		86		59		204		
01:15	24		121		21		95		45		216		
01:30	18		109		10		93		28		202		
01:45	21	97	125	473	18	74	85	359	39	171	210	832	
02:00	21		120		13		91		34		211		
02:15	17		137		8		111		25		248		
02:30	17		145		17		104		34		249		
02:45	12	67	154	556	11	49	105	411	23	116	259	967	
03:00	18		152		11		135		29		287		
03:15	18		173		11		133		29		306		
03:30	8		190		10		141		18		331		
03:45	18	62	200	715	19	51	154	563	37	113	354	1278	
04:00	14		177		14		136		28		313		
04:15	9		187		10		149		19		336		
04:30	7		201		4		174		11		375		
04:45	9	39	180	745	8	36	157	616	17	75	337	1361	
05:00	8		219		9		162		17		381		
05:15	16		128		8		157		24		285		
05:30	28		115		16		118		44		233		
05:45	31	83	48	510	23	56	72	509	54	139	120	1019	
06:00	49		74		23		91		72		165		
06:15	66		88		32		153		98		241		
06:30	86		145		61		187		147		332		
06:45	105	306	141	448	67	183	126	557	172	489	267	1005	
07:00	110		161		81		127		191		288		
07:15	110		125		88		87		198		212		
07:30	133		136		105		117		238		253		
07:45	141	494	102	524	99	373	87	418	240	867	189	942	
08:00	151		98		126		88		277		186		
08:15	131		100		218		55		349		155		
08:30	131		96		194		67		325		163		
08:45	143	556	106	400	182	720	65	275	325	1276	171	675	
09:00	148		84		171		75		319		159		
09:15	145		113		105		76		250		189		
09:30	134		95		106		64		240		159		
09:45	123	550	97	389	65	447	68	283	188	997	165	672	
10:00	120		101		79		78		199		179		
10:15	101		122		71		85		172		207		
10:30	100		101		80		90		180		191		
10:45	84	405	125	449	81	311	77	330	165	716	202	779	
11:00	108		96		84		60		192		156		
11:15	94		113		85		99		179		212		
11:30	114		118		91		115		205		233		
11:45	100	416	101	428	81	341	79	353	181	757	180	781	
Total	3265		6082		2805		5055		6070		11137		
Percent	53.8%		54.6%		46.2%		45.4%						
Day Total	9347				7860						17207		
Peak	08:45		04:15		08:15		04:30		08:15		04:15		
Vol.	570		787		765		650		1318		1429		
P.H.F.	0.963		0.898		0.877		0.934		0.944		0.938		

PRECISION
D A T A
INDUSTRIES, LLC
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Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) speed
Site Code: 10082.00

NB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	0	0	15	7	0	0	0	0	0	0	0	22	36	33
01:00	0	0	0	1	0	1	0	0	0	0	0	0	0	2	35	30
02:00	1	0	0	0	1	0	0	0	0	0	0	0	0	2	30	16
03:00	0	0	0	2	8	5	1	0	0	0	0	0	0	16	38	33
04:00	1	0	0	4	8	13	3	0	0	0	0	0	0	29	39	33
05:00	0	0	0	12	27	39	23	0	**1**	0	0	0	0	102	41	36
06:00	1	1	3	39	141	107	**29**	**3**	0	0	0	0	0	324	39	34
07:00	4	12	38	120	**206**	**132**	25	0	1	0	0	0	0	538	37	31
08:00	**107**	**72**	**118**	150	117	43	10	0	0	0	0	0	0	**617**	33	23
09:00	49	26	52	**176**	197	70	10	1	0	0	0	0	0	581	34	28
10:00	9	4	31	136	200	79	6	0	0	0	0	0	0	465	35	30
11:00	**6**	0	27	133	198	84	7	0	0	0	0	0	0	455	36	31
12 PM	1	2	**39**	**142**	199	73	8	**2**	0	0	0	0	0	466	35	31
13:00	5	8	32	86	175	66	**13**	1	0	0	0	0	0	386	36	31
14:00	5	**12**	25	115	**212**	**113**	13	1	0	0	0	0	0	**496**	37	31
15:00	10	21	61	153	**306**	**107**	13	**1**	0	0	0	0	0	672	35	30
16:00	15	20	84	227	303	93	12	0	0	0	0	0	0	754	34	29
17:00	**57**	**79**	**167**	**254**	180	35	2	0	0	0	0	0	0	**774**	32	25
18:00	14	20	81	224	246	74	4	0	0	0	0	0	0	663	34	29
19:00	5	5	33	121	211	67	11	0	0	0	0	0	0	453	35	31
20:00	3	2	24	126	174	44	8	1	0	0	0	0	0	382	34	30
21:00	5	1	7	109	192	53	6	0	0	0	0	0	0	373	35	31
22:00	3	0	5	67	148	56	6	0	0	0	0	0	0	285	36	32
23:00	3	0	0	68	195	81	**15**	0	0	0	0	0	0	362	37	32
Total	304	285	827	2465	3659	1442	225	10	2	0	0	0	0	9219		
%	3.3%	3.1%	9.0%	26.7%	39.7%	15.6%	2.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	07:00	07:00	06:00	06:00	05:00					08:00		
Vol.	107	72	118	176	206	132	29	3	1					617		
Midday Peak	11:00	14:00	12:00	12:00	14:00	14:00	13:00	12:00						14:00		
Vol.	6	12	39	142	212	113	13	2						496		
PM Peak	17:00	17:00	17:00	17:00	15:00	15:00	23:00	15:00						17:00		
Vol.	57	79	167	254	306	107	15	1						774		

% iles

15th Percentile :	24 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	6124
Percent in Pace :	66.4%
Number of Vehicles > 30 MPH :	4606
Percent of Vehicles > 30 MPH :	50.0%
Mean Speed(Average) :	30 MPH

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south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) speed
Site Code: 10082.00

NB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/0 9	1	0	1	32	91	55	8	1	**1**	0	0	0	0	190	38	33
01:00	2	0	5	18	50	22	0	0	0	0	0	0	0	97	36	31
02:00	3	0	3	11	29	17	4	0	0	0	0	0	0	67	37	31
03:00	2	0	2	7	34	16	1	0	0	0	0	0	0	62	37	32
04:00	1	0	0	3	18	12	3	**2**	0	0	0	0	0	39	39	34
05:00	5	0	0	7	33	29	8	0	1	0	0	0	0	83	39	33
06:00	0	0	14	72	142	66	10	2	0	0	0	0	0	306	37	32
07:00	7	7	45	140	**189**	**87**	**19**	0	0	0	0	0	0	494	36	30
08:00	**194**	**59**	**75**	116	91	18	2	1	0	0	0	0	0	**556**	31	20
09:00	50	34	66	**143**	188	61	8	0	0	0	0	0	0	550	34	27
10:00	1	15	14	95	185	79	16	0	0	0	0	0	0	405	37	31
11:00	4	3	17	81	209	84	17	**1**	0	0	0	0	0	416	37	32
12 PM	**5**	0	9	115	199	**105**	11	1	0	0	0	0	0	445	37	32
13:00	5	1	23	**136**	208	90	9	1	0	0	0	0	0	473	36	31
14:00	4	**10**	**36**	131	**247**	101	**27**	0	0	0	0	0	0	**556**	37	31
15:00	24	14	58	172	**312**	123	10	2	0	0	0	0	0	715	36	30
16:00	31	36	53	**214**	264	**130**	**16**	1	0	0	0	0	0	**745**	36	29
17:00	181	59	**67**	78	96	26	3	0	0	0	0	0	0	510	32	20
18:00	**208**	**76**	38	26	69	25	5	1	0	0	0	0	0	448	32	17
19:00	10	18	43	139	180	115	15	**4**	0	0	0	0	0	524	37	30
20:00	1	1	26	94	174	91	13	0	0	0	0	0	0	400	37	32
21:00	4	0	6	99	194	70	14	2	0	0	0	0	0	389	36	32
22:00	2	0	10	115	202	104	13	2	0	**1**	0	0	0	449	37	32
23:00	1	1	11	92	188	119	16	0	0	0	0	0	0	428	37	32
Total	746	334	622	2136	3592	1645	248	21	2	1	0	0	0	9347		
%	8.0%	3.6%	6.7%	22.9%	38.4%	17.6%	2.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	07:00	07:00	07:00	04:00	00:00					08:00		
Vol.	194	59	75	143	189	87	19	2	1					556		
Midday Peak	12:00	14:00	14:00	13:00	14:00	12:00	14:00	11:00						14:00		
Vol.	5	10	36	136	247	105	27	1						556		
PM Peak	18:00	18:00	17:00	16:00	15:00	16:00	16:00	19:00		22:00				16:00		
Vol.	208	76	67	214	312	130	16	4		1				745		

% iles

15th Percentile : 22 MPH
50th Percentile : 31 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 5728
Percent in Pace : 61.3%
Number of Vehicles > 30 MPH : 4790
Percent of Vehicles > 30 MPH : 51.2%
Mean Speed(Average) : 29 MPH

PRECISION DATA INDUSTRIES, LLC
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Email: datarequests@pdillc.com

Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) speed
Site Code: 10082.00

NB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	1	1	12	3	0	1	0	0	0	0	0	18	35	33
01:00	0	0	2	1	1	1	0	0	0	0	0	0	0	5	34	28
02:00	0	1	1	5	1	1	0	0	0	0	0	0	0	9	34	27
03:00	2	3	0	1	2	4	3	**2**	0	0	0	0	0	17	41	31
04:00	0	0	0	5	20	13	4	0	0	0	0	0	0	42	38	34
05:00	2	0	2	3	20	22	11	0	**1**	0	0	0	0	61	40	34
06:00	11	1	0	14	57	64	18	2	0	0	0	0	0	167	39	33
07:00	3	2	12	73	183	**92**	**19**	2	1	0	0	0	0	387	37	32
08:00	**40**	**26**	**93**	**186**	**213**	55	9	1	0	0	0	0	0	**623**	34	27
09:00	22	3	32	126	160	54	4	1	0	0	0	0	0	402	34	29
10:00	8	6	24	78	136	40	5	0	0	0	0	0	0	297	34	30
11:00	13	6	29	112	124	32	5	0	0	0	0	0	0	321	34	29
12 PM	**20**	3	42	121	138	38	7	1	0	0	0	0	0	370	34	28
13:00	10	5	**50**	108	144	38	**9**	**2**	0	0	0	0	0	366	34	29
14:00	13	**11**	38	**131**	**148**	**71**	9	0	0	0	0	0	0	**421**	36	29
15:00	24	7	50	157	187	**88**	9	**2**	0	0	0	0	0	524	36	29
16:00	31	24	63	186	**232**	71	**10**	0	0	0	0	0	0	617	34	28
17:00	**65**	**51**	**130**	**220**	148	25	5	0	0	0	0	0	0	**644**	32	25
18:00	24	10	49	170	191	64	6	1	0	0	0	0	0	515	34	29
19:00	8	6	38	118	153	51	3	0	0	0	0	0	0	377	34	29
20:00	3	3	11	56	87	30	4	0	0	0	0	0	0	194	35	30
21:00	3	5	17	64	95	39	6	1	0	0	0	0	0	230	36	30
22:00	3	1	17	43	101	47	6	0	0	0	0	0	0	218	36	31
23:00	2	0	13	60	155	50	7	0	0	0	0	0	0	287	36	31
Total	307	174	714	2039	2708	993	159	16	2	0	0	0	0	7112		
%	4.3%	2.4%	10.0%	28.7%	38.1%	14.0%	2.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	07:00	07:00	03:00	05:00					08:00		
Vol.	40	26	93	186	213	92	19	2	1					623		
Midday Peak	12:00	14:00	13:00	14:00	14:00	14:00	13:00	13:00						14:00		
Vol.	20	11	50	131	148	71	9	2						421		
PM Peak	17:00	17:00	17:00	17:00	16:00	15:00	16:00	15:00						17:00		
Vol.	65	51	130	220	232	88	10	2						644		

% iles

15th Percentile :	24 MPH
50th Percentile :	30 MPH
85th Percentile :	35 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4747
Percent in Pace :	66.7%
Number of Vehicles > 30 MPH :	3336
Percent of Vehicles > 30 MPH :	46.9%
Mean Speed(Average) :	29 MPH

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south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) speed
Site Code: 10082.00

NB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	1	0	9	19	83	43	6	**3**	0	0	0	0	0	164	37	33
01:00	2	1	6	11	32	21	1	0	0	0	0	0	0	74	37	31
02:00	1	0	6	6	18	15	3	0	0	0	0	0	0	49	38	32
03:00	1	0	3	11	20	15	1	0	0	0	0	0	0	51	37	31
04:00	3	1	0	6	13	10	2	1	0	0	0	0	0	36	38	30
05:00	2	0	0	6	22	20	6	0	0	0	0	0	0	56	39	33
06:00	8	3	2	28	79	52	11	0	0	0	0	0	0	183	38	32
07:00	8	5	13	78	162	**90**	**15**	2	0	0	0	0	0	373	37	32
08:00	**58**	**36**	**120**	**249**	**206**	44	7	0	0	0	0	0	0	**720**	33	26
09:00	18	8	56	139	164	56	5	1	0	0	0	0	0	447	34	29
10:00	22	9	34	72	115	50	9	0	0	0	0	0	0	311	36	29
11:00	**26**	5	26	76	138	58	11	**1**	0	0	0	0	0	341	36	29
12 PM	21	4	27	**105**	**163**	52	8	1	0	0	0	0	0	381	35	29
13:00	21	6	**30**	102	137	51	12	0	0	0	0	0	0	359	35	29
14:00	21	**12**	28	97	155	**78**	**19**	1	0	0	0	0	0	**411**	37	30
15:00	44	16	48	**141**	181	108	**24**	1	0	0	0	0	0	563	37	29
16:00	32	12	**66**	138	**226**	**120**	21	1	0	0	0	0	0	**616**	37	30
17:00	226	57	48	87	67	19	4	1	0	0	0	0	0	509	31	18
18:00	**345**	**67**	37	29	49	25	5	0	0	0	0	0	0	557	29	14
19:00	22	8	45	103	148	75	14	**3**	0	0	0	0	0	418	36	29
20:00	7	3	28	58	115	47	17	0	0	0	0	0	0	275	37	31
21:00	7	3	12	66	122	64	8	1	0	0	0	0	0	283	37	31
22:00	4	1	10	52	160	78	21	3	0	**1**	0	0	0	330	38	33
23:00	13	3	10	67	144	97	17	1	**1**	0	0	0	0	353	38	32
Total	913	260	664	1746	2719	1288	247	21	1	1	0	0	0	7860		
%	11.6%	3.3%	8.4%	22.2%	34.6%	16.4%	3.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	08:00	07:00	07:00	00:00						08:00		
Vol.	58	36	120	249	206	90	15	3						720		
Midday Peak	11:00	14:00	13:00	12:00	12:00	14:00	14:00	11:00						14:00		
Vol.	26	12	30	105	163	78	19	1						411		
PM Peak	18:00	18:00	16:00	15:00	16:00	16:00	15:00	19:00	23:00	22:00				16:00		
Vol.	345	67	66	141	226	120	24	3	1	1				616		

% iles

15th Percentile : 20 MPH
50th Percentile : 30 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 4465
Percent in Pace : 56.8%
Number of Vehicles > 30 MPH : 3733
Percent of Vehicles > 30 MPH : 47.5%
Mean Speed(Average) : 28 MPH

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south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) speed
Site Code: 10082.00

NB Left Lane, NB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	1	1	27	10	0	1	0	0	0	0	0	40	37	33
01:00	0	0	2	2	1	2	0	0	0	0	0	0	0	7	35	29
02:00	1	1	1	5	2	1	0	0	0	0	0	0	0	11	30	26
03:00	2	3	0	3	10	9	4	2	0	0	0	0	0	33	40	32
04:00	1	0	0	9	28	26	7	0	0	0	0	0	0	71	39	34
05:00	2	0	2	15	47	61	34	0	**2**	0	0	0	0	163	41	35
06:00	12	2	3	53	198	171	**47**	**5**	0	0	0	0	0	491	39	34
07:00	7	14	50	193	**389**	**224**	44	2	2	0	0	0	0	925	37	32
08:00	**147**	**98**	**211**	**336**	330	98	19	1	0	0	0	0	0	**1240**	33	25
09:00	71	29	84	302	357	124	14	2	0	0	0	0	0	983	34	28
10:00	17	10	55	214	336	119	11	0	0	0	0	0	0	762	35	30
11:00	19	6	56	245	322	116	12	0	0	0	0	0	0	776	35	30
12 PM	**21**	5	81	**263**	337	111	15	**3**	0	0	0	0	0	836	35	30
13:00	15	13	**82**	194	319	104	**22**	3	0	0	0	0	0	752	35	30
14:00	18	**23**	63	246	**360**	**184**	22	1	0	0	0	0	0	**917**	36	30
15:00	34	28	111	310	493	**195**	**22**	**3**	0	0	0	0	0	1196	36	30
16:00	46	44	147	413	**535**	164	22	0	0	0	0	0	0	1371	34	29
17:00	**122**	**130**	**297**	**474**	328	60	7	0	0	0	0	0	0	**1418**	32	25
18:00	38	30	130	394	437	138	10	1	0	0	0	0	0	1178	34	29
19:00	13	11	71	239	364	118	14	0	0	0	0	0	0	830	35	30
20:00	6	5	35	182	261	74	12	1	0	0	0	0	0	576	35	30
21:00	8	6	24	173	287	92	12	1	0	0	0	0	0	603	35	31
22:00	6	1	22	110	249	103	12	0	0	0	0	0	0	503	36	31
23:00	5	0	13	128	350	131	22	0	0	0	0	0	0	649	37	32
Total	611	459	1541	4504	6367	2435	384	26	4	0	0	0	0	16331		
%	3.7%	2.8%	9.4%	27.6%	39.0%	14.9%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	07:00	07:00	06:00	06:00	05:00					08:00		
Vol.	147	98	211	336	389	224	47	5	2					1240		
Midday Peak	12:00	14:00	13:00	12:00	14:00	14:00	13:00	12:00						14:00		
Vol.	21	23	82	263	360	184	22	3						917		
PM Peak	17:00	17:00	17:00	17:00	16:00	15:00	15:00	15:00						17:00		
Vol.	122	130	297	474	535	195	22	3						1418		

% iles

15th Percentile :	24 MPH
50th Percentile :	30 MPH
85th Percentile :	35 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	10871
Percent in Pace :	66.6%
Number of Vehicles > 30 MPH :	7942
Percent of Vehicles > 30 MPH :	48.6%
Mean Speed(Average) :	29 MPH

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91863 E (NB) speed
Site Code: 10082.00

NB Left Lane, NB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	2	0	10	51	174	98	14	**4**	**1**	0	0	0	0	354	38	33
01:00	4	1	11	29	82	43	1	0	0	0	0	0	0	171	36	31
02:00	4	0	9	17	47	32	7	0	0	0	0	0	0	116	38	31
03:00	3	0	5	18	54	31	2	0	0	0	0	0	0	113	37	31
04:00	4	1	0	9	31	22	5	3	0	0	0	0	0	75	39	32
05:00	7	0	0	13	55	49	14	0	1	0	0	0	0	139	39	33
06:00	8	3	16	100	221	118	21	2	0	0	0	0	0	489	37	32
07:00	15	12	58	218	351	**177**	**34**	2	0	0	0	0	0	867	37	31
08:00	**252**	**95**	**195**	**365**	297	62	9	1	0	0	0	0	0	**1276**	32	23
09:00	68	42	122	282	**352**	117	13	1	0	0	0	0	0	997	34	28
10:00	23	24	48	167	300	129	25	0	0	0	0	0	0	716	36	30
11:00	**30**	8	43	157	347	142	28	**2**	0	0	0	0	0	757	36	31
12 PM	26	4	36	220	362	157	19	2	0	0	0	0	0	826	36	31
13:00	26	7	53	**238**	345	141	21	1	0	0	0	0	0	832	36	30
14:00	25	**22**	**64**	228	**402**	**179**	**46**	1	0	0	0	0	0	**967**	37	31
15:00	68	30	106	313	**493**	231	34	3	0	0	0	0	0	1278	36	29
16:00	63	48	**119**	**352**	490	**250**	**37**	2	0	0	0	0	0	**1361**	36	29
17:00	407	116	115	165	163	45	7	1	0	0	0	0	0	1019	31	19
18:00	**553**	**143**	75	55	118	50	10	1	0	0	0	0	0	1005	31	16
19:00	32	26	88	242	328	190	29	**7**	0	0	0	0	0	942	37	30
20:00	8	4	54	152	289	138	30	0	0	0	0	0	0	675	37	31
21:00	11	3	18	165	316	134	22	3	0	0	0	0	0	672	37	31
22:00	6	1	20	167	362	182	34	5	0	**2**	0	0	0	779	37	32
23:00	14	4	21	159	332	216	33	1	**1**	0	0	0	0	781	38	32
Total	1659	594	1286	3882	6311	2933	495	42	3	2	0	0	0	17207		
%	9.6%	3.5%	7.5%	22.6%	36.7%	17.0%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	09:00	07:00	07:00	00:00	00:00					08:00		
Vol.	252	95	195	365	352	177	34	4	1					1276		
Midday Peak	11:00	14:00	14:00	13:00	14:00	14:00	14:00	11:00						14:00		
Vol.	30	22	64	238	402	179	46	2						967		
PM Peak	18:00	18:00	16:00	16:00	15:00	16:00	16:00	19:00	23:00	22:00				16:00		
Vol.	553	143	119	352	493	250	37	7	1	2				1361		

% iles

15th Percentile :	21 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	10193
Percent in Pace :	59.2%
Number of Vehicles > 30 MPH :	8523
Percent of Vehicles > 30 MPH :	49.5%
Mean Speed(Average) :	28 MPH

PRECISION
D A T A
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91863 E (NB) class
Site Code: 10082.00

NB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	21	1	0	0	0	0	0	0	0	0	0	0	22
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	10	3	0	3	0	0	0	0	0	0	0	0	16
04:00	0	21	7	0	1	0	0	0	0	0	0	0	0	29
05:00	1	82	17	0	2	0	0	0	0	0	0	0	0	102
06:00	1	271	47	0	5	0	0	0	0	0	0	0	0	324
07:00	2	484	50	0	1	0	0	1	0	0	0	0	0	538
08:00	1	560	42	4	8	0	0	1	0	1	0	0	0	617
09:00	0	520	52	3	3	0	0	3	0	0	0	0	0	581
10:00	0	397	58	1	4	0	0	5	0	0	0	0	0	465
11:00	0	386	61	0	7	0	0	1	0	0	0	0	0	455
12 PM	0	389	64	1	12	0	0	0	0	0	0	0	0	466
13:00	1	324	51	0	9	1	0	0	0	0	0	0	0	386
14:00	0	422	70	0	4	0	0	0	0	0	0	0	0	496
15:00	0	566	98	0	6	0	0	2	0	0	0	0	0	672
16:00	1	674	66	0	8	0	0	5	0	0	0	0	0	754
17:00	3	706	56	0	5	0	0	4	0	0	0	0	0	774
18:00	1	603	54	0	1	0	0	4	0	0	0	0	0	663
19:00	1	420	30	0	1	0	0	1	0	0	0	0	0	453
20:00	1	350	26	0	3	0	0	2	0	0	0	0	0	382
21:00	0	350	22	0	1	0	0	0	0	0	0	0	0	373
22:00	1	266	17	0	0	1	0	0	0	0	0	0	0	285
23:00	1	326	32	0	2	0	0	1	0	0	0	0	0	362
Total	15	8152	924	9	86	2	0	30	0	1	0	0	0	9219
Percent	0.2%	88.4%	10.0%	0.1%	0.9%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	09:00	08:00	08:00			09:00		08:00				08:00
Vol.	2	560	52	4	8			3		1				617
Midday Peak	13:00	14:00	14:00	12:00	12:00	13:00		11:00						14:00
Vol.	1	422	70	1	12	1		1						496
PM Peak	17:00	17:00	15:00		16:00	22:00		16:00						17:00
Vol.	3	706	98		8	1		5						774

PRECISION
D A T A
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Site Code: 10082.00

NB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	176	13	0	0	0	0	1	0	0	0	0	0	190
01:00	0	91	6	0	0	0	0	0	0	0	0	0	0	97
02:00	0	57	10	0	0	0	0	0	0	0	0	0	0	67
03:00	1	52	6	0	3	0	0	0	0	0	0	0	0	62
04:00	0	34	5	0	0	0	0	0	0	0	0	0	0	39
05:00	0	74	8	0	1	0	0	0	0	0	0	0	0	83
06:00	0	267	33	0	4	0	0	2	0	0	0	0	0	306
07:00	1	457	32	0	2	0	0	2	0	0	0	0	0	494
08:00	0	523	26	0	5	0	0	2	0	0	0	0	0	556
09:00	2	502	40	1	3	0	0	2	0	0	0	0	0	550
10:00	0	351	46	1	6	0	0	1	0	0	0	0	0	405
11:00	0	353	56	0	5	0	0	2	0	0	0	0	0	416
12 M P	0	377	62	0	5	0	0	1	0	0	0	0	0	445
13:00	0	409	53	0	9	0	0	0	1	1	0	0	0	473
14:00	2	462	76	0	12	0	0	2	0	1	0	1	0	556
15:00	0	624	78	1	7	0	0	5	0	0	0	0	0	715
16:00	1	672	63	0	1	0	0	8	0	0	0	0	0	745
17:00	2	462	26	4	5	0	0	10	0	0	0	1	0	510
18:00	3	414	24	0	3	0	0	4	0	0	0	0	0	448
19:00	1	496	25	0	1	0	0	0	0	1	0	0	0	524
20:00	3	363	32	0	2	0	0	0	0	0	0	0	0	400
21:00	0	366	22	0	1	0	0	0	0	0	0	0	0	389
22:00	0	409	37	0	3	0	0	0	0	0	0	0	0	449
23:00	2	385	41	0	0	0	0	0	0	0	0	0	0	428
Total	18	8376	820	7	78	0	0	42	1	3	0	2	0	9347
Percent	0.2%	89.6%	8.8%	0.1%	0.8%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	09:00	09:00	08:00			06:00						08:00
Vol.	2	523	40	1	5			2						556
Midday Peak	14:00	14:00	14:00		14:00			11:00	13:00	13:00		14:00		14:00
Vol.	2	462	76	12				2	1	1		1		556
PM Peak	18:00	16:00	15:00	17:00	15:00			17:00		19:00		17:00		16:00
Vol.	3	672	78	4	7			10	1		1			745

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) class
Site Code: 10082.00

NB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/0 9	0	17	0	0	1	0	0	0	0	0	0	0	0	18
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
02:00	0	6	2	0	1	0	0	0	0	0	0	0	0	9
03:00	0	15	1	0	1	0	0	0	0	0	0	0	0	17
04:00	0	35	5	0	0	1	0	1	0	0	0	0	0	42
05:00	0	52	9	0	0	0	0	0	0	0	0	0	0	61
06:00	0	144	17	0	2	3	0	1	0	0	0	0	0	167
07:00	1	349	31	0	3	2	0	0	0	1	0	0	0	387
08:00	14	553	42	0	2	5	0	3	3	1	0	0	0	623
09:00	4	346	40	0	4	6	0	1	1	0	0	0	0	402
10:00	3	232	51	0	6	5	0	0	0	0	0	0	0	297
11:00	1	261	46	0	8	3	0	2	0	0	0	0	0	321
12 PM	7	299	53	0	10	1	0	0	0	0	0	0	0	370
13:00	3	294	61	0	4	3	0	1	0	0	0	0	0	366
14:00	3	345	65	0	3	4	0	1	0	0	0	0	0	421
15:00	11	406	96	0	5	5	0	0	1	0	0	0	0	524
16:00	22	510	76	0	2	5	0	0	2	0	0	0	0	617
17:00	38	555	40	0	2	7	0	1	1	0	0	0	0	644
18:00	10	456	43	0	3	2	0	0	1	0	0	0	0	515
19:00	9	337	29	0	1	0	0	1	0	0	0	0	0	377
20:00	3	180	11	0	0	0	0	0	0	0	0	0	0	194
21:00	1	211	15	1	0	1	0	0	1	0	0	0	0	230
22:00	4	199	15	0	0	0	0	0	0	0	0	0	0	218
23:00	0	271	16	0	0	0	0	0	0	0	0	0	0	287
Total	134	6077	765	1	58	53	0	12	10	2	0	0	0	7112
Percent	1.9%	85.4%	10.8%	0.0%	0.8%	0.7%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00		09:00	09:00		08:00	08:00	07:00				08:00
Vol.	14	553	42		4	6		3	3	1				623
Midday Peak	12:00	14:00	14:00		12:00	14:00		11:00						14:00
Vol.	7	345	65		10	4		2						421
PM Peak	17:00	17:00	15:00	21:00	15:00	17:00		17:00	16:00					17:00
Vol.	38	555	96	1	5	7		1	2					644

PRECISION
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Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) class
Site Code: 10082.00

NB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	148	14	0	0	1	0	1	0	0	0	0	0	164
01:00	1	66	7	0	0	0	0	0	0	0	0	0	0	74
02:00	1	41	7	0	0	0	0	0	0	0	0	0	0	49
03:00	0	39	8	0	4	0	0	0	0	0	0	0	0	51
04:00	1	23	12	0	0	0	0	0	0	0	0	0	0	36
05:00	0	48	7	0	0	0	0	0	1	0	0	0	0	56
06:00	2	155	19	0	4	3	0	0	0	0	0	0	0	183
07:00	4	331	33	0	1	2	0	2	0	0	0	0	0	373
08:00	32	631	42	0	3	3	0	1	7	1	0	0	0	720
09:00	11	389	35	0	6	5	0	1	0	0	0	0	0	447
10:00	9	236	55	0	4	6	0	0	1	0	0	0	0	311
11:00	9	267	56	1	7	0	0	1	0	0	0	0	0	341
12 PM	8	294	65	0	12	2	0	0	0	0	0	0	0	381
13:00	11	282	55	1	8	1	0	0	1	0	0	0	0	359
14:00	11	310	73	1	10	4	0	1	1	0	0	0	0	411
15:00	13	435	99	0	9	3	0	3	1	0	0	0	0	563
16:00	17	512	74	0	6	0	0	4	3	0	0	0	0	616
17:00	43	434	25	0	1	3	0	1	2	0	0	0	0	509
18:00	50	473	22	1	3	6	0	0	2	0	0	0	0	557
19:00	17	354	43	0	3	0	0	0	0	1	0	0	0	418
20:00	8	245	20	0	0	2	0	0	0	0	0	0	0	275
21:00	9	247	23	0	3	0	0	1	0	0	0	0	0	283
22:00	5	287	31	1	3	3	0	0	0	0	0	0	0	330
23:00	6	306	38	0	2	0	0	1	0	0	0	0	0	353
Total	268	6553	863	5	89	44	0	17	19	2	0	0	0	7860
Percent	3.4%	83.4%	11.0%	0.1%	1.1%	0.6%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	08:00		09:00	09:00		07:00	08:00	08:00				08:00
Vol.	32	631	42		6	5		2	7	1				720
Midday Peak	13:00	14:00	14:00	11:00	12:00	14:00		11:00	13:00					14:00
Vol.	11	310	73	1	12	4		1	1					411
PM Peak	18:00	16:00	15:00	18:00	15:00	18:00		16:00	16:00	19:00				16:00
Vol.	50	512	99	1	9	6		4	3	1				616

PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) class
Site Code: 10082.00

NB Left Lane, NB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/0 9	0	38	1	0	1	0	0	0	0	0	0	0	0	40
01:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
02:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
03:00	0	25	4	0	4	0	0	0	0	0	0	0	0	33
04:00	0	56	12	0	1	1	0	1	0	0	0	0	0	71
05:00	1	134	26	0	2	0	0	0	0	0	0	0	0	163
06:00	1	415	64	0	7	3	0	1	0	0	0	0	0	491
07:00	3	833	81	0	4	2	0	1	0	1	0	0	0	925
08:00	15	1113	84	4	10	5	0	4	3	2	0	0	0	1240
09:00	4	866	92	3	7	6	0	4	1	0	0	0	0	983
10:00	3	629	109	1	10	5	0	5	0	0	0	0	0	762
11:00	1	647	107	0	15	3	0	3	0	0	0	0	0	776
12 PM	7	688	117	1	22	1	0	0	0	0	0	0	0	836
13:00	4	618	112	0	13	4	0	1	0	0	0	0	0	752
14:00	3	767	135	0	7	4	0	1	0	0	0	0	0	917
15:00	11	972	194	0	11	5	0	2	1	0	0	0	0	1196
16:00	23	1184	142	0	10	5	0	5	2	0	0	0	0	1371
17:00	41	1261	96	0	7	7	0	5	1	0	0	0	0	1418
18:00	11	1059	97	0	4	2	0	4	1	0	0	0	0	1178
19:00	10	757	59	0	2	0	0	2	0	0	0	0	0	830
20:00	4	530	37	0	3	0	0	2	0	0	0	0	0	576
21:00	1	561	37	1	1	1	0	0	1	0	0	0	0	603
22:00	5	465	32	0	0	1	0	0	0	0	0	0	0	503
23:00	1	597	48	0	2	0	0	1	0	0	0	0	0	649
Total	149	14229	1689	10	144	55	0	42	10	3	0	0	0	16331
Percent	0.9%	87.1%	10.3%	0.1%	0.9%	0.3%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	08:00	08:00	09:00		08:00	08:00	08:00				08:00
Vol.	15	1113	92	4	10	6		4	3	2				1240
Midday Peak	12:00	14:00	14:00	12:00	12:00	13:00		11:00						14:00
Vol.	7	767	135	1	22	4		3						917
PM Peak	17:00	17:00	15:00	21:00	15:00	17:00		16:00	16:00					17:00
Vol.	41	1261	194	1	11	7		5	2					1418

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (NB Lanes)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 E (NB) class
Site Code: 10082.00

NB Left Lane, NB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	324	27	0	0	1	0	2	0	0	0	0	0	354
01:00	1	157	13	0	0	0	0	0	0	0	0	0	0	171
02:00	1	98	17	0	0	0	0	0	0	0	0	0	0	116
03:00	1	91	14	0	7	0	0	0	0	0	0	0	0	113
04:00	1	57	17	0	0	0	0	0	0	0	0	0	0	75
05:00	0	122	15	0	1	0	0	0	1	0	0	0	0	139
06:00	2	422	52	0	8	3	0	2	0	0	0	0	0	489
07:00	5	788	65	0	3	2	0	4	0	0	0	0	0	867
08:00	32	1154	68	0	8	3	0	3	7	1	0	0	0	1276
09:00	13	891	75	1	9	5	0	3	0	0	0	0	0	997
10:00	9	587	101	1	10	6	0	1	1	0	0	0	0	716
11:00	9	620	112	1	12	0	0	3	0	0	0	0	0	757
12 PM	8	671	127	0	17	2	0	1	0	0	0	0	0	826
13:00	11	691	108	1	17	1	0	0	2	1	0	0	0	832
14:00	13	772	149	1	22	4	0	3	1	1	0	1	0	967
15:00	13	1059	177	1	16	3	0	8	1	0	0	0	0	1278
16:00	18	1184	137	0	7	0	0	12	3	0	0	0	0	1361
17:00	45	896	51	4	6	3	0	11	2	0	0	1	0	1019
18:00	53	887	46	1	6	6	0	4	2	0	0	0	0	1005
19:00	18	850	68	0	4	0	0	0	0	2	0	0	0	942
20:00	11	608	52	0	2	2	0	0	0	0	0	0	0	675
21:00	9	613	45	0	4	0	0	1	0	0	0	0	0	672
22:00	5	696	68	1	6	3	0	0	0	0	0	0	0	779
23:00	8	691	79	0	2	0	0	1	0	0	0	0	0	781
Total	286	14929	1683	12	167	44	0	59	20	5	0	2	0	17207
Percent	1.7%	86.8%	9.8%	0.1%	1.0%	0.3%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	09:00	09:00	09:00		07:00	08:00	08:00				08:00
Vol.	32	1154	75	1	9	5		4	7	1				1276
Midday Peak	14:00	14:00	14:00	11:00	14:00	14:00		11:00	13:00	13:00		14:00		14:00
Vol.	13	772	149	1	22	4	3		2	1		1		967
PM Peak	18:00	16:00	15:00	17:00	15:00	18:00		16:00	16:00	19:00		17:00		16:00
Vol.	53	1184	177	4	16	6	12		3	2		1		1361

Land Boulevard (SB)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
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91863 EE (SB) volume
Site Code: 10082.00

Start Time	A.M.	SB	P.M.				Wed 13-May-09
12:00	25		94				
12:15	20		129				
12:30	19		131				
12:45	18	82	119	473			
01:00	22		155				
01:15	22		130				
01:30	14		128				
01:45	10	68	128	541			
02:00	7		124				
02:15	4		122				
02:30	10		144				
02:45	4	25	122	512			
03:00	6		154				
03:15	8		137				
03:30	9		173				
03:45	11	34	172	636			
04:00	10		163				
04:15	8		148				
04:30	21		147				
04:45	21	60	175	633			
05:00	33		199				
05:15	62		153				
05:30	76		173				
05:45	107	278	173	698			
06:00	94		143				
06:15	146		204				
06:30	157		143				
06:45	195	592	139	629			
07:00	181		104				
07:15	226		127				
07:30	216		89				
07:45	230	853	98	418			
08:00	206		119				
08:15	230		110				
08:30	216		98				
08:45	192	844	87	414			
09:00	226		118				
09:15	207		93				
09:30	172		58				
09:45	190	795	81	350			
10:00	145		76				
10:15	152		55				
10:30	147		68				
10:45	141	585	71	270			
11:00	141		30				
11:15	140		37				
11:30	108		33				
11:45	128	517	32	132			
Total	4733		5706				
Percent			100.0%		0.0%	0.0%	
Day Total		10439					
Peak	07:30		04:45				
Vol.	882		700				
P.H.F.	0.959		0.879				

Land Boulevard (SB)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

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91863 EE (SB) volume
Site Code: 10082.00

Start Time	A.M.	SB	P.M.				Thu 14-May-09
12:00	21		115				
12:15	19		142				
12:30	14		126				
12:45	12	66	120	503			
01:00	10		147				
01:15	11		136				
01:30	9		126				
01:45	5	35	125	534			
02:00	12		146				
02:15	10		125				
02:30	7		170				
02:45	4	33	155	596			
03:00	4		154				
03:15	6		174				
03:30	9		184				
03:45	8	27	175	687			
04:00	12		183				
04:15	17		188				
04:30	17		218				
04:45	33	79	220	809			
05:00	40		228				
05:15	54		193				
05:30	85		225				
05:45	92	271	188	834			
06:00	97		173				
06:15	137		218				
06:30	159		198				
06:45	207	600	213	802			
07:00	186		156				
07:15	213		135				
07:30	228		132				
07:45	232	859	115	538			
08:00	209		89				
08:15	219		87				
08:30	250		98				
08:45	235	913	94	368			
09:00	232		106				
09:15	196		94				
09:30	151		90				
09:45	185	764	64	354			
10:00	148		77				
10:15	165		61				
10:30	131		76				
10:45	148	592	63	277			
11:00	122		64				
11:15	117		42				
11:30	125		69				
11:45	129	493	62	237			
Total	4732		6539				
Percent			100.0%		0.0%	0.0%	
Day Total		11271					
Peak	08:15		04:45				
Vol.	936		866				
P.H.F.	0.936		0.950				

PRECISION
D A T A
INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
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Land Boulevard (SB)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 EE (SB) speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/13/0 9	0	1	1	12	23	25	11	4	4	**1**	0	0	0	82	43	36
01:00	0	1	5	14	19	14	14	1	0	0	0	0	0	68	41	33
02:00	0	0	0	2	3	14	2	2	2	0	0	0	0	25	44	38
03:00	0	0	2	3	7	13	5	4	0	0	0	0	0	34	43	36
04:00	0	0	0	4	9	17	18	11	1	0	0	0	0	60	45	39
05:00	0	0	1	16	56	88	**74**	**32**	**10**	1	0	0	0	278	45	38
06:00	0	0	1	91	250	154	69	24	3	0	0	0	0	592	40	34
07:00	0	0	7	105	**418**	**250**	62	11	0	0	0	0	0	**853**	38	34
08:00	0	0	16	**323**	405	78	20	1	1	0	0	0	0	844	34	31
09:00	0	**4**	**28**	289	378	84	10	1	1	0	0	0	0	795	34	30
10:00	0	2	18	176	251	102	30	5	0	1	0	0	0	585	37	32
11:00	**2**	**2**	16	168	231	74	21	2	0	**1**	0	0	0	517	36	31
12 PM	0	0	**23**	**186**	187	64	11	2	0	0	0	0	0	473	35	31
13:00	0	0	17	170	**234**	90	**27**	3	0	0	0	0	0	**541**	37	32
14:00	0	1	14	141	226	**98**	27	**5**	0	0	0	0	0	512	37	32
15:00	**1**	3	11	179	299	**106**	26	**7**	**4**	0	0	0	0	636	37	32
16:00	0	**4**	30	201	284	88	21	4	0	**1**	0	0	0	633	36	31
17:00	0	4	**36**	**270**	**313**	62	12	1	0	0	0	0	0	**698**	34	30
18:00	0	0	24	212	281	88	19	3	1	0	**1**	0	0	629	35	31
19:00	0	0	11	108	180	90	25	4	0	0	0	0	0	418	38	32
20:00	0	0	19	105	196	76	15	3	0	0	0	0	0	414	37	32
21:00	0	0	10	76	161	77	22	4	0	0	0	0	0	350	38	33
22:00	0	0	5	56	101	77	**27**	4	0	0	0	0	0	270	39	33
23:00	0	0	3	18	43	41	21	6	0	0	0	0	0	132	41	35
Total	3	22	298	2925	4555	1870	589	144	27	5	1	0	0	10439		
%	0.0%	0.2%	2.9%	28.0%	43.6%	17.9%	5.6%	1.4%	0.3%	0.0%	0.0%	0.0%	0.0%			
AM Peak		09:00	09:00	08:00	07:00	07:00	05:00	05:00	05:00	00:00				07:00		
Vol.		4	28	323	418	250	74	32	10	1				853		
Midday Peak	11:00	11:00	12:00	12:00	13:00	14:00	13:00	14:00		11:00				13:00		
Vol.	2	2	23	186	234	98	27	5		1				541		
PM Peak	15:00	16:00	17:00	17:00	17:00	15:00	22:00	15:00	15:00	16:00	18:00			17:00		
Vol.	1	4	36	270	313	106	27	7	4	1	1			698		

% iles

15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 37 MPH
95th Percentile : 42 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 7480
Percent in Pace : 71.7%
Number of Vehicles > 30 MPH : 6280
Percent of Vehicles > 30 MPH : 60.2%
Mean Speed(Average) : 32 MPH

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (SB)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 EE (SB) speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/14/0 9	0	1	2	11	19	20	10	3	0	0	0	0	0	66	41	34
01:00	0	0	2	2	12	10	8	1	0	0	0	0	0	35	41	35
02:00	0	0	3	2	8	7	9	3	1	0	0	0	0	33	43	36
03:00	0	0	0	0	6	8	8	2	2	**1**	0	0	0	27	48	40
04:00	0	0	0	6	15	30	18	6	3	0	**1**	0	0	79	44	38
05:00	0	1	1	22	67	75	**75**	**23**	**6**	1	0	0	0	271	44	37
06:00	0	0	4	103	246	**160**	65	18	3	1	0	0	0	600	39	34
07:00	0	0	10	178	**463**	155	47	6	0	0	0	0	0	859	37	32
08:00	0	**2**	17	**274**	446	150	22	2	0	0	0	0	0	**913**	36	31
09:00	0	0	**21**	218	390	108	26	1	0	0	0	0	0	764	35	31
10:00	0	1	16	165	268	110	26	6	0	0	0	0	0	592	37	32
11:00	0	**3**	15	146	228	73	**23**	5	0	0	0	0	0	493	36	31
12 PM	0	2	21	132	237	86	19	**6**	0	0	0	0	0	503	37	32
13:00	0	1	**22**	191	211	**94**	14	1	0	0	0	0	0	534	36	31
14:00	0	3	22	**217**	**276**	63	12	2	0	**1**	0	0	0	**596**	34	31
15:00	0	0	19	305	253	91	18	1	0	0	0	0	0	687	35	30
16:00	0	0	25	314	**367**	85	15	3	0	0	0	0	0	809	34	31
17:00	0	**6**	41	**357**	341	75	14	0	0	0	0	0	0	**834**	34	30
18:00	0	6	**61**	308	293	**120**	13	1	0	0	0	0	0	802	35	30
19:00	0	0	27	166	240	88	16	1	0	0	0	0	0	538	36	31
20:00	0	0	31	129	143	51	14	0	0	0	0	0	0	368	35	30
21:00	0	2	25	115	147	57	8	0	0	0	0	0	0	354	35	31
22:00	0	0	19	76	97	69	11	**4**	**1**	0	0	0	0	277	38	32
23:00	0	1	7	46	95	60	**26**	2	0	0	0	0	0	237	39	33
Total	0	29	411	3483	4868	1845	517	97	16	4	1	0	0	11271		
%	0.0%	0.3%	3.6%	30.9%	43.2%	16.4%	4.6%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak		08:00	09:00	08:00	07:00	06:00	05:00	05:00	05:00	03:00	04:00			08:00		
Vol.		2	21	274	463	160	75	23	6	1	1			913		
Midday Peak		11:00	13:00	14:00	14:00	13:00	11:00	12:00		14:00				14:00		
Vol.		3	22	217	276	94	23	6		1				596		
PM Peak		17:00	18:00	17:00	16:00	18:00	23:00	22:00	22:00					17:00		
Vol.		6	61	357	367	120	26	4	1					834		

% iles

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	37 MPH
95th Percentile :	40 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	8351
Percent in Pace :	74.1%
Number of Vehicles > 30 MPH :	6374
Percent of Vehicles > 30 MPH :	56.6%
Mean Speed(Average) :	31 MPH

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Land Boulevard (SB)
south of Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 EE (SB) class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/13/0 9	2	67	10	0	3	0	0	0	0	0	0	0	0	82
01:00	2	57	5	0	4	0	0	0	0	0	0	0	0	68
02:00	0	21	4	0	0	0	0	0	0	0	0	0	0	25
03:00	0	26	7	0	1	0	0	0	0	0	0	0	0	34
04:00	1	46	13	0	0	0	0	0	0	0	0	0	0	60
05:00	2	220	49	0	4	0	0	3	0	0	0	0	0	278
06:00	17	441	111	0	13	0	1	9	0	0	0	0	0	592
07:00	3	726	97	0	13	0	0	12	1	0	0	1	0	853
08:00	21	750	62	0	4	0	0	7	0	0	0	0	0	844
09:00	16	676	84	0	6	0	0	8	1	4	0	0	0	795
10:00	5	503	67	0	5	0	0	5	0	0	0	0	0	585
11:00	6	435	63	0	4	0	0	7	1	1	0	0	0	517
12 M	P 5	404	59	0	5	0	0	0	0	0	0	0	0	473
13:00	2	477	52	0	5	0	0	3	0	2	0	0	0	541
14:00	3	444	56	0	4	0	0	4	0	1	0	0	0	512
15:00	5	553	67	0	4	0	0	6	0	1	0	0	0	636
16:00	4	570	49	0	2	0	0	5	1	2	0	0	0	633
17:00	6	646	39	0	2	0	0	5	0	0	0	0	0	698
18:00	6	578	41	0	2	0	0	1	1	0	0	0	0	629
19:00	3	387	23	0	1	0	0	4	0	0	0	0	0	418
20:00	5	380	25	0	0	0	0	4	0	0	0	0	0	414
21:00	8	315	20	0	1	0	0	5	0	1	0	0	0	350
22:00	2	242	23	0	3	0	0	0	0	0	0	0	0	270
23:00	2	117	12	0	0	0	0	1	0	0	0	0	0	132
Total	126	9081	1038	0	86	0	1	89	5	12	0	1	0	10439
Percent	1.2%	87.0%	9.9%	0.0%	0.8%	0.0%	0.0%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00		06:00		06:00	07:00	07:00	09:00		07:00		07:00
Vol.	21	750	111		13	1		12	1	4	1			853
Midday Peak	11:00	13:00	11:00		12:00			11:00	11:00	13:00				13:00
Vol.	6	477	63		5			7	1	2				541
PM Peak	21:00	17:00	15:00		15:00			15:00	16:00	16:00				17:00
Vol.	8	646	67		4			6	1	2				698

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91863 EE (SB) class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/14/0 9	0	59	6	0	1	0	0	0	0	0	0	0	0	66
01:00	0	33	1	0	1	0	0	0	0	0	0	0	0	35
02:00	0	28	5	0	0	0	0	0	0	0	0	0	0	33
03:00	0	21	5	0	1	0	0	0	0	0	0	0	0	27
04:00	0	63	13	0	3	0	0	0	0	0	0	0	0	79
05:00	3	213	49	0	5	0	0	1	0	0	0	0	0	271
06:00	12	465	102	0	11	0	1	7	0	2	0	0	0	600
07:00	10	741	81	0	10	0	0	15	0	2	0	0	0	859
08:00	6	823	73	0	4	0	0	6	0	1	0	0	0	913
09:00	10	667	70	0	7	0	0	5	1	3	0	1	0	764
10:00	4	498	74	0	8	0	0	5	0	2	0	1	0	592
11:00	3	409	64	0	11	0	0	4	1	1	0	0	0	493
12 PM	5	411	71	0	11	0	0	3	1	0	0	1	0	503
13:00	4	456	61	0	10	0	0	1	1	1	0	0	0	534
14:00	4	524	54	0	5	0	0	7	1	1	0	0	0	596
15:00	4	601	67	0	3	0	0	11	0	1	0	0	0	687
16:00	4	739	57	0	1	0	0	6	0	2	0	0	0	809
17:00	13	745	63	0	5	0	0	6	0	2	0	0	0	834
18:00	5	745	44	0	4	0	0	4	0	0	0	0	0	802
19:00	1	506	27	0	1	0	0	3	0	0	0	0	0	538
20:00	2	331	29	0	3	0	0	3	0	0	0	0	0	368
21:00	2	325	23	0	3	0	0	1	0	0	0	0	0	354
22:00	0	258	16	0	1	0	0	2	0	0	0	0	0	277
23:00	1	216	19	0	0	0	0	1	0	0	0	0	0	237
Total	93	9877	1074	0	109	0	1	91	5	18	0	3	0	11271
Percent	0.8%	87.6%	9.5%	0.0%	1.0%	0.0%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00		06:00		06:00	07:00	09:00	09:00		09:00		08:00
Vol.	12	823	102		11	1		15	1	3	1			913
Midday Peak	12:00	14:00	12:00		11:00			14:00	11:00	11:00		12:00		14:00
Vol.	5	524	71	11				7	1	1		1		596
PM Peak	17:00	17:00	15:00		17:00			15:00		16:00				17:00
Vol.	13	745	67		5			11		2				834

Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 G (WB) volume
Site Code: 10082.00

Start	WB Right Lane				WB Left Lane				Combined				04-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Mon
12:00	6		28		4		31		10		59		
12:15	4		44		7		35		11		79		
12:30	3		46		4		41		7		87		
12:45	7	20	52	170	2	17	39	146	9	37	91	316	
01:00	3		42		2		40		5		82		
01:15	3		36		3		28		6		64		
01:30	1		51		2		32		3		83		
01:45	7	14	57	186	1	8	26	126	8	22	83	312	
02:00	2		41		0		23		2		64		
02:15	6		47		3		25		9		72		
02:30	2		37		1		23		3		60		
02:45	2	12	42	167	0	4	36	107	2	16	78	274	
03:00	8		41		6		28		14		69		
03:15	0		38		2		23		2		61		
03:30	3		39		3		34		6		73		
03:45	0	11	49	167	2	13	20	105	2	24	69	272	
04:00	4		48		3		23		7		71		
04:15	8		45		4		28		12		73		
04:30	6		44		3		32		9		76		
04:45	8	26	43	180	7	17	22	105	15	43	65	285	
05:00	6		59		7		31		13		90		
05:15	20		78		16		30		36		108		
05:30	33		49		15		37		48		86		
05:45	57	116	57	243	31	69	23	121	88	185	80	364	
06:00	44		48		25		31		69		79		
06:15	64		73		56		23		120		96		
06:30	66		48		48		30		114		78		
06:45	71	245	48	217	45	174	38	122	116	419	86	339	
07:00	64		41		36		26		100		67		
07:15	76		37		46		22		122		59		
07:30	82		37		33		20		115		57		
07:45	77	299	31	146	27	142	13	81	104	441	44	227	
08:00	88		32		27		18		115		50		
08:15	96		29		33		15		129		44		
08:30	83		32		34		11		117		43		
08:45	96	363	31	124	51	145	18	62	147	508	49	186	
09:00	75		33		57		19		132		52		
09:15	77		37		35		16		112		53		
09:30	75		17		62		15		137		32		
09:45	60	287	21	108	46	200	17	67	106	487	38	175	
10:00	45		21		61		9		106		30		
10:15	25		17		77		11		102		28		
10:30	22		21		77		8		99		29		
10:45	17	109	20	79	64	279	11	39	81	388	31	118	
11:00	21		7		65		9		86		16		
11:15	36		18		30		8		66		26		
11:30	46		8		42		4		88		12		
11:45	42	145	8	41	23	160	10	31	65	305	18	72	
Total	1647		1828		1228		1112		2875		2940		
Percent	57.3%		62.2%		42.7%		37.8%						
Day Total	3475				2340				5815				
Peak	08:00		05:00		10:15		00:15		08:45		05:00		
Vol.	363		243		283		155		528		364		
P.H.F.	0.945		0.779		0.919		0.945		0.898		0.843		

Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

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91863 G (WB) volume
Site Code: 10082.00

Start	WB Right Lane				WB Left Lane				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	7		41		1		37		8		78		
12:15	8		52		2		37		10		89		
12:30	6		39		3		35		9		74		
12:45	3	24	49	181	0	6	28	137	3	30	77	318	
01:00	3		43		2		40		5		83		
01:15	4		41		3		34		7		75		
01:30	8		37		5		28		13		65		
01:45	1	16	46	167	2	12	29	131	3	28	75	298	
02:00	4		34		6		39		10		73		
02:15	2		40		0		32		2		72		
02:30	1		36		3		34		4		70		
02:45	3	10	47	157	3	12	37	142	6	22	84	299	
03:00	2		45		3		29		5		74		
03:15	4		37		2		28		6		65		
03:30	4		35		6		38		10		73		
03:45	5	15	42	159	2	13	34	129	7	28	76	288	
04:00	8		51		5		33		13		84		
04:15	1		44		0		27		1		71		
04:30	6		33		3		37		9		70		
04:45	17	32	47	175	7	15	33	130	24	47	80	305	
05:00	11		55		4		37		15		92		
05:15	14		60		10		49		24		109		
05:30	26		50		20		35		46		85		
05:45	62	113	58	223	20	54	41	162	82	167	99	385	
06:00	61		52		20		57		81		109		
06:15	56		50		37		39		93		89		
06:30	74		47		37		58		111		105		
06:45	97	288	44	193	40	134	36	190	137	422	80	383	
07:00	68		48		37		37		105		85		
07:15	67		41		43		21		110		62		
07:30	87		43		28		24		115		67		
07:45	99	321	39	171	20	128	25	107	119	449	64	278	
08:00	77		19		31		21		108		40		
08:15	90		29		26		24		116		53		
08:30	96		34		43		19		139		53		
08:45	98	361	32	114	47	147	18	82	145	508	50	196	
09:00	106		32		56		16		162		48		
09:15	88		29		50		16		138		45		
09:30	85		17		42		19		127		36		
09:45	58	337	18	96	53	201	19	70	111	538	37	166	
10:00	63		18		45		5		108		23		
10:15	48		25		44		11		92		36		
10:30	43		25		29		9		72		34		
10:45	46	200	22	90	36	154	13	38	82	354	35	128	
11:00	37		19		32		13		69		32		
11:15	47		12		42		10		89		22		
11:30	37		8		41		6		78		14		
11:45	30	151	11	50	49	164	10	39	79	315	21	89	
Total	1868		1776		1040		1357		2908		3133		
Percent	64.2%		56.7%		35.8%		43.3%						
Day Total	3644				2397				6041				
Peak	08:15		05:00		09:00		05:45		08:30		05:15		
Vol.	390		223		201		195		584		402		
P.H.F.	0.920		0.929		0.897		0.841		0.901		0.922		

PRECISION DATA INDUSTRIES, LLC
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Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) speed
Site Code: 10082.00

WB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/0 9	1	0	3	10	3	2	1	0	0	0	0	0	0	20	32	27
01:00	0	1	3	4	5	1	0	0	0	0	0	0	0	14	33	28
02:00	0	0	3	3	5	1	0	0	0	0	0	0	0	12	33	29
03:00	0	0	0	3	5	2	1	0	0	0	0	0	0	11	35	32
04:00	1	1	5	7	7	4	1	0	0	0	0	0	0	26	35	29
05:00	0	2	14	34	49	16	1	0	0	0	0	0	0	116	34	30
06:00	4	15	40	81	**79**	**24**	2	0	0	0	0	0	0	245	34	28
07:00	32	40	87	78	49	11	2	0	0	0	0	0	0	299	31	23
08:00	**61**	**65**	**119**	74	40	4	0	0	0	0	0	0	0	**363**	29	21
09:00	6	32	63	**93**	76	13	**4**	0	0	0	0	0	0	287	33	26
10:00	2	7	22	53	23	2	0	0	0	0	0	0	0	109	31	26
11:00	0	6	21	52	51	13	**2**	0	0	0	0	0	0	145	34	29
12 PM	1	6	25	69	53	**14**	2	0	0	0	0	0	0	170	33	28
13:00	**3**	**8**	**30**	**83**	54	8	0	0	0	0	0	0	0	**186**	33	27
14:00	2	5	20	74	**55**	10	1	0	0	0	0	0	0	167	33	28
15:00	6	24	28	59	38	12	0	0	0	0	0	0	0	167	33	26
16:00	3	9	35	68	56	9	0	0	0	0	0	0	0	180	33	27
17:00	**14**	**35**	**56**	**76**	55	7	0	0	0	0	0	0	0	**243**	32	25
18:00	0	11	25	74	**78**	**29**	0	0	0	0	0	0	0	217	34	29
19:00	2	8	8	55	51	17	**5**	0	0	0	0	0	0	146	34	29
20:00	0	1	7	47	52	15	2	0	0	0	0	0	0	124	34	30
21:00	0	2	17	40	38	10	0	**1**	0	0	0	0	0	108	34	29
22:00	0	0	14	22	27	12	3	1	0	0	0	0	0	79	36	30
23:00	0	0	5	14	14	8	0	0	0	0	0	0	0	41	35	30
Total	138	278	650	1173	963	244	27	2	0	0	0	0	0	3475		
%	4.0%	8.0%	18.7%	33.8%	27.7%	7.0%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	06:00	06:00	09:00							08:00		
Vol.	61	65	119	93	79	24	4							363		
Midday Peak	13:00	13:00	13:00	13:00	14:00	12:00	11:00							13:00		
Vol.	3	8	30	83	55	14	2							186		
PM Peak	17:00	17:00	17:00	17:00	18:00	18:00	19:00	21:00						17:00		
Vol.	14	35	56	76	78	29	5	1						243		

% iles

15th Percentile :	20 MPH
50th Percentile :	27 MPH
85th Percentile :	33 MPH
95th Percentile :	37 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	2136
Percent in Pace :	61.5%
Number of Vehicles > 30 MPH :	1043
Percent of Vehicles > 30 MPH :	30.0%
Mean Speed(Average) :	27 MPH

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Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) speed
Site Code: 10082.00

WB Right Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	1	1	9	9	4	0	0	0	0	0	0	0	24	34	30
01:00	0	0	2	4	9	1	0	0	0	0	0	0	0	16	33	30
02:00	0	0	3	2	5	0	0	0	0	0	0	0	0	10	32	28
03:00	0	0	1	6	5	1	0	**2**	0	0	0	0	0	15	35	31
04:00	1	0	3	14	8	5	1	0	0	0	0	0	0	32	35	29
05:00	3	1	17	39	40	9	**4**	0	0	0	0	0	0	113	34	29
06:00	2	7	38	99	**109**	**30**	3	0	0	0	0	0	0	288	34	29
07:00	8	35	100	117	52	9	0	0	0	0	0	0	0	321	31	25
08:00	**30**	**66**	**155**	75	30	5	0	0	0	0	0	0	0	**361**	28	22
09:00	19	36	83	**137**	51	10	1	0	0	0	0	0	0	337	30	25
10:00	3	5	31	60	79	17	4	0	1	0	0	0	0	200	34	29
11:00	2	15	21	53	49	10	1	0	0	0	0	0	0	151	33	27
12 PM	0	16	37	**65**	44	**14**	**5**	0	0	0	0	0	0	**181**	33	28
13:00	**9**	**20**	**54**	53	24	7	0	0	0	0	0	0	0	167	31	24
14:00	1	6	22	63	**54**	9	1	**1**	0	0	0	0	0	157	33	28
15:00	**3**	7	35	64	36	12	2	0	0	0	0	0	0	159	33	27
16:00	2	11	24	60	56	20	1	1	0	0	0	0	0	175	34	28
17:00	3	**25**	**42**	**88**	47	14	**4**	0	0	0	0	0	0	**223**	33	27
18:00	0	7	17	62	**73**	**28**	4	**2**	0	0	0	0	0	193	35	30
19:00	1	6	30	44	66	21	3	0	0	0	0	0	0	171	34	29
20:00	0	1	14	37	47	13	2	0	0	0	0	0	0	114	34	30
21:00	0	3	20	32	27	12	1	1	0	0	0	0	0	96	34	29
22:00	0	8	18	36	14	12	1	1	0	0	0	0	0	90	34	28
23:00	0	1	9	12	16	8	3	1	0	0	0	0	0	50	36	30
Total	87	277	777	1231	950	271	41	9	1	0	0	0	0	3644		
%	2.4%	7.6%	21.3%	33.8%	26.1%	7.4%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	06:00	06:00	05:00	03:00						08:00		
Vol.	30	66	155	137	109	30	4	2						361		
Midday Peak	13:00	13:00	13:00	12:00	14:00	12:00	12:00	14:00						12:00		
Vol.	9	20	54	65	54	14	5	1						181		
PM Peak	15:00	17:00	17:00	17:00	18:00	18:00	17:00	18:00						17:00		
Vol.	3	25	42	88	73	28	4	2						223		

% iles

15th Percentile :	21 MPH
50th Percentile :	27 MPH
85th Percentile :	33 MPH
95th Percentile :	37 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	2181
Percent in Pace :	59.9%
Number of Vehicles > 30 MPH :	1082
Percent of Vehicles > 30 MPH :	29.7%
Mean Speed(Average) :	27 MPH

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Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) speed
Site Code: 10082.00

WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/09	0	0	2	4	7	2	2	0	0	0	0	0	0	17	38	32
01:00	0	0	0	4	3	0	1	0	0	0	0	0	0	8	32	30
02:00	0	0	2	2	0	0	0	0	0	0	0	0	0	4	25	24
03:00	0	0	0	3	5	4	1	0	0	0	0	0	0	13	37	33
04:00	0	0	3	5	7	2	0	0	0	0	0	0	0	17	33	29
05:00	0	0	6	12	33	15	2	0	**1**	0	0	0	0	69	37	32
06:00	0	3	17	36	**79**	**33**	**6**	0	0	0	0	0	0	174	36	31
07:00	**1**	3	25	51	46	14	2	0	0	0	0	0	0	142	34	29
08:00	1	**6**	**47**	46	34	11	0	0	0	0	0	0	0	145	33	27
09:00	0	2	27	**81**	63	23	4	0	0	0	0	0	0	**200**	34	29
10:00	0	5	35	116	97	24	2	0	0	0	0	0	0	279	34	29
11:00	0	1	**14**	**55**	**64**	**24**	1	**1**	0	0	0	0	0	**160**	35	30
12 PM	0	**3**	7	49	58	23	**6**	0	0	0	0	0	0	146	36	31
13:00	**1**	0	10	42	55	18	0	0	0	0	0	0	0	126	34	30
14:00	0	0	4	37	47	16	3	0	0	0	0	0	0	107	35	31
15:00	**1**	1	8	**38**	35	20	1	0	0	**1**	0	0	0	105	36	30
16:00	0	0	3	30	47	19	**5**	1	0	0	0	0	0	105	37	32
17:00	0	**2**	**9**	30	54	18	5	**3**	0	0	0	0	0	121	36	31
18:00	0	0	3	23	**66**	**26**	4	0	0	0	0	0	0	**122**	37	32
19:00	0	0	0	10	46	19	4	2	0	0	0	0	0	81	38	33
20:00	0	0	0	8	33	16	4	1	0	0	0	0	0	62	38	33
21:00	0	0	0	13	36	14	3	1	0	0	0	0	0	67	37	33
22:00	0	0	0	10	17	12	0	0	0	0	0	0	0	39	36	32
23:00	0	0	1	2	18	7	1	2	0	0	0	0	0	31	37	34
Total	4	26	223	707	950	360	57	11	1	1	0	0	0	2340		
%	0.2%	1.1%	9.5%	30.2%	40.6%	15.4%	2.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	08:00	09:00	06:00	06:00	06:00		05:00					09:00		
Vol.	1	6	47	81	79	33	6		1					200		
Midday Peak	13:00	12:00	11:00	11:00	11:00	11:00	12:00	11:00						11:00		
Vol.	1	3	14	55	64	24	6	1						160		
PM Peak	15:00	17:00	17:00	15:00	18:00	18:00	16:00	17:00		15:00				18:00		
Vol.	1	2	9	38	66	26	5	3		1				122		

% iles

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	1657
Percent in Pace :	70.8%
Number of Vehicles > 30 MPH :	1190
Percent of Vehicles > 30 MPH :	50.9%
Mean Speed(Average) :	30 MPH

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91863 G (WB) speed
Site Code: 10082.00

WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	0	0	2	3	1	0	0	0	0	0	0	0	6	32	31
01:00	0	0	1	2	4	3	2	0	0	0	0	0	0	12	37	33
02:00	0	0	2	1	5	2	1	0	**1**	0	0	0	0	12	36	33
03:00	0	0	0	3	8	2	0	0	0	0	0	0	0	13	34	31
04:00	0	0	0	7	6	2	0	0	0	0	0	0	0	15	34	30
05:00	0	0	3	9	25	16	1	0	0	0	0	0	0	54	37	32
06:00	0	0	3	33	68	**25**	**5**	0	0	0	0	0	0	134	36	32
07:00	0	6	10	53	49	10	0	0	0	0	0	0	0	128	33	29
08:00	**3**	**8**	**48**	31	43	12	2	0	0	0	0	0	0	147	33	27
09:00	0	6	28	**66**	**76**	24	1	0	0	0	0	0	0	**201**	34	29
10:00	0	2	8	31	74	29	8	1	1	0	0	0	0	154	37	32
11:00	0	0	13	**61**	**71**	16	3	0	0	0	0	0	0	**164**	34	30
12 PM	0	4	13	36	55	**26**	3	0	0	0	0	0	0	137	36	30
13:00	0	**5**	**39**	44	36	6	1	0	0	0	0	0	0	131	33	27
14:00	0	3	13	43	53	22	**5**	**3**	0	0	0	0	0	142	36	31
15:00	0	**3**	**16**	34	46	24	6	0	0	0	0	0	0	129	37	30
16:00	**1**	1	5	37	53	29	3	1	0	0	0	0	0	130	37	31
17:00	1	0	11	**41**	73	28	**8**	0	0	0	0	0	0	162	36	31
18:00	0	0	3	38	**110**	30	8	1	0	0	0	0	0	**190**	36	32
19:00	0	1	0	23	40	**34**	7	**2**	0	0	0	0	0	107	38	33
20:00	0	0	2	13	42	17	7	1	0	0	0	0	0	82	38	33
21:00	0	0	2	10	42	15	1	0	0	0	0	0	0	70	36	32
22:00	0	0	2	6	16	9	5	0	0	0	0	0	0	38	38	33
23:00	0	0	1	3	21	10	4	0	0	0	0	0	0	39	38	34
Total	5	39	223	627	1019	392	81	9	2	0	0	0	0	2397		
%	0.2%	1.6%	9.3%	26.2%	42.5%	16.4%	3.4%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	09:00	06:00	06:00		02:00					09:00		
Vol.	3	8	48	66	76	25	5		1					201		
Midday Peak		13:00	13:00	11:00	11:00	12:00	14:00	14:00						11:00		
Vol.		5	39	61	71	26	5	3						164		
PM Peak	16:00	15:00	15:00	17:00	18:00	19:00	17:00	19:00						18:00		
Vol.	1	3	16	41	110	34	8	2						190		

% iles

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	1646
Percent in Pace :	68.7%
Number of Vehicles > 30 MPH :	1299
Percent of Vehicles > 30 MPH :	54.2%
Mean Speed(Average) :	31 MPH

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91863 G (WB) speed
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/04/0 9	1	0	5	14	10	4	3	0	0	0	0	0	0	37	35	29
01:00	0	1	3	8	8	1	1	0	0	0	0	0	0	22	33	29
02:00	0	0	5	5	5	1	0	0	0	0	0	0	0	16	33	28
03:00	0	0	0	6	10	6	2	0	0	0	0	0	0	24	37	33
04:00	1	1	8	12	14	6	1	0	0	0	0	0	0	43	35	29
05:00	0	2	20	46	82	31	3	0	**1**	0	0	0	0	185	35	31
06:00	4	18	57	117	**158**	**57**	**8**	0	0	0	0	0	0	419	35	29
07:00	33	43	112	129	95	25	4	0	0	0	0	0	0	441	33	25
08:00	**62**	**71**	**166**	120	74	15	0	0	0	0	0	0	0	**508**	30	23
09:00	6	34	90	**174**	139	36	8	0	0	0	0	0	0	487	33	28
10:00	2	12	57	169	120	26	2	0	0	0	0	0	0	388	33	28
11:00	0	7	35	107	**115**	**37**	3	**1**	0	0	0	0	0	305	34	30
12 PM	1	**9**	32	118	111	37	**8**	0	0	0	0	0	0	**316**	34	29
13:00	**4**	8	**40**	**125**	109	26	0	0	0	0	0	0	0	312	33	28
14:00	2	5	24	111	102	26	4	0	0	0	0	0	0	274	34	29
15:00	7	25	36	97	73	32	1	0	0	**1**	0	0	0	272	34	28
16:00	3	9	38	98	103	28	5	1	0	0	0	0	0	285	34	29
17:00	**14**	**37**	**65**	**106**	109	25	5	**3**	0	0	0	0	0	**364**	33	27
18:00	0	11	28	97	**144**	**55**	4	0	0	0	0	0	0	339	35	30
19:00	2	8	8	65	97	36	**9**	2	0	0	0	0	0	227	36	31
20:00	0	1	7	55	85	31	6	1	0	0	0	0	0	186	36	31
21:00	0	2	17	53	74	24	3	2	0	0	0	0	0	175	35	30
22:00	0	0	14	32	44	24	3	1	0	0	0	0	0	118	36	31
23:00	0	0	6	16	32	15	1	2	0	0	0	0	0	72	37	32
Total	142	304	873	1880	1913	604	84	13	1	1	0	0	0	5815		
%	2.4%	5.2%	15.0%	32.3%	32.9%	10.4%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	06:00	06:00	06:00		05:00					08:00		
Vol.	62	71	166	174	158	57	8		1					508		
Midday Peak	13:00	12:00	13:00	13:00	11:00	11:00	12:00	11:00						12:00		
Vol.	4	9	40	125	115	37	8	1						316		
PM Peak	17:00	17:00	17:00	17:00	18:00	18:00	19:00	17:00		15:00				17:00		
Vol.	14	37	65	106	144	55	9	3		1				364		

% iles

15th Percentile :	22 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	3793
Percent in Pace :	65.2%
Number of Vehicles > 30 MPH :	2233
Percent of Vehicles > 30 MPH :	38.4%
Mean Speed(Average) :	28 MPH

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) speed
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	0	1	1	11	12	5	0	0	0	0	0	0	0	30	34	30
01:00	0	0	3	6	13	4	2	0	0	0	0	0	0	28	36	31
02:00	0	0	5	3	10	2	1	0	**1**	0	0	0	0	22	35	31
03:00	0	0	1	9	13	3	0	**2**	0	0	0	0	0	28	35	31
04:00	1	0	3	21	14	7	1	0	0	0	0	0	0	47	35	29
05:00	3	1	20	48	65	25	5	0	0	0	0	0	0	167	35	30
06:00	2	7	41	132	**177**	**55**	**8**	0	0	0	0	0	0	422	34	30
07:00	8	41	110	170	101	19	0	0	0	0	0	0	0	449	32	26
08:00	**33**	**74**	**203**	106	73	17	2	0	0	0	0	0	0	508	31	23
09:00	19	42	111	**203**	127	34	2	0	0	0	0	0	0	**538**	33	26
10:00	3	7	39	91	153	46	12	1	2	0	0	0	0	354	35	30
11:00	2	15	34	**114**	**120**	26	4	0	0	0	0	0	0	315	34	29
12 PM	0	20	50	101	99	**40**	**8**	0	0	0	0	0	0	**318**	34	29
13:00	**9**	**25**	**93**	97	60	13	1	0	0	0	0	0	0	298	32	26
14:00	1	9	35	106	107	31	6	**4**	0	0	0	0	0	299	34	29
15:00	3	10	51	98	82	36	8	0	0	0	0	0	0	288	35	29
16:00	3	12	29	97	109	49	4	2	0	0	0	0	0	305	35	30
17:00	**4**	**25**	**53**	**129**	120	42	**12**	0	0	0	0	0	0	**385**	34	29
18:00	0	7	20	100	**183**	**58**	12	**3**	0	0	0	0	0	383	36	31
19:00	1	7	30	67	106	55	10	2	0	0	0	0	0	278	37	31
20:00	0	1	16	50	89	30	9	1	0	0	0	0	0	196	36	31
21:00	0	3	22	42	69	27	2	1	0	0	0	0	0	166	35	30
22:00	0	8	20	42	30	21	6	1	0	0	0	0	0	128	36	29
23:00	0	1	10	15	37	18	7	1	0	0	0	0	0	89	38	32
Total	92	316	1000	1858	1969	663	122	18	3	0	0	0	0	6041		
%	1.5%	5.2%	16.6%	30.8%	32.6%	11.0%	2.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	06:00	06:00	06:00	03:00	02:00					09:00		
Vol.	33	74	203	203	177	55	8	2	1					538		
Midday Peak	13:00	13:00	13:00	11:00	11:00	12:00	12:00	14:00						12:00		
Vol.	9	25	93	114	120	40	8	4						318		
PM Peak	17:00	17:00	17:00	17:00	18:00	18:00	17:00	18:00						17:00		
Vol.	4	25	53	129	183	58	12	3						385		

% iles

15th Percentile : 22 MPH
50th Percentile : 29 MPH
85th Percentile : 34 MPH
95th Percentile : 38 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 3827
Percent in Pace : 63.4%
Number of Vehicles > 30 MPH : 2381
Percent of Vehicles > 30 MPH : 39.4%
Mean Speed(Average) : 28 MPH

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) class
Site Code: 10082.00

WB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/0 9	0	16	2	0	1	1	0	0	0	0	0	0	0	20
01:00	1	10	1	1	0	0	0	0	1	0	0	0	0	14
02:00	0	8	2	0	1	1	0	0	0	0	0	0	0	12
03:00	0	5	2	1	1	1	0	1	0	0	0	0	0	11
04:00	0	12	1	0	6	5	0	1	0	1	0	0	0	26
05:00	1	56	31	9	10	5	1	1	1	1	0	0	0	116
06:00	3	171	36	14	10	8	0	0	3	0	0	0	0	245
07:00	7	235	28	9	12	4	1	1	2	0	0	0	0	299
08:00	7	307	31	4	10	1	1	0	2	0	0	0	0	363
09:00	3	239	17	7	17	2	0	2	0	0	0	0	0	287
10:00	0	84	15	4	4	1	0	1	0	0	0	0	0	109
11:00	1	101	23	5	9	5	0	1	0	0	0	0	0	145
12 M	P 0	121	26	8	6	2	2	2	1	2	0	0	0	170
13:00	1	145	24	4	5	2	2	1	2	0	0	0	0	186
14:00	0	120	25	7	9	1	0	3	2	0	0	0	0	167
15:00	1	133	19	5	7	2	0	0	0	0	0	0	0	167
16:00	0	152	16	5	5	0	0	1	1	0	0	0	0	180
17:00	0	219	15	1	4	2	0	2	0	0	0	0	0	243
18:00	0	191	15	3	5	0	0	1	1	1	0	0	0	217
19:00	0	128	8	2	6	0	0	1	1	0	0	0	0	146
20:00	0	115	9	0	0	0	0	0	0	0	0	0	0	124
21:00	0	99	4	2	1	0	0	0	1	1	0	0	0	108
22:00	2	67	8	0	1	0	1	0	0	0	0	0	0	79
23:00	0	35	6	0	0	0	0	0	0	0	0	0	0	41
Total	27	2769	364	91	130	43	8	19	18	6	0	0	0	3475
Percent	0.8%	79.7%	10.5%	2.6%	3.7%	1.2%	0.2%	0.5%	0.5%	0.2%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	06:00	06:00	09:00	06:00	05:00	09:00	06:00	04:00				08:00
Vol.	7	307	36	14	17	8	1	2	3	1				363
Midday Peak	11:00	13:00	12:00	12:00	11:00	11:00	12:00	14:00	13:00	12:00				13:00
Vol.	1	145	26	8	9	5	2	3	2	2				186
PM Peak	22:00	17:00	15:00	15:00	15:00	15:00	22:00	17:00	16:00	18:00				17:00
Vol.	2	219	19	5	7	2	1	2	1	1				243

Binney Street WB between
Fifth Street and Sixth Street
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Client: VHB/M. Miller

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91863 G (WB) class
Site Code: 10082.00

WB Right Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	23	0	0	1	0	0	0	0	0	0	0	0	24
01:00	0	14	1	1	0	0	0	0	0	0	0	0	0	16
02:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
03:00	0	4	4	1	2	4	0	0	0	0	0	0	0	15
04:00	0	20	3	1	3	4	0	0	0	1	0	0	0	32
05:00	2	69	23	7	5	3	0	2	1	1	0	0	0	113
06:00	2	196	54	12	13	6	0	3	2	0	0	0	0	288
07:00	1	267	30	6	10	4	1	0	0	0	0	0	2	321
08:00	4	314	26	1	8	3	1	1	2	1	0	0	0	361
09:00	6	278	25	6	17	2	1	1	0	1	0	0	0	337
10:00	3	152	23	10	9	2	1	0	0	0	0	0	0	200
11:00	4	110	21	1	8	2	4	0	0	1	0	0	0	151
12 PM	2	129	28	7	10	1	1	2	1	0	0	0	0	181
13:00	1	121	22	4	12	3	0	1	3	0	0	0	0	167
14:00	0	115	23	6	8	1	0	0	3	1	0	0	0	157
15:00	1	130	17	6	3	0	1	0	1	0	0	0	0	159
16:00	2	146	14	4	5	2	0	2	0	0	0	0	0	175
17:00	2	197	15	2	6	0	0	1	0	0	0	0	0	223
18:00	0	172	12	4	4	0	0	1	0	0	0	0	0	193
19:00	3	146	16	3	2	0	0	0	0	0	0	0	1	171
20:00	0	106	6	0	0	0	0	0	0	2	0	0	0	114
21:00	3	78	11	2	1	0	0	0	0	1	0	0	0	96
22:00	3	74	9	0	1	1	0	1	1	0	0	0	0	90
23:00	0	43	4	0	0	1	0	0	1	0	0	0	1	50
Total	39	2913	388	84	128	39	10	15	15	9	0	0	4	3644
Percent	1.1%	79.9%	10.6%	2.3%	3.5%	1.1%	0.3%	0.4%	0.4%	0.2%	0.0%	0.0%	0.1%	
AM Peak	09:00	08:00	06:00	06:00	09:00	06:00	07:00	06:00	06:00	04:00			07:00	08:00
Vol.	6	314	54	12	17	6	1	3	2	1			2	361
Midday Peak	11:00	12:00	12:00	12:00	13:00	13:00	11:00	12:00	13:00	11:00				12:00
Vol.	4	129	28	7	12	3	4	2	3	1				181
PM Peak	19:00	17:00	15:00	15:00	17:00	16:00	15:00	16:00	15:00	20:00			19:00	17:00
Vol.	3	197	17	6	6	2	1	2	1	2			1	223

Binney Street WB between
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91863 G (WB) class
Site Code: 10082.00

WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/09	0	12	5	0	0	0	0	0	0	0	0	0	0	17
01:00	0	6	1	0	0	0	0	0	1	0	0	0	0	8
02:00	0	2	1	0	0	1	0	0	0	0	0	0	0	4
03:00	0	8	2	1	0	1	0	1	0	0	0	0	0	13
04:00	0	7	0	1	1	7	0	1	0	0	0	0	0	17
05:00	0	39	14	5	5	6	0	0	0	0	0	0	0	69
06:00	1	125	30	4	9	3	0	2	0	0	0	0	0	174
07:00	0	112	14	7	7	1	0	0	1	0	0	0	0	142
08:00	0	116	15	6	6	1	0	0	0	1	0	0	0	145
09:00	0	147	26	7	13	6	0	1	0	0	0	0	0	200
10:00	1	190	42	15	16	9	0	4	2	0	0	0	0	279
11:00	0	100	32	12	8	4	1	2	1	0	0	0	0	160
12 PM	0	105	13	7	16	3	0	1	1	0	0	0	0	146
13:00	0	85	25	7	6	2	0	0	1	0	0	0	0	126
14:00	0	71	22	6	8	0	0	0	0	0	0	0	0	107
15:00	1	73	15	8	7	1	0	0	0	0	0	0	0	105
16:00	0	81	15	6	3	0	0	0	0	0	0	0	0	105
17:00	0	102	11	5	3	0	0	0	0	0	0	0	0	121
18:00	0	100	12	4	4	0	0	0	0	2	0	0	0	122
19:00	0	69	9	3	0	0	0	0	0	0	0	0	0	81
20:00	0	60	2	0	0	0	0	0	0	0	0	0	0	62
21:00	0	58	6	0	3	0	0	0	0	0	0	0	0	67
22:00	0	34	5	0	0	0	0	0	0	0	0	0	0	39
23:00	0	24	6	0	0	0	0	0	1	0	0	0	0	31
Total	3	1726	323	104	115	45	1	12	8	3	0	0	0	2340
Percent	0.1%	73.8%	13.8%	4.4%	4.9%	1.9%	0.0%	0.5%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	06:00	09:00	06:00	07:00	09:00	04:00		06:00	01:00	08:00				09:00
Vol.	1	147	30	7	13	7		2	1	1				200
Midday Peak		12:00	11:00	11:00	12:00	11:00	11:00	11:00	11:00					11:00
Vol.		105	32	12	16	4	1	2	1					160
PM Peak	15:00	17:00	15:00	15:00	15:00	15:00			23:00	18:00				18:00
Vol.	1	102	15	8	7	1			1	2				122

PRECISION
D A T A
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Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) class
Site Code: 10082.00

WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	5	0	0	1	0	0	0	0	0	0	0	0	6
01:00	0	9	0	0	1	1	0	0	1	0	0	0	0	12
02:00	0	8	1	0	1	1	0	0	1	0	0	0	0	12
03:00	0	6	1	2	1	3	0	0	0	0	0	0	0	13
04:00	0	9	3	0	1	1	1	0	0	0	0	0	0	15
05:00	1	32	11	4	5	1	0	0	0	0	0	0	0	54
06:00	0	80	28	9	13	4	0	0	0	0	0	0	0	134
07:00	0	85	16	7	13	3	0	3	1	0	0	0	0	128
08:00	2	109	17	4	11	1	2	0	1	0	0	0	0	147
09:00	0	125	34	10	20	6	2	1	2	1	0	0	0	201
10:00	0	106	19	10	14	2	0	1	2	0	0	0	0	154
11:00	0	107	30	8	11	6	0	0	2	0	0	0	0	164
12 M P	0	102	17	5	7	2	1	1	2	0	0	0	0	137
13:00	2	94	15	5	5	3	0	2	4	1	0	0	0	131
14:00	0	102	19	9	9	1	0	0	2	0	0	0	0	142
15:00	0	102	14	9	4	0	0	0	0	0	0	0	0	129
16:00	0	108	10	7	5	0	0	0	0	0	0	0	0	130
17:00	0	138	16	6	1	1	0	0	0	0	0	0	0	162
18:00	0	168	15	6	1	0	0	0	0	0	0	0	0	190
19:00	0	92	9	1	5	0	0	0	0	0	0	0	0	107
20:00	0	77	5	0	0	0	0	0	0	0	0	0	0	82
21:00	0	68	2	0	0	0	0	0	0	0	0	0	0	70
22:00	0	34	2	0	0	0	0	0	0	2	0	0	0	38
23:00	0	33	5	0	0	0	0	0	1	0	0	0	0	39
Total	5	1799	289	102	129	36	6	8	19	4	0	0	0	2397
Percent	0.2%	75.1%	12.1%	4.3%	5.4%	1.5%	0.3%	0.3%	0.8%	0.2%	0.0%	0.0%	0.0%	
AM Peak	08:00	09:00	09:00	09:00	09:00	09:00	08:00	07:00	09:00	09:00				09:00
Vol.	2	125	34	10	20	6	2	3	2	1				201
Midday Peak	13:00	11:00	11:00	14:00	11:00	11:00	12:00	13:00	13:00	13:00				11:00
Vol.	2	107	30	9	11	6	1	2	4	1				164
PM Peak		18:00	17:00	15:00	16:00	17:00			23:00	22:00				18:00
Vol.		168	16	9	5	1			1	2				190

Binney Street WB between
Fifth Street and Sixth Street
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Client: VHB/M. Miller

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91863 G (WB) class
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/04/09	0	28	7	0	1	1	0	0	0	0	0	0	0	37
01:00	1	16	2	1	0	0	0	0	2	0	0	0	0	22
02:00	0	10	3	0	1	2	0	0	0	0	0	0	0	16
03:00	0	13	4	2	1	2	0	2	0	0	0	0	0	24
04:00	0	19	1	1	7	12	0	2	0	1	0	0	0	43
05:00	1	95	45	14	15	11	1	1	1	1	0	0	0	185
06:00	4	296	66	18	19	11	0	2	3	0	0	0	0	419
07:00	7	347	42	16	19	5	1	1	3	0	0	0	0	441
08:00	7	423	46	10	16	2	1	0	2	1	0	0	0	508
09:00	3	386	43	14	30	8	0	3	0	0	0	0	0	487
10:00	1	274	57	19	20	10	0	5	2	0	0	0	0	388
11:00	1	201	55	17	17	9	1	3	1	0	0	0	0	305
12 PM	0	226	39	15	22	5	2	3	2	2	0	0	0	316
13:00	1	230	49	11	11	4	2	1	3	0	0	0	0	312
14:00	0	191	47	13	17	1	0	3	2	0	0	0	0	274
15:00	2	206	34	13	14	3	0	0	0	0	0	0	0	272
16:00	0	233	31	11	8	0	0	1	1	0	0	0	0	285
17:00	0	321	26	6	7	2	0	2	0	0	0	0	0	364
18:00	0	291	27	7	9	0	0	1	1	3	0	0	0	339
19:00	0	197	17	5	6	0	0	1	1	0	0	0	0	227
20:00	0	175	11	0	0	0	0	0	0	0	0	0	0	186
21:00	0	157	10	2	4	0	0	0	1	1	0	0	0	175
22:00	2	101	13	0	1	0	1	0	0	0	0	0	0	118
23:00	0	59	12	0	0	0	0	0	1	0	0	0	0	72
Total	30	4495	687	195	245	88	9	31	26	9	0	0	0	5815
Percent	0.5%	77.3%	11.8%	3.4%	4.2%	1.5%	0.2%	0.5%	0.4%	0.2%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	06:00	06:00	09:00	04:00	05:00	09:00	06:00	04:00				08:00
Vol.	7	423	66	18	30	12	1	3	3	1				508
Midday Peak	11:00	13:00	11:00	11:00	12:00	11:00	12:00	11:00	13:00	12:00				12:00
Vol.	1	230	55	17	22	9	2	3	3	2				316
PM Peak	15:00	17:00	15:00	15:00	15:00	15:00	22:00	17:00	16:00	18:00				17:00
Vol.	2	321	34	13	14	3	1	2	1	3				364

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Binney Street WB between
Fifth Street and Sixth Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 G (WB) class
Site Code: 10082.00

WB Right Lane, WB Left Lane

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	28	0	0	2	0	0	0	0	0	0	0	0	30
01:00	0	23	1	1	1	1	0	0	1	0	0	0	0	28
02:00	0	17	2	0	1	1	0	0	1	0	0	0	0	22
03:00	0	10	5	3	3	7	0	0	0	0	0	0	0	28
04:00	0	29	6	1	4	5	1	0	0	1	0	0	0	47
05:00	3	101	34	11	10	4	0	2	1	1	0	0	0	167
06:00	2	276	82	21	26	10	0	3	2	0	0	0	0	422
07:00	1	352	46	13	23	7	1	3	1	0	0	0	2	449
08:00	6	423	43	5	19	4	3	1	3	1	0	0	0	508
09:00	6	403	59	16	37	8	3	2	2	2	0	0	0	538
10:00	3	258	42	20	23	4	1	1	2	0	0	0	0	354
11:00	4	217	51	9	19	8	4	0	2	1	0	0	0	315
12 PM	2	231	45	12	17	3	2	3	3	0	0	0	0	318
13:00	3	215	37	9	17	6	0	3	7	1	0	0	0	298
14:00	0	217	42	15	17	2	0	0	5	1	0	0	0	299
15:00	1	232	31	15	7	0	1	0	1	0	0	0	0	288
16:00	2	254	24	11	10	2	0	2	0	0	0	0	0	305
17:00	2	335	31	8	7	1	0	1	0	0	0	0	0	385
18:00	0	340	27	10	5	0	0	1	0	0	0	0	0	383
19:00	3	238	25	4	7	0	0	0	0	0	0	0	1	278
20:00	0	183	11	0	0	0	0	0	0	2	0	0	0	196
21:00	3	146	13	2	1	0	0	0	0	1	0	0	0	166
22:00	3	108	11	0	1	1	0	1	1	2	0	0	0	128
23:00	0	76	9	0	0	1	0	0	2	0	0	0	1	89
Total	44	4712	677	186	257	75	16	23	34	13	0	0	4	6041
Percent	0.7%	78.0%	11.2%	3.1%	4.3%	1.2%	0.3%	0.4%	0.6%	0.2%	0.0%	0.0%	0.1%	
AM Peak	08:00	08:00	06:00	06:00	09:00	06:00	08:00	06:00	08:00	09:00			07:00	09:00
Vol.	6	423	82	21	37	10	3	3	3	2			2	538
Midday Peak	11:00	12:00	11:00	14:00	11:00	11:00	11:00	12:00	13:00	11:00				12:00
Vol.	4	231	51	15	19	8	4	3	7	1				318
PM Peak	19:00	18:00	15:00	15:00	16:00	16:00	15:00	16:00	23:00	20:00			19:00	17:00
Vol.	3	340	31	15	10	2	1	2	2	2			1	385

Binney Street WB between
Fifth and Sixth Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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91863 GG (EB) volume
Site Code: 10082.00

Start Time	A.M.	EB	P.M.				Wed 13-May-09
12:00	25		89				
12:15	11		93				
12:30	18		77				
12:45	13	67	84	343			
01:00	10		73				
01:15	6		89				
01:30	6		92				
01:45	6	28	73	327			
02:00	2		110				
02:15	5		94				
02:30	6		122				
02:45	6	19	128	454			
03:00	3		160				
03:15	10		152				
03:30	2		160				
03:45	7	22	144	616			
04:00	2		180				
04:15	9		173				
04:30	4		167				
04:45	5	20	152	672			
05:00	9		186				
05:15	14		206				
05:30	23		200				
05:45	23	69	196	788			
06:00	21		167				
06:15	32		163				
06:30	26		140				
06:45	42	121	122	592			
07:00	52		98				
07:15	56		106				
07:30	56		81				
07:45	73	237	69	354			
08:00	60		67				
08:15	75		52				
08:30	54		63				
08:45	71	260	45	227			
09:00	79		58				
09:15	70		39				
09:30	84		44				
09:45	86	319	39	180			
10:00	72		38				
10:15	83		26				
10:30	58		25				
10:45	60	273	32	121			
11:00	76		33				
11:15	68		23				
11:30	84		19				
11:45	73	301	12	87			
Total	1736		4761				
Percent			100.0%		0.0%	0.0%	
Day Total		6497					
Peak	09:30		05:00				
Vol.	325		788				
P.H.F.	0.945		0.956				

Binney Street WB between
Fifth and Sixth Street
City, State: Cambridge, MA
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91863 GG (EB) volume
Site Code: 10082.00

Start Time	A.M.	EB	P.M.				Thu 14-May-09
12:00	18		103				
12:15	15		103				
12:30	12		93				
12:45	13	58	81	380			
01:00	6		88				
01:15	7		79				
01:30	6		94				
01:45	10	29	78	339			
02:00	11		105				
02:15	3		97				
02:30	10		115				
02:45	4	28	120	437			
03:00	6		145				
03:15	4		159				
03:30	2		170				
03:45	9	21	143	617			
04:00	8		197				
04:15	6		173				
04:30	3		189				
04:45	5	22	187	746			
05:00	11		210				
05:15	9		268				
05:30	23		216				
05:45	24	67	209	903			
06:00	18		171				
06:15	24		174				
06:30	35		135				
06:45	41	118	126	606			
07:00	74		117				
07:15	57		118				
07:30	48		82				
07:45	50	229	76	393			
08:00	55		69				
08:15	74		69				
08:30	65		62				
08:45	108	302	52	252			
09:00	77		42				
09:15	62		40				
09:30	72		43				
09:45	91	302	35	160			
10:00	62		38				
10:15	59		32				
10:30	67		29				
10:45	70	258	39	138			
11:00	79		28				
11:15	84		29				
11:30	102		22				
11:45	65	330	27	106			
Total	1764		5077				
Percent			100.0%		0.0%	0.0%	
Day Total		6841					
Peak	10:45		05:00				
Vol.	335		903				
P.H.F.	0.775		0.842				

PRECISION
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Binney Street WB between
Fifth and Sixth Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 GG (EB) speed
Site Code: 10082.00

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/13/0 9	0	0	0	7	20	18	19	3	0	0	0	0	0	67	42	36
01:00	0	0	1	6	9	7	4	1	0	0	0	0	0	28	40	34
02:00	0	1	0	2	7	6	1	0	1	**1**	0	0	0	19	39	35
03:00	0	0	0	2	8	9	1	2	0	0	0	0	0	22	39	36
04:00	0	0	1	3	6	5	3	1	0	1	0	0	0	20	41	35
05:00	0	0	0	9	18	25	13	2	**2**	0	0	0	0	69	42	36
06:00	0	2	5	11	29	46	24	3	1	0	0	0	0	121	41	35
07:00	**1**	4	11	54	66	**66**	**26**	**9**	0	0	0	0	0	237	39	33
08:00	0	5	**32**	**94**	88	34	6	0	1	0	0	0	0	260	35	30
09:00	0	**6**	21	83	**123**	57	25	3	1	0	0	0	0	**319**	38	32
10:00	1	1	13	52	117	64	24	0	1	0	0	0	0	273	38	33
11:00	0	2	12	71	134	59	20	3	0	0	0	0	0	301	38	32
12 PM	0	2	26	85	127	83	14	**5**	**1**	0	0	0	0	343	38	32
13:00	0	2	**32**	114	119	50	9	1	0	0	0	0	0	327	36	30
14:00	**1**	**7**	23	**122**	**176**	**98**	**26**	1	0	0	0	0	0	**454**	37	32
15:00	0	3	17	121	244	**175**	**46**	**9**	**1**	0	0	0	0	616	38	33
16:00	0	1	42	173	231	174	42	8	0	**1**	0	0	0	672	38	32
17:00	0	**8**	**88**	**285**	**273**	112	22	0	0	0	0	0	0	**788**	35	30
18:00	0	2	20	148	211	161	44	5	1	0	0	0	0	592	38	33
19:00	0	0	5	51	154	102	38	3	1	0	0	0	0	354	39	34
20:00	0	1	2	38	94	61	23	7	1	0	0	0	0	227	39	34
21:00	0	0	5	22	94	36	20	2	0	0	**1**	0	0	180	39	34
22:00	0	0	6	22	37	42	9	4	1	0	0	0	0	121	39	34
23:00	0	0	1	11	27	30	13	3	1	0	0	**1**	0	87	41	36
Total	3	47	363	1586	2412	1520	472	75	14	3	1	1	0	6497		
%	0.0%	0.7%	5.6%	24.4%	37.1%	23.4%	7.3%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	09:00	08:00	08:00	09:00	07:00	07:00	07:00	05:00	02:00				09:00		
Vol.	1	6	32	94	123	66	26	9	2	1				319		
Midday Peak	14:00	14:00	13:00	14:00	14:00	14:00	14:00	12:00	12:00					14:00		
Vol.	1	7	32	122	176	98	26	5	1					454		
PM Peak		17:00	17:00	17:00	17:00	15:00	15:00	15:00	15:00	16:00	21:00	23:00		17:00		
Vol.		8	88	285	273	175	46	9	1	1	1	1		788		

% iles

15th Percentile : 26 MPH
50th Percentile : 32 MPH
85th Percentile : 38 MPH
95th Percentile : 42 MPH

Stats

10 MPH Pace Speed : 25-34 MPH
Number in Pace : 3998
Percent in Pace : 61.5%
Number of Vehicles > 35 MPH : 1782
Percent of Vehicles > 35 MPH : 27.4%
Mean Speed(Average) : 32 MPH

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Binney Street WB between
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City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 GG (EB) speed
Site Code: 10082.00

EB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/14/0 9	0	0	1	6	14	25	8	1	**3**	0	0	0	0	58	41	36
01:00	0	0	0	3	8	13	5	0	0	0	0	0	0	29	40	36
02:00	0	0	0	3	14	8	3	0	0	0	0	0	0	28	38	34
03:00	0	0	0	2	6	13	0	0	0	0	0	0	0	21	38	35
04:00	**1**	1	0	2	9	5	3	1	0	0	0	0	0	22	40	33
05:00	0	0	2	7	28	16	8	**6**	0	0	0	0	0	67	41	35
06:00	0	0	4	20	32	47	15	0	0	0	0	0	0	118	39	34
07:00	0	4	9	53	76	**66**	**19**	2	0	0	0	0	0	229	38	33
08:00	1	**6**	**31**	**103**	108	42	9	2	0	0	0	0	0	**302**	35	30
09:00	0	2	25	79	**121**	52	19	3	1	0	0	0	0	302	37	31
10:00	2	4	29	79	98	36	7	3	0	0	0	0	0	258	35	30
11:00	**1**	0	9	107	123	70	16	**4**	0	0	0	0	0	330	37	32
12 PM	0	**2**	**28**	**110**	157	65	15	3	0	0	0	0	0	380	36	31
13:00	0	2	24	83	139	69	20	2	0	0	0	0	0	339	37	32
14:00	0	0	24	98	**158**	**116**	**37**	3	**1**	0	0	0	0	**437**	38	33
15:00	1	1	42	212	247	91	20	3	0	0	0	0	0	617	36	31
16:00	**4**	**13**	48	246	**281**	128	22	4	0	0	0	0	0	746	36	31
17:00	2	13	**96**	**372**	275	123	18	4	0	0	0	0	0	**903**	35	30
18:00	0	1	16	145	233	**176**	**33**	2	0	0	0	0	0	606	38	33
19:00	0	0	9	83	163	115	17	**6**	0	0	0	0	0	393	38	33
20:00	0	0	15	63	112	48	8	5	1	0	0	0	0	252	37	32
21:00	1	0	3	31	67	48	7	2	1	0	0	0	0	160	38	33
22:00	0	0	0	28	52	41	15	2	0	0	0	0	0	138	39	34
23:00	1	0	0	17	34	34	15	3	**2**	0	0	0	0	106	41	35
Total	14	49	415	1952	2555	1447	339	61	9	0	0	0	0	6841		
%	0.2%	0.7%	6.1%	28.5%	37.3%	21.2%	5.0%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	04:00	08:00	08:00	08:00	09:00	07:00	07:00	05:00	00:00					08:00		
Vol.	1	6	31	103	121	66	19	6	3					302		
Midday Peak	11:00	12:00	12:00	12:00	14:00	14:00	14:00	11:00	14:00					14:00		
Vol.	1	2	28	110	158	116	37	4	1					437		
PM Peak	16:00	16:00	17:00	17:00	16:00	18:00	18:00	19:00	23:00					17:00		
Vol.	4	13	96	372	281	176	33	6	2					903		

% iles

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	37 MPH
95th Percentile :	40 MPH

Stats

10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4507
Percent in Pace :	65.9%
Number of Vehicles > 35 MPH :	1566
Percent of Vehicles > 35 MPH :	22.9%
Mean Speed(Average) :	32 MPH

Binney Street WB between
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Client: VHB/ M. Miller

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91863 GG (EB) class
Site Code: 10082.00

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/13/09	0	52	11	1	1	0	0	0	2	0	0	0	0	67
01:00	1	20	4	2	0	0	0	0	1	0	0	0	0	28
02:00	0	12	2	1	0	0	0	0	4	0	0	0	0	19
03:00	0	13	2	3	1	0	0	0	3	0	0	0	0	22
04:00	0	10	3	3	1	3	0	0	0	0	0	0	0	20
05:00	0	40	11	6	5	1	0	0	6	0	0	0	0	69
06:00	3	77	19	8	9	3	0	1	1	0	0	0	0	121
07:00	3	161	29	9	17	9	2	1	6	0	0	0	0	237
08:00	4	179	41	11	10	5	1	2	6	0	1	0	0	260
09:00	6	203	51	14	28	4	1	6	6	0	0	0	0	319
10:00	7	163	52	10	28	5	1	4	3	0	0	0	0	273
11:00	2	176	68	15	27	4	2	1	4	1	0	0	1	301
12 PM	3	222	51	13	34	10	2	7	0	1	0	0	0	343
13:00	1	218	65	15	20	5	0	2	1	0	0	0	0	327
14:00	3	282	100	12	30	11	1	9	4	1	1	0	0	454
15:00	9	486	83	6	23	2	1	5	1	0	0	0	0	616
16:00	4	570	61	7	15	2	0	6	5	1	0	1	0	672
17:00	4	680	71	10	12	0	0	8	1	1	1	0	0	788
18:00	3	510	54	5	16	0	0	2	0	1	0	0	1	592
19:00	5	295	31	8	12	0	0	2	1	0	0	0	0	354
20:00	3	182	21	5	11	1	0	0	4	0	0	0	0	227
21:00	4	147	19	4	5	0	0	1	0	0	0	0	0	180
22:00	1	100	11	2	3	0	0	1	3	0	0	0	0	121
23:00	2	67	15	3	0	0	0	0	0	0	0	0	0	87
Total	68	4865	875	173	308	65	11	58	62	6	3	1	2	6497
Percent	1.0%	74.9%	13.5%	2.7%	4.7%	1.0%	0.2%	0.9%	1.0%	0.1%	0.0%	0.0%	0.0%	
AM Peak	09:00	09:00	09:00	09:00	09:00	07:00	07:00	09:00	05:00		08:00			09:00
Vol.	6	203	51	14	28	9	2	6	6	1				319
Midday Peak	12:00	14:00	14:00	11:00	12:00	14:00	11:00	14:00	11:00	11:00	14:00		11:00	14:00
Vol.	3	282	100	15	34	11	2	9	4	1	1	1		454
PM Peak	15:00	17:00	15:00	17:00	15:00	15:00	15:00	17:00	16:00	16:00	17:00	16:00	18:00	17:00
Vol.	9	680	83	10	23	2	1	8	5	1	1	1	1	788

Binney Street WB between
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91863 GG (EB) class
Site Code: 10082.00

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/14/09	0	49	8	0	0	0	0	0	1	0	0	0	0	58
01:00	0	20	1	2	1	1	0	0	3	1	0	0	0	29
02:00	1	19	1	3	2	0	0	0	2	0	0	0	0	28
03:00	0	13	1	2	3	0	0	0	2	0	0	0	0	21
04:00	1	5	2	2	2	8	0	0	2	0	0	0	0	22
05:00	0	40	11	4	5	5	0	0	2	0	0	0	0	67
06:00	0	69	23	7	12	5	0	0	1	1	0	0	0	118
07:00	1	160	32	8	17	6	0	2	3	0	0	0	0	229
08:00	6	210	35	11	20	10	0	5	4	1	0	0	0	302
09:00	1	201	47	18	23	6	0	5	1	0	0	0	0	302
10:00	4	138	48	27	20	12	0	3	5	1	0	0	0	258
11:00	3	208	62	10	24	12	1	7	3	0	0	0	0	330
12 PM	1	261	64	20	17	11	0	3	1	1	0	1	0	380
13:00	1	234	53	15	19	9	0	5	2	1	0	0	0	339
14:00	2	278	92	16	33	9	0	4	2	0	0	1	0	437
15:00	3	469	88	12	27	3	0	11	1	1	1	0	1	617
16:00	6	599	97	13	16	2	0	8	2	3	0	0	0	746
17:00	5	785	78	10	11	4	0	7	0	1	0	0	2	903
18:00	7	522	52	5	13	1	0	6	0	0	0	0	0	606
19:00	4	320	42	8	15	0	0	1	2	1	0	0	0	393
20:00	0	210	24	3	11	1	0	0	3	0	0	0	0	252
21:00	2	133	15	5	1	1	0	1	2	0	0	0	0	160
22:00	0	113	16	2	3	1	0	1	1	0	0	0	1	138
23:00	1	86	14	1	0	1	0	0	2	1	0	0	0	106
Total	49	5142	906	204	295	108	1	69	47	13	1	2	4	6841
Percent	0.7%	75.2%	13.2%	3.0%	4.3%	1.6%	0.0%	1.0%	0.7%	0.2%	0.0%	0.0%	0.1%	
AM Peak	08:00	08:00	09:00	09:00	09:00	08:00		08:00	08:00	01:00				08:00
Vol.	6	210	47	18	23	10		5	4	1				302
Midday Peak	11:00	14:00	14:00	12:00	14:00	11:00	11:00	11:00	11:00	12:00		12:00		14:00
Vol.	3	278	92	20	33	12	1	7	3	1	1			437
PM Peak	18:00	17:00	16:00	16:00	15:00	17:00		15:00	20:00	16:00	15:00		17:00	17:00
Vol.	7	785	97	13	27	4	11		3	3	1		2	903

Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

91863 H volume
Site Code: 10082.00

Start	NB				SB				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	4		9		1		12		5		21		
12:15	4		15		0		13		4		28		
12:30	0		7		2		16		2		23		
12:45	2	10	16	47	2	5	15	56	4	15	31	103	
01:00	0		5		0		14		0		19		
01:15	1		15		2		10		3		25		
01:30	1		11		1		17		2		28		
01:45	0	2	13	44	2	5	15	56	2	7	28	100	
02:00	4		8		0		19		4		27		
02:15	2		13		0		7		2		20		
02:30	0		19		0		12		0		31		
02:45	0	6	13	53	0	0	14	52	0	6	27	105	
03:00	0		16		0		13		0		29		
03:15	0		22		1		14		1		36		
03:30	1		13		0		11		1		24		
03:45	0	1	27	78	0	1	12	50	0	2	39	128	
04:00	0		20		1		18		1		38		
04:15	2		15		2		11		4		26		
04:30	0		20		0		12		0		32		
04:45	1	3	29	84	3	6	17	58	4	9	46	142	
05:00	2		35		8		13		10		48		
05:15	2		39		3		6		5		45		
05:30	3		28		7		10		10		38		
05:45	3	10	23	125	10	28	13	42	13	38	36	167	
06:00	5		21		10		13		15		34		
06:15	1		19		15		12		16		31		
06:30	5		14		22		15		27		29		
06:45	3	14	7	61	29	76	10	50	32	90	17	111	
07:00	13		8		17		6		30		14		
07:15	8		8		28		4		36		12		
07:30	7		8		30		5		37		13		
07:45	6	34	7	31	20	95	9	24	26	129	16	55	
08:00	10		10		47		15		57		25		
08:15	17		7		53		4		70		11		
08:30	13		3		38		4		51		7		
08:45	9	49	7	27	49	187	6	29	58	236	13	56	
09:00	7		10		53		5		60		15		
09:15	8		7		41		4		49		11		
09:30	7		9		36		5		43		14		
09:45	8	30	5	31	25	155	4	18	33	185	9	49	
10:00	7		3		20		2		27		5		
10:15	11		5		17		4		28		9		
10:30	7		9		13		4		20		13		
10:45	9	34	3	20	8	58	4	14	17	92	7	34	
11:00	10		6		11		4		21		10		
11:15	9		7		11		5		20		12		
11:30	7		6		14		2		21		8		
11:45	8	34	3	22	17	53	1	12	25	87	4	34	
Total	227		623		669		461		896		1084		
Percent	25.3%		57.5%		74.7%		42.5%						
Day Total		850			1130				1980				

Peak	08:00	04:45	08:15	01:15	08:15	04:45
Vol.	49	131	193	61	239	177
P.H.F.	0.721	0.840	0.910	0.803	0.854	0.922

Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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Email: datarequests@pdillc.com

91863 H volume
Site Code: 10082.00

Start	NB				SB				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	2		12		2		18		4		30		
12:15	5		13		6		8		11		21		
12:30	5		11		2		21		7		32		
12:45	1	13	11	47	0	10	15	62	1	23	26	109	
01:00	1		7		0		11		1		18		
01:15	2		4		0		11		2		15		
01:30	0		16		1		11		1		27		
01:45	0	3	18	45	2	3	12	45	2	6	30	90	
02:00	1		11		1		19		2		30		
02:15	1		9		3		12		4		21		
02:30	0		13		0		10		0		23		
02:45	1	3	18	51	0	4	11	52	1	7	29	103	
03:00	0		12		2		8		2		20		
03:15	2		23		1		12		3		35		
03:30	2		17		1		16		3		33		
03:45	1	5	17	69	0	4	21	57	1	9	38	126	
04:00	2		18		0		17		2		35		
04:15	1		13		2		6		3		19		
04:30	1		23		2		11		3		34		
04:45	4	8	14	68	3	7	14	48	7	15	28	116	
05:00	7		26		6		8		13		34		
05:15	1		31		6		15		7		46		
05:30	7		23		8		13		15		36		
05:45	3	18	17	97	9	29	7	43	12	47	24	140	
06:00	2		15		14		18		16		33		
06:15	2		18		14		14		16		32		
06:30	2		7		24		10		26		17		
06:45	4	10	13	53	31	83	12	54	35	93	25	107	
07:00	12		6		17		14		29		20		
07:15	6		7		33		8		39		15		
07:30	8		13		32		11		40		24		
07:45	12	38	5	31	30	112	7	40	42	150	12	71	
08:00	18		8		51		9		69		17		
08:15	15		4		52		7		67		11		
08:30	7		9		59		9		66		18		
08:45	11	51	6	27	52	214	8	33	63	265	14	60	
09:00	12		8		52		4		64		12		
09:15	9		3		43		7		52		10		
09:30	8		5		39		9		47		14		
09:45	12	41	5	21	26	160	10	30	38	201	15	51	
10:00	9		9		19		4		28		13		
10:15	11		5		16		5		27		10		
10:30	8		3		19		8		27		11		
10:45	9	37	4	21	14	68	3	20	23	105	7	41	
11:00	13		5		19		4		32		9		
11:15	6		8		7		11		13		19		
11:30	9		7		6		2		15		9		
11:45	10	38	7	27	16	48	6	23	26	86	13	50	
Total	265		557		742		507		1007		1064		
Percent	26.3%		52.3%		73.7%		47.7%						
Day Total		822			1249				2071				
Peak	07:30		05:00		08:15		03:15		08:00		04:45		
Vol.	53		97		215	6	6		265		144		
P.H.F.	0.736		0.782		0.911		0.786		0.960		0.783		

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Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 H speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	6	0	4	0	0	0	0	0	0	0	0	0	0	10	21	11
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	20	10
02:00	2	0	4	0	0	0	0	0	0	0	0	0	0	6	22	15
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:00	1	0	2	0	0	0	0	0	0	0	0	0	0	3	21	14
05:00	3	0	7	0	0	0	0	0	0	0	0	0	0	10	22	16
06:00	6	0	8	0	0	0	0	0	0	0	0	0	0	14	22	14
07:00	**17**	0	17	0	0	0	0	0	0	0	0	0	0	34	23	14
08:00	12	0	**37**	0	0	0	0	0	0	0	0	0	0	**49**	23	18
09:00	5	0	25	0	0	0	0	0	0	0	0	0	0	30	23	19
10:00	13	0	21	0	0	0	0	0	0	0	0	0	0	34	23	16
11:00	13	0	21	0	0	0	0	0	0	0	0	0	0	34	23	16
12 PM	15	0	**32**	0	0	0	0	0	0	0	0	0	0	47	23	17
13:00	13	0	31	0	0	0	0	0	0	0	0	0	0	44	23	18
14:00	**24**	0	29	0	0	0	0	0	0	0	0	0	0	**53**	23	15
15:00	29	0	49	0	0	0	0	0	0	0	0	0	0	78	23	16
16:00	28	0	56	0	0	0	0	0	0	0	0	0	0	84	23	17
17:00	**36**	0	**89**	0	0	0	0	0	0	0	0	0	0	**125**	23	18
18:00	18	0	43	0	0	0	0	0	0	0	0	0	0	61	23	17
19:00	13	0	18	0	0	0	0	0	0	0	0	0	0	31	23	16
20:00	12	0	15	0	0	0	0	0	0	0	0	0	0	27	23	15
21:00	14	0	17	0	0	0	0	0	0	0	0	0	0	31	23	15
22:00	9	0	11	0	0	0	0	0	0	0	0	0	0	20	23	14
23:00	14	0	8	0	0	0	0	0	0	0	0	0	0	22	22	13
Total	305	0	545	0	0	0	0	0	0	0	0	0	0	850		
%	35.9%	0.0%	64.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00		08:00											08:00		
Vol.	17		37											49		
Midday Peak	14:00		12:00											14:00		
Vol.	24		32											53		
PM Peak	17:00		17:00											17:00		
Vol.	36		89											125		

% iles

15th Percentile :	6 MPH
50th Percentile :	21 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	545
Percent in Pace :	64.1%
Number of Vehicles > 25 MPH :	0
Percent of Vehicles > 25 MPH :	0.0%
Mean Speed(Average) :	17 MPH

PRECISION
D A T A
INDUSTRIES, LLC
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Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 H speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	4	0	9	0	0	0	0	0	0	0	0	0	0	13	23	16
01:00	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2
02:00	2	0	1	0	0	0	0	0	0	0	0	0	0	3	20	8
03:00	5	0	0	0	0	0	0	0	0	0	0	0	0	5	4	3
04:00	2	0	6	0	0	0	0	0	0	0	0	0	0	8	23	17
05:00	9	**1**	8	0	0	0	0	0	0	0	0	0	0	18	22	13
06:00	3	0	7	0	0	0	0	0	0	0	0	0	0	10	22	16
07:00	12	0	26	0	0	0	0	0	0	0	0	0	0	38	23	17
08:00	11	0	**40**	0	0	0	0	0	0	0	0	0	0	**51**	23	19
09:00	**14**	0	27	0	0	0	0	0	0	0	0	0	0	41	23	17
10:00	16	0	21	0	0	0	0	0	0	0	0	0	0	37	23	15
11:00	12	0	26	0	0	0	0	0	0	0	0	0	0	38	23	17
12 PM	11	0	**36**	0	0	0	0	0	0	0	0	0	0	47	23	18
13:00	16	0	29	0	0	0	0	0	0	0	0	0	0	45	23	17
14:00	**21**	0	30	0	0	0	0	0	0	0	0	0	0	**51**	23	16
15:00	**34**	0	35	0	0	0	0	0	0	0	0	0	0	69	23	15
16:00	23	0	45	0	0	0	0	0	0	0	0	0	0	68	23	17
17:00	28	0	**69**	0	0	0	0	0	0	0	0	0	0	**97**	23	18
18:00	18	0	35	0	0	0	0	0	0	0	0	0	0	53	23	17
19:00	7	0	24	0	0	0	0	0	0	0	0	0	0	31	23	18
20:00	9	0	18	0	0	0	0	0	0	0	0	0	0	27	23	16
21:00	8	0	13	0	0	0	0	0	0	0	0	0	0	21	23	15
22:00	9	0	12	0	0	0	0	0	0	0	0	0	0	21	23	15
23:00	13	0	14	0	0	0	0	0	0	0	0	0	0	27	23	15
Total	290	1	531	0	0	0	0	0	0	0	0	0	0	822		
%	35.3%	0.1%	64.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	05:00	08:00											08:00		
Vol.	14	1	40											51		
Midday Peak	14:00		12:00											14:00		
Vol.	21		36											51		
PM Peak	15:00		17:00											17:00		
Vol.	34		69											97		

% iles

15th Percentile :	6 MPH
50th Percentile :	21 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	532
Percent in Pace :	64.7%
Number of Vehicles > 25 MPH :	0
Percent of Vehicles > 25 MPH :	0.0%
Mean Speed(Average) :	17 MPH

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91863 H speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	2	2	1	0	0	0	0	0	0	0	0	0	0	5	16	16
01:00	1	3	1	0	0	0	0	0	0	0	0	0	0	5	17	16
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
04:00	2	1	3	0	0	0	0	0	0	0	0	0	0	6	21	14
05:00	14	10	4	0	0	0	0	0	0	0	0	0	0	28	19	13
06:00	23	46	7	0	0	0	0	0	0	0	0	0	0	76	19	15
07:00	31	56	8	0	0	0	0	0	0	0	0	0	0	95	19	14
08:00	**50**	**120**	**17**	0	0	0	0	0	0	0	0	0	0	**187**	19	15
09:00	36	102	17	0	0	0	0	0	0	0	0	0	0	155	19	15
10:00	20	31	7	0	0	0	0	0	0	0	0	0	0	58	19	15
11:00	16	**27**	**10**	0	0	0	0	0	0	0	0	0	0	53	20	15
12 M	P 21	26	9	0	0	0	0	0	0	0	0	0	0	**56**	20	15
13:00	**25**	25	6	0	0	0	0	0	0	0	0	0	0	56	19	14
14:00	18	26	8	0	0	0	0	0	0	0	0	0	0	52	19	15
15:00	21	23	6	0	0	0	0	0	0	0	0	0	0	50	19	14
16:00	**28**	21	9	0	0	0	0	0	0	0	0	0	0	**58**	19	13
17:00	12	18	**12**	0	0	0	0	0	0	0	0	0	0	42	21	16
18:00	16	**30**	4	0	0	0	0	0	0	0	0	0	0	50	19	15
19:00	10	10	4	0	0	0	0	0	0	0	0	0	0	24	19	15
20:00	14	14	1	0	0	0	0	0	0	0	0	0	0	29	18	12
21:00	8	9	1	0	0	0	0	0	0	0	0	0	0	18	18	14
22:00	5	5	4	0	0	0	0	0	0	0	0	0	0	14	21	16
23:00	5	4	3	0	0	0	0	0	0	0	0	0	0	12	20	12
Total	378	610	142	0	0	0	0	0	0	0	0	0	0	1130		
%	33.5%	54.0%	12.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00											08:00		
Vol.	50	120	17											187		
Midday Peak	13:00	11:00	11:00											12:00		
Vol.	25	27	10											56		
PM Peak	16:00	18:00	17:00											16:00		
Vol.	28	30	12											58		

% iles

15th Percentile :	7 MPH
50th Percentile :	16 MPH
85th Percentile :	19 MPH
95th Percentile :	22 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	752
Percent in Pace :	66.5%
Number of Vehicles > 25 MPH :	0
Percent of Vehicles > 25 MPH :	0.0%
Mean Speed(Average) :	14 MPH

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 H speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	6	1	3	0	0	0	0	0	0	0	0	0	0	10	20	10
01:00	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2
02:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4	16	16
03:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4	16	16
04:00	4	1	2	0	0	0	0	0	0	0	0	0	0	7	20	10
05:00	14	11	4	0	0	0	0	0	0	0	0	0	0	29	19	13
06:00	33	36	13	**1**	0	0	0	0	0	0	0	0	0	83	20	14
07:00	28	74	10	0	0	0	0	0	0	0	0	0	0	112	19	15
08:00	**51**	**150**	13	0	0	0	0	0	0	0	0	0	0	**214**	19	15
09:00	34	108	**18**	0	0	0	0	0	0	0	0	0	0	160	19	16
10:00	30	34	4	0	0	0	0	0	0	0	0	0	0	68	18	13
11:00	25	18	5	0	0	0	0	0	0	0	0	0	0	48	19	12
12 PM	**26**	**30**	6	0	0	0	0	0	0	0	0	0	0	**62**	19	14
13:00	22	15	**8**	0	0	0	0	0	0	0	0	0	0	45	20	13
14:00	17	29	5	**1**	0	0	0	0	0	0	0	0	0	52	19	15
15:00	17	**33**	7	0	0	0	0	0	0	0	0	0	0	**57**	19	15
16:00	20	23	5	0	0	0	0	0	0	0	0	0	0	48	19	14
17:00	11	23	**9**	0	0	0	0	0	0	0	0	0	0	43	21	16
18:00	**21**	26	7	0	0	0	0	0	0	0	0	0	0	54	19	14
19:00	14	21	5	0	0	0	0	0	0	0	0	0	0	40	19	14
20:00	16	12	5	0	0	0	0	0	0	0	0	0	0	33	19	13
21:00	12	9	9	0	0	0	0	0	0	0	0	0	0	30	21	14
22:00	6	10	4	0	0	0	0	0	0	0	0	0	0	20	20	16
23:00	10	10	3	0	0	0	0	0	0	0	0	0	0	23	19	14
Total	422	678	147	2	0	0	0	0	0	0	0	0	0	1249		
%	33.8%	54.3%	11.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	09:00	06:00										08:00		
Vol.	51	150	18	1										214		
Midday Peak	12:00	12:00	13:00	14:00										12:00		
Vol.	26	30	8	1										62		
PM Peak	18:00	15:00	17:00											15:00		
Vol.	21	33	9											57		

% iles

15th Percentile :	7 MPH
50th Percentile :	16 MPH
85th Percentile :	19 MPH
95th Percentile :	22 MPH

Stats

10 MPH Pace Speed :	10-19 MPH
Number in Pace :	830
Percent in Pace :	66.5%
Number of Vehicles > 25 MPH :	1
Percent of Vehicles > 25 MPH :	0.1%
Mean Speed(Average) :	14 MPH

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Sixth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 H class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	9	1	0	0	0	0	0	0	0	0	0	0	10
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
05:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
06:00	0	13	1	0	0	0	0	0	0	0	0	0	0	14
07:00	0	34	0	0	0	0	0	0	0	0	0	0	0	34
08:00	1	47	0	0	1	0	0	0	0	0	0	0	0	49
09:00	0	30	0	0	0	0	0	0	0	0	0	0	0	30
10:00	0	32	1	0	1	0	0	0	0	0	0	0	0	34
11:00	1	29	2	0	2	0	0	0	0	0	0	0	0	34
12 M	P 1	45	0	0	1	0	0	0	0	0	0	0	0	47
13:00	0	42	2	0	0	0	0	0	0	0	0	0	0	44
14:00	1	51	1	0	0	0	0	0	0	0	0	0	0	53
15:00	0	76	2	0	0	0	0	0	0	0	0	0	0	78
16:00	0	83	1	0	0	0	0	0	0	0	0	0	0	84
17:00	2	117	4	0	2	0	0	0	0	0	0	0	0	125
18:00	1	59	1	0	0	0	0	0	0	0	0	0	0	61
19:00	0	28	1	0	2	0	0	0	0	0	0	0	0	31
20:00	0	26	1	0	0	0	0	0	0	0	0	0	0	27
21:00	0	31	0	0	0	0	0	0	0	0	0	0	0	31
22:00	0	19	0	0	0	1	0	0	0	0	0	0	0	20
23:00	0	22	0	0	0	0	0	0	0	0	0	0	0	22
Total	7	813	20	0	9	1	0	0	0	0	0	0	0	850
Percent	0.8%	95.6%	2.4%	0.0%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	00:00		08:00									08:00
Vol.	1	47	1		1									49
Midday Peak	11:00	14:00	11:00		11:00									14:00
Vol.	1	51	2		2									53
PM Peak	17:00	17:00	17:00		17:00	22:00								17:00
Vol.	2	117	4		2	1								125

Sixth Street between
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91863 H class
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NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	13	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:00	1	2	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
05:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
06:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
07:00	0	37	1	0	0	0	0	0	0	0	0	0	0	38
08:00	0	50	1	0	0	0	0	0	0	0	0	0	0	51
09:00	0	38	3	0	0	0	0	0	0	0	0	0	0	41
10:00	0	32	1	0	4	0	0	0	0	0	0	0	0	37
11:00	0	38	0	0	0	0	0	0	0	0	0	0	0	38
12 M	P 0	45	1	0	1	0	0	0	0	0	0	0	0	47
13:00	1	42	1	0	1	0	0	0	0	0	0	0	0	45
14:00	0	50	0	0	1	0	0	0	0	0	0	0	0	51
15:00	0	67	2	0	0	0	0	0	0	0	0	0	0	69
16:00	0	66	2	0	0	0	0	0	0	0	0	0	0	68
17:00	0	93	3	0	1	0	0	0	0	0	0	0	0	97
18:00	0	50	3	0	0	0	0	0	0	0	0	0	0	53
19:00	0	31	0	0	0	0	0	0	0	0	0	0	0	31
20:00	0	27	0	0	0	0	0	0	0	0	0	0	0	27
21:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
22:00	0	21	0	0	0	0	0	0	0	0	0	0	0	21
23:00	0	26	1	0	0	0	0	0	0	0	0	0	0	27
Total	2	793	19	0	8	0	0	0	0	0	0	0	0	822
Percent	0.2%	96.5%	2.3%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	02:00	08:00	09:00											08:00
Vol.	1	50	3											51
Midday Peak	13:00	14:00	12:00		12:00									14:00
Vol.	1	50	1		1									51
PM Peak		17:00	17:00		17:00									17:00
Vol.		93	3		1									97

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91863 H class
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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	4	1	0	0	0	0	0	0	0	0	0	0	5
01:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
05:00	0	22	3	0	3	0	0	0	0	0	0	0	0	28
06:00	0	58	16	1	1	0	0	0	0	0	0	0	0	76
07:00	0	82	8	3	2	0	0	0	0	0	0	0	0	95
08:00	0	154	30	0	3	0	0	0	0	0	0	0	0	187
09:00	1	125	24	1	4	0	0	0	0	0	0	0	0	155
10:00	1	43	13	0	1	0	0	0	0	0	0	0	0	58
11:00	0	41	10	0	2	0	0	0	0	0	0	0	0	53
12 M	P 2	36	13	0	5	0	0	0	0	0	0	0	0	56
13:00	0	40	14	0	2	0	0	0	0	0	0	0	0	56
14:00	0	41	7	3	1	0	0	0	0	0	0	0	0	52
15:00	0	40	9	0	1	0	0	0	0	0	0	0	0	50
16:00	0	46	11	0	1	0	0	0	0	0	0	0	0	58
17:00	0	38	3	0	1	0	0	0	0	0	0	0	0	42
18:00	1	45	3	0	1	0	0	0	0	0	0	0	0	50
19:00	0	24	0	0	0	0	0	0	0	0	0	0	0	24
20:00	0	28	1	0	0	0	0	0	0	0	0	0	0	29
21:00	0	16	2	0	0	0	0	0	0	0	0	0	0	18
22:00	0	10	4	0	0	0	0	0	0	0	0	0	0	14
23:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
Total	5	911	178	8	28	0	0	0	0	0	0	0	0	1130
Percent	0.4%	80.6%	15.8%	0.7%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	08:00	07:00	09:00									08:00
Vol.	1	154	30	3	4									187
Midday Peak	12:00	11:00	13:00	14:00	12:00									12:00
Vol.	2	41	14	3	5									56
PM Peak	18:00	16:00	16:00		15:00									16:00
Vol.	1	46	11		1									58

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Client: VHB/M. Miller

91863 H class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	7	3	0	0	0	0	0	0	0	0	0	0	10
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	3	4	0	0	0	0	0	0	0	0	0	0	7
05:00	5	17	4	0	3	0	0	0	0	0	0	0	0	29
06:00	2	60	18	1	2	0	0	0	0	0	0	0	0	83
07:00	0	96	12	2	2	0	0	0	0	0	0	0	0	112
08:00	0	183	29	0	2	0	0	0	0	0	0	0	0	214
09:00	1	133	19	1	5	1	0	0	0	0	0	0	0	160
10:00	0	53	11	0	4	0	0	0	0	0	0	0	0	68
11:00	0	37	10	0	1	0	0	0	0	0	0	0	0	48
12 M P	0	45	15	0	2	0	0	0	0	0	0	0	0	62
13:00	0	33	9	0	3	0	0	0	0	0	0	0	0	45
14:00	0	31	11	6	4	0	0	0	0	0	0	0	0	52
15:00	0	45	10	0	2	0	0	0	0	0	0	0	0	57
16:00	0	40	7	0	1	0	0	0	0	0	0	0	0	48
17:00	0	38	5	0	0	0	0	0	0	0	0	0	0	43
18:00	0	45	9	0	0	0	0	0	0	0	0	0	0	54
19:00	0	27	12	0	1	0	0	0	0	0	0	0	0	40
20:00	0	27	5	0	1	0	0	0	0	0	0	0	0	33
21:00	0	21	9	0	0	0	0	0	0	0	0	0	0	30
22:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
23:00	0	17	4	0	2	0	0	0	0	0	0	0	0	23
Total	8	985	210	10	35	1	0	0	0	0	0	0	0	1249
Percent	0.6%	78.9%	16.8%	0.8%	2.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	08:00	08:00	07:00	09:00	09:00								08:00
Vol.	5	183	29	2	5	1								214
Midday Peak		12:00	12:00	14:00	14:00									12:00
Vol.		45	15	6	4									62
PM Peak		15:00	19:00		15:00									15:00
Vol.		45	12		2									57

Fifth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

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91863 I volume
Site Code: 10082.00

Start	SB				NB				Combined				05-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	0		5		4		6		4		11		
12:15	2		9		1		7		3		16		
12:30	0		7		2		3		2		10		
12:45	0	2	7	28	0	7	4	20	0	9	11	48	
01:00	0		8		1		1		1		9		
01:15	1		5		2		0		3		5		
01:30	0		4		1		2		1		6		
01:45	1	2	5	22	2	6	3	6	3	8	8	28	
02:00	1		2		1		5		2		7		
02:15	0		8		0		8		0		16		
02:30	0		7		0		10		0		17		
02:45	1	2	6	23	0	1	13	36	1	3	19	59	
03:00	0		3		0		6		0		9		
03:15	0		5		0		9		0		14		
03:30	0		11		0		12		0		23		
03:45	0	0	6	25	1	1	9	36	1	1	15	61	
04:00	0		11		0		6		0		17		
04:15	0		9		1		6		1		15		
04:30	1		5		2		10		3		15		
04:45	1	2	4	29	1	4	15	37	2	6	19	66	
05:00	1		8		1		15		2		23		
05:15	3		11		3		31		6		42		
05:30	1		6		1		31		2		37		
05:45	4	9	6	31	3	8	10	87	7	17	16	118	
06:00	3		3		2		7		5		10		
06:15	2		9		0		7		2		16		
06:30	4		7		2		6		6		13		
06:45	3	12	3	22	5	9	5	25	8	21	8	47	
07:00	5		1		5		1		10		2		
07:15	3		3		3		3		6		6		
07:30	11		0		7		7		18		7		
07:45	10	29	7	11	5	20	6	17	15	49	13	28	
08:00	10		7		13		3		23		10		
08:15	6		5		8		1		14		6		
08:30	12		5		7		1		19		6		
08:45	15	43	3	20	5	33	1	6	20	76	4	26	
09:00	3		7		5		5		8		12		
09:15	5		1		13		2		18		3		
09:30	3		1		6		1		9		2		
09:45	5	16	3	12	2	26	0	8	7	42	3	20	
10:00	7		1		6		2		13		3		
10:15	11		1		9		2		20		3		
10:30	6		5		4		1		10		6		
10:45	6	30	1	8	1	20	3	8	7	50	4	16	
11:00	4		4		2		6		6		10		
11:15	6		2		4		0		10		2		
11:30	4		1		3		1		7		2		
11:45	8	22	2	9	5	14	5	12	13	36	7	21	
Total	169		240		149		298		318		538		
Percent	53.1%		44.6%		46.9%		55.4%						
Day Total	409				447				856				
Peak	08:00	03:	30	07:	30	04:	45	08:	00		04:45		
Vol.	43	37		33		9	2	76			121		
P.H.F.	0.717	0.	841	0.	635	0.	742	0.	826		0.720		

Fifth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

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Site Code: 10082.00

Start	SB				NB				Combined				06-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	0		2		1		7		1		9		
12:15	3		3		2		4		5		7		
12:30	1		8		1		9		2		17		
12:45	2	6	7	20	3	7	10	30	5	13	17	50	
01:00	0		8		0		5		0		13		
01:15	2		10		0		6		2		16		
01:30	1		6		1		8		2		14		
01:45	2	5	9	33	0	1	4	23	2	6	13	56	
02:00	2		5		2		5		4		10		
02:15	2		4		1		5		3		9		
02:30	0		7		3		9		3		16		
02:45	1	5	10	26	0	6	4	23	1	11	14	49	
03:00	0		8		0		4		0		12		
03:15	0		6		0		11		0		17		
03:30	0		5		1		11		1		16		
03:45	0	0	6	25	0	1	4	30	0	1	10	55	
04:00	1		10		0		11		1		21		
04:15	0		4		0		3		0		7		
04:30	1		5		1		11		2		16		
04:45	3	5	7	26	1	2	9	34	4	7	16	60	
05:00	0		5		0		9		0		14		
05:15	4		6		0		21		4		27		
05:30	4		3		0		11		4		14		
05:45	4	12	9	23	4	4	9	50	8	16	18	73	
06:00	1		8		3		13		4		21		
06:15	8		4		2		4		10		8		
06:30	3		4		4		5		7		9		
06:45	10	22	3	19	1	10	9	31	11	32	12	50	
07:00	2		5		4		1		6		6		
07:15	4		1		2		6		6		7		
07:30	9		6		11		5		20		11		
07:45	13	28	6	18	9	26	2	14	22	54	8	32	
08:00	8		2		8		1		16		3		
08:15	10		5		15		4		25		9		
08:30	12		1		4		1		16		2		
08:45	10	40	3	11	5	32	4	10	15	72	7	21	
09:00	6		2		2		3		8		5		
09:15	9		6		10		5		19		11		
09:30	2		0		6		2		8		2		
09:45	4	21	5	13	3	21	6	16	7	42	11	29	
10:00	4		4		4		3		8		7		
10:15	3		2		7		2		10		4		
10:30	4		3		5		1		9		4		
10:45	3	14	2	11	1	17	0	6	4	31	2	17	
11:00	4		2		8		4		12		6		
11:15	9		0		4		3		13		3		
11:30	5		4		3		1		8		5		
11:45	5	23	1	7	8	23	2	10	13	46	3	17	
Total	181		232		150		277		331		509		
Percent	54.7%		45.6%		45.3%		54.4%						
Day Total	413				427				840				
Peak	07:45		00:30		07:30		05:15		07:30		05:15		
Vol.	43		33		43	5	4		83		80		
P.H.F.	0.827		0.825		0.717		0.643		0.830		0.741		

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91863 I speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16	16
02:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16	16
05:00	1	6	2	0	0	0	0	0	0	0	0	0	0	9	20	17
06:00	2	7	3	0	0	0	0	0	0	0	0	0	0	12	20	17
07:00	7	12	10	0	0	0	0	0	0	0	0	0	0	29	22	17
08:00	**10**	**19**	**14**	0	0	0	0	0	0	0	0	0	0	**43**	22	17
09:00	2	6	8	0	0	0	0	0	0	0	0	0	0	16	22	19
10:00	7	15	8	0	0	0	0	0	0	0	0	0	0	30	21	17
11:00	**6**	8	**7**	**1**	0	0	0	0	0	0	0	0	0	22	22	17
12 PM	5	**16**	6	1	0	0	0	0	0	0	0	0	0	**28**	21	17
13:00	6	13	3	0	0	0	0	0	0	0	0	0	0	22	19	16
14:00	4	12	7	0	0	0	0	0	0	0	0	0	0	23	21	17
15:00	5	13	7	0	0	0	0	0	0	0	0	0	0	25	21	17
16:00	2	17	**9**	**1**	0	0	0	0	0	0	0	0	0	29	22	18
17:00	3	**19**	8	1	0	0	0	0	0	0	0	0	0	**31**	21	18
18:00	5	9	8	0	0	0	0	0	0	0	0	0	0	22	22	17
19:00	3	6	2	0	0	0	0	0	0	0	0	0	0	11	19	16
20:00	**7**	7	6	0	0	0	0	0	0	0	0	0	0	20	21	16
21:00	4	4	4	0	0	0	0	0	0	0	0	0	0	12	21	17
22:00	3	4	1	0	0	0	0	0	0	0	0	0	0	8	18	16
23:00	2	7	0	0	0	0	0	0	0	0	0	0	0	9	18	16
Total	87	205	113	4	0	0	0	0	0	0	0	0	0	409		
%	21.3%	50.1%	27.6%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00											08:00		
Vol.	10	19	14											43		
Midday Peak	11:00	12:00	11:00	11:00										12:00		
Vol.	6	16	7	1										28		
PM Peak	20:00	17:00	16:00	16:00										17:00		
Vol.	7	19	9	1										31		

% iles

15th Percentile :	11 MPH
50th Percentile :	17 MPH
85th Percentile :	22 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	318
Percent in Pace :	77.8%
Number of Vehicles > 25 MPH :	3
Percent of Vehicles > 25 MPH :	0.7%
Mean Speed(Average) :	16 MPH

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91863 I speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	3	2	1	0	0	0	0	0	0	0	0	0	0	6	16	10
01:00	3	1	1	0	0	0	0	0	0	0	0	0	0	5	19	9
02:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5	20	18
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	1	2	2	0	0	0	0	0	0	0	0	0	0	5	20	18
05:00	2	9	1	0	0	0	0	0	0	0	0	0	0	12	18	16
06:00	2	10	9	**1**	0	0	0	0	0	0	0	0	0	22	23	19
07:00	5	15	8	0	0	0	0	0	0	0	0	0	0	28	21	17
08:00	**7**	**22**	**11**	0	0	0	0	0	0	0	0	0	0	**40**	21	17
09:00	4	10	7	0	0	0	0	0	0	0	0	0	0	21	21	18
10:00	7	7	0	0	0	0	0	0	0	0	0	0	0	14	17	14
11:00	**8**	7	8	0	0	0	0	0	0	0	0	0	0	23	22	14
12 M	P 2	13	5	0	0	0	0	0	0	0	0	0	0	20	21	18
13:00	4	**21**	8	0	0	0	0	0	0	0	0	0	0	**33**	21	18
14:00	3	10	**13**	0	0	0	0	0	0	0	0	0	0	26	22	19
15:00	4	14	7	0	0	0	0	0	0	0	0	0	0	25	21	17
16:00	4	**15**	6	**1**	0	0	0	0	0	0	0	0	0	**26**	21	18
17:00	1	15	7	0	0	0	0	0	0	0	0	0	0	23	21	18
18:00	2	9	**8**	0	0	0	0	0	0	0	0	0	0	19	22	18
19:00	1	9	8	0	0	0	0	0	0	0	0	0	0	18	22	19
20:00	1	10	0	0	0	0	0	0	0	0	0	0	0	11	18	17
21:00	**5**	5	3	0	0	0	0	0	0	0	0	0	0	13	20	16
22:00	4	5	1	1	0	0	0	0	0	0	0	0	0	11	19	17
23:00	1	5	1	0	0	0	0	0	0	0	0	0	0	7	19	17
Total	74	219	117	3	0	0	0	0	0	0	0	0	0	413		
%	17.9%	53.0%	28.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	06:00										08:00		
Vol.	7	22	11	1										40		
Midday Peak	11:00	13:00	14:00											13:00		
Vol.	8	21	13											33		
PM Peak	21:00	16:00	18:00	16:00										16:00		
Vol.	5	15	8	1										26		

% iles

15th Percentile :	12 MPH
50th Percentile :	17 MPH
85th Percentile :	22 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	336
Percent in Pace :	81.4%
Number of Vehicles > 25 MPH :	2
Percent of Vehicles > 25 MPH :	0.5%
Mean Speed(Average) :	17 MPH

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91863 I speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/05/09	1	3	3	0	0	0	0	0	0	0	0	0	0	7	21	19
01:00	0	3	2	**1**	0	0	0	0	0	0	0	0	0	6	21	19
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20	20
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
04:00	2	0	2	0	0	0	0	0	0	0	0	0	0	4	20	11
05:00	1	3	4	0	0	0	0	0	0	0	0	0	0	8	22	19
06:00	3	4	2	0	0	0	0	0	0	0	0	0	0	9	20	16
07:00	2	11	**6**	1	0	0	0	0	0	0	0	0	0	20	22	18
08:00	**6**	**23**	4	0	0	0	0	0	0	0	0	0	0	**33**	19	16
09:00	6	14	6	0	0	0	0	0	0	0	0	0	0	26	20	17
10:00	5	11	4	0	0	0	0	0	0	0	0	0	0	20	20	17
11:00	5	6	3	0	0	0	0	0	0	0	0	0	0	14	20	16
12 M	P 1	14	5	0	0	0	0	0	0	0	0	0	0	20	21	18
13:00	3	1	2	0	0	0	0	0	0	0	0	0	0	6	20	11
14:00	**8**	**21**	**6**	**1**	0	0	0	0	0	0	0	0	0	**36**	20	16
15:00	**6**	15	15	0	0	0	0	0	0	0	0	0	0	36	23	18
16:00	6	16	15	0	0	0	0	0	0	0	0	0	0	37	22	18
17:00	4	**48**	**33**	**2**	0	0	0	0	0	0	0	0	0	**87**	23	19
18:00	3	14	8	0	0	0	0	0	0	0	0	0	0	25	21	18
19:00	4	3	10	0	0	0	0	0	0	0	0	0	0	17	23	17
20:00	2	0	4	0	0	0	0	0	0	0	0	0	0	6	22	15
21:00	3	3	2	0	0	0	0	0	0	0	0	0	0	8	20	16
22:00	0	5	2	1	0	0	0	0	0	0	0	0	0	8	21	19
23:00	1	6	5	0	0	0	0	0	0	0	0	0	0	12	22	19
Total	72	225	144	6	0	0	0	0	0	0	0	0	0	447		
%	16.1%	50.3%	32.2%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	07:00	01:00										08:00		
Vol.	6	23	6	1										33		
Midday Peak	14:00	14:00	14:00	14:00										14:00		
Vol.	8	21	6	1										36		
PM Peak	15:00	17:00	17:00	17:00										17:00		
Vol.	6	48	33	2										87		

% iles

15th Percentile : 14 MPH
50th Percentile : 18 MPH
85th Percentile : 22 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 369
Percent in Pace : 82.6%
Number of Vehicles > 25 MPH : 4
Percent of Vehicles > 25 MPH : 0.9%
Mean Speed(Average) : 17 MPH

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NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/06/09	0	4	3	0	0	0	0	0	0	0	0	0	0	7	21	18
01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
02:00	1	3	2	0	0	0	0	0	0	0	0	0	0	6	20	17
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20	20
04:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	14
05:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4	16	16
06:00	3	6	1	0	0	0	0	0	0	0	0	0	0	10	18	16
07:00	4	18	3	**1**	0	0	0	0	0	0	0	0	0	26	19	17
08:00	4	**22**	6	0	0	0	0	0	0	0	0	0	0	**32**	20	17
09:00	**5**	9	**7**	0	0	0	0	0	0	0	0	0	0	21	21	17
10:00	4	9	3	1	0	0	0	0	0	0	0	0	0	17	20	17
11:00	**7**	11	5	0	0	0	0	0	0	0	0	0	0	23	21	16
12 PM	3	**13**	**14**	0	0	0	0	0	0	0	0	0	0	**30**	22	19
13:00	2	13	8	0	0	0	0	0	0	0	0	0	0	23	22	18
14:00	1	12	9	**1**	0	0	0	0	0	0	0	0	0	23	23	19
15:00	3	13	13	1	0	0	0	0	0	0	0	0	0	30	22	19
16:00	3	17	13	1	0	0	0	0	0	0	0	0	0	34	22	19
17:00	4	**19**	**24**	**3**	0	0	0	0	0	0	0	0	0	**50**	23	20
18:00	1	15	15	0	0	0	0	0	0	0	0	0	0	31	23	19
19:00	2	5	7	0	0	0	0	0	0	0	0	0	0	14	22	19
20:00	1	3	6	0	0	0	0	0	0	0	0	0	0	10	22	20
21:00	**6**	2	8	0	0	0	0	0	0	0	0	0	0	16	22	14
22:00	0	3	3	0	0	0	0	0	0	0	0	0	0	6	21	20
23:00	2	4	4	0	0	0	0	0	0	0	0	0	0	10	21	18
Total	59	204	156	8	0	0	0	0	0	0	0	0	0	427		
%	13.8%	47.8%	36.5%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	09:00	07:00										08:00		
Vol.	5	22	7	1										32		
Midday Peak	11:00	12:00	12:00	14:00										12:00		
Vol.	7	13	14	1										30		
PM Peak	21:00	17:00	17:00	17:00										17:00		
Vol.	6	19	24	3										50		

% iles

15th Percentile :	15 MPH
50th Percentile :	18 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	360
Percent in Pace :	84.3%
Number of Vehicles > 25 MPH :	6
Percent of Vehicles > 25 MPH :	1.4%
Mean Speed(Average) :	18 MPH

PRECISION
D A T A
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SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	5	4	0	0	0	0	0	0	0	0	0	0	9
06:00	0	9	3	0	0	0	0	0	0	0	0	0	0	12
07:00	0	25	3	1	0	0	0	0	0	0	0	0	0	29
08:00	0	35	5	0	2	1	0	0	0	0	0	0	0	43
09:00	0	10	6	0	0	0	0	0	0	0	0	0	0	16
10:00	0	20	8	0	2	0	0	0	0	0	0	0	0	30
11:00	0	17	2	2	1	0	0	0	0	0	0	0	0	22
12 M	P 0	16	10	0	2	0	0	0	0	0	0	0	0	28
13:00	0	16	5	0	1	0	0	0	0	0	0	0	0	22
14:00	0	15	6	0	2	0	0	0	0	0	0	0	0	23
15:00	0	17	6	2	0	0	0	0	0	0	0	0	0	25
16:00	0	23	6	0	0	0	0	0	0	0	0	0	0	29
17:00	0	27	4	0	0	0	0	0	0	0	0	0	0	31
18:00	0	21	0	0	1	0	0	0	0	0	0	0	0	22
19:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
20:00	0	19	1	0	0	0	0	0	0	0	0	0	0	20
21:00	0	11	0	0	1	0	0	0	0	0	0	0	0	12
22:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
23:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
Total	0	319	72	5	12	1	0	0	0	0	0	0	0	409
Percent	0.0%	78.0%	17.6%	1.2%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	09:00	07:00	08:00	08:00								08:00
Vol.		35	6	1	2	1								43
Midday Peak		11:00	12:00	11:00	12:00									12:00
Vol.		17	10	2	2									28
PM Peak		17:00	15:00	15:00	18:00									17:00
Vol.		27	6	2	1									31

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Fifth Street between
Bent Street and Charles Street
City, State: Cambridge, MA
Client: VHB/ M. Miller

91863 I class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	6	0	0	0	0	0	0	0	0	0	0	0	6
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
02:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	4	0	1	0	0	0	0	0	0	0	0	0	5
05:00	0	7	5	0	0	0	0	0	0	0	0	0	0	12
06:00	0	18	3	0	1	0	0	0	0	0	0	0	0	22
07:00	0	20	7	1	0	0	0	0	0	0	0	0	0	28
08:00	0	36	3	1	0	0	0	0	0	0	0	0	0	40
09:00	0	16	2	1	1	1	0	0	0	0	0	0	0	21
10:00	0	7	5	0	2	0	0	0	0	0	0	0	0	14
11:00	0	17	5	0	1	0	0	0	0	0	0	0	0	23
12 M P	0	17	2	0	1	0	0	0	0	0	0	0	0	20
13:00	0	25	5	1	2	0	0	0	0	0	0	0	0	33
14:00	0	23	3	0	0	0	0	0	0	0	0	0	0	26
15:00	0	17	6	2	0	0	0	0	0	0	0	0	0	25
16:00	0	22	3	0	1	0	0	0	0	0	0	0	0	26
17:00	0	21	2	0	0	0	0	0	0	0	0	0	0	23
18:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
19:00	0	16	1	0	1	0	0	0	0	0	0	0	0	18
20:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
21:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
22:00	0	8	3	0	0	0	0	0	0	0	0	0	0	11
23:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
Total	0	333	62	7	10	1	0	0	0	0	0	0	0	413
Percent	0.0%	80.6%	15.0%	1.7%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	07:00	04:00	06:00	09:00								08:00
Vol.		36	7	1	1	1								40
Midday Peak		13:00	11:00	13:00	13:00									13:00
Vol.		25	5	1	2									33
PM Peak		16:00	15:00	15:00	16:00									16:00
Vol.		22	6	2	1									26

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City, State: Cambridge, MA
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91863 I class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/05/09	0	6	1	0	0	0	0	0	0	0	0	0	0	7
01:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
06:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
07:00	0	16	3	1	0	0	0	0	0	0	0	0	0	20
08:00	0	26	6	1	0	0	0	0	0	0	0	0	0	33
09:00	0	17	7	1	0	1	0	0	0	0	0	0	0	26
10:00	0	11	6	0	3	0	0	0	0	0	0	0	0	20
11:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
12 M P	0	14	5	0	1	0	0	0	0	0	0	0	0	20
13:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
14:00	0	25	8	1	2	0	0	0	0	0	0	0	0	36
15:00	0	32	4	0	0	0	0	0	0	0	0	0	0	36
16:00	0	27	7	0	3	0	0	0	0	0	0	0	0	37
17:00	0	72	13	0	2	0	0	0	0	0	0	0	0	87
18:00	0	23	2	0	0	0	0	0	0	0	0	0	0	25
19:00	0	14	3	0	0	0	0	0	0	0	0	0	0	17
20:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
21:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
22:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
23:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
Total	0	355	76	4	11	1	0	0	0	0	0	0	0	447
Percent	0.0%	79.4%	17.0%	0.9%	2.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	09:00	07:00		09:00								08:00
Vol.		26	7	1		1								33
Midday Peak		14:00	14:00	14:00	14:00									14:00
Vol.		25	8	1	2									36
PM Peak		17:00	17:00		16:00									17:00
Vol.		72	13		3									87

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91863 I class
Site Code: 10082.00

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/06/09	0	6	1	0	0	0	0	0	0	0	0	0	0	7
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
06:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
07:00	0	17	7	1	1	0	0	0	0	0	0	0	0	26
08:00	0	26	5	1	0	0	0	0	0	0	0	0	0	32
09:00	0	12	7	2	0	0	0	0	0	0	0	0	0	21
10:00	0	10	3	0	4	0	0	0	0	0	0	0	0	17
11:00	0	15	8	0	0	0	0	0	0	0	0	0	0	23
12 M P	0	23	6	0	1	0	0	0	0	0	0	0	0	30
13:00	0	13	7	0	3	0	0	0	0	0	0	0	0	23
14:00	0	17	4	1	1	0	0	0	0	0	0	0	0	23
15:00	0	25	2	0	3	0	0	0	0	0	0	0	0	30
16:00	0	29	5	0	0	0	0	0	0	0	0	0	0	34
17:00	0	43	6	0	1	0	0	0	0	0	0	0	0	50
18:00	0	31	0	0	0	0	0	0	0	0	0	0	0	31
19:00	0	11	3	0	0	0	0	0	0	0	0	0	0	14
20:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
21:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
22:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
23:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
Total	0	339	69	5	14	0	0	0	0	0	0	0	0	427
Percent	0.0%	79.4%	16.2%	1.2%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		08:00	07:00	09:00	07:00									08:00
Vol.		26	7	2	1									32
Midday Peak		12:00	11:00	14:00	13:00									12:00
Vol.		23	8	1	3									30
PM Peak		17:00	17:00		15:00									17:00
Vol.		43	6		3									50

Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

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91863 F (NB) volume
Site Code: 10082.00

Start	NB (Left Lane)				NB (Right Lane)				Combined				19-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	5		52		4		29		9		81		
12:15	9		45		6		28		15		73		
12:30	6		41		7		17		13		58		
12:45	3	23	41	179	2	19	36	110	5	42	77	289	
01:00	3		42		1		17		4		59		
01:15	2		34		3		30		5		64		
01:30	3		38		3		31		6		69		
01:45	2	10	35	149	2	9	23	101	4	19	58	250	
02:00	2		41		1		31		3		72		
02:15	1		41		5		23		6		64		
02:30	2		43		1		35		3		78		
02:45	0	5	35	160	2	9	38	127	2	14	73	287	
03:00	3		59		5		40		8		99		
03:15	1		50		0		37		1		87		
03:30	0		78		3		39		3		117		
03:45	2	6	58	245	1	9	40	156	3	15	98	401	
04:00	0		78		3		38		3		116		
04:15	5		65		1		28		6		93		
04:30	3		73		0		54		3		127		
04:45	3	11	80	296	3	7	47	167	6	18	127	463	
05:00	8		90		1		47		9		137		
05:15	5		77		2		70		7		147		
05:30	12		86		3		70		15		156		
05:45	18	43	84	337	3	9	55	242	21	52	139	579	
06:00	18		86		2		58		20		144		
06:15	14		72		12		37		26		109		
06:30	15		54		7		33		22		87		
06:45	19	66	47	259	13	34	43	171	32	100	90	430	
07:00	30		61		16		27		46		88		
07:15	29		54		15		30		44		84		
07:30	21		41		17		25		38		66		
07:45	31	111	32	188	12	60	20	102	43	171	52	290	
08:00	44		16		25		8		69		24		
08:15	43		26		23		12		66		38		
08:30	31		20		26		13		57		33		
08:45	39	157	24	86	28	102	7	40	67	259	31	126	
09:00	35		23		22		13		57		36		
09:15	41		19		15		7		56		26		
09:30	27		30		26		7		53		37		
09:45	35	138	12	84	18	81	3	30	53	219	15	114	
10:00	31		15		20		9		51		24		
10:15	28		19		22		5		50		24		
10:30	38		17		28		7		66		24		
10:45	29	126	19	70	18	88	3	24	47	214	22	94	
11:00	31		18		25		3		56		21		
11:15	35		14		26		6		61		20		
11:30	27		9		21		5		48		14		
11:45	42	135	5	46	25	97	4	18	67	232	9	64	
Total	831		2099		524		1288		1355		3387		
Percent	61.3%		62.0%		38.7%		38.0%						
Day Total	2930				1812				4742				
Peak	08:00		05:00		08:00		05:15		08:00		05:15		
Vol.	157		337		102		253		259		586		
P.H.F.	0.892		0.936		0.911		0.904		0.938		0.939		

Third Street (NB) between
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91863 F (NB) volume
Site Code: 10082.00

Start	NB (Left Lane)				NB (Right Lane)				Combined				20-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	12		41		7		24		19		65		
12:15	9		40		0		21		9		61		
12:30	4		32		2		28		6		60		
12:45	3	28	33	146	1	10	29	102	4	38	62	248	
01:00	3		36		4		26		7		62		
01:15	2		41		2		26		4		67		
01:30	1		43		1		34		2		77		
01:45	1	7	51	171	0	7	29	115	1	14	80	286	
02:00	2		40		1		42		3		82		
02:15	1		46		1		38		2		84		
02:30	1		46		1		29		2		75		
02:45	0	4	36	168	1	4	28	137	1	8	64	305	
03:00	1		68		0		34		1		102		
03:15	1		45		0		34		1		79		
03:30	0		70		0		42		0		112		
03:45	2	4	67	250	1	1	26	136	3	5	93	386	
04:00	1		67		0		43		1		110		
04:15	4		88		1		28		5		116		
04:30	9		75		1		45		10		120		
04:45	7	21	83	313	0	2	44	160	7	23	127	473	
05:00	7		83		1		43		8		126		
05:15	11		71		2		57		13		128		
05:30	11		75		3		53		14		128		
05:45	20	49	68	297	2	8	68	221	22	57	136	518	
06:00	14		61		7		48		21		109		
06:15	11		74		7		44		18		118		
06:30	12		50		6		28		18		78		
06:45	17	54	55	240	8	28	28	148	25	82	83	388	
07:00	16		51		9		23		25		74		
07:15	26		43		11		29		37		72		
07:30	25		34		11		21		36		55		
07:45	26	93	36	164	21	52	21	94	47	145	57	258	
08:00	20		34		29		19		49		53		
08:15	34		26		27		13		61		39		
08:30	33		27		24		12		57		39		
08:45	41	128	31	118	32	112	9	53	73	240	40	171	
09:00	30		23		20		12		50		35		
09:15	37		29		24		13		61		42		
09:30	26		21		20		18		46		39		
09:45	27	120	17	90	22	86	10	53	49	206	27	143	
10:00	27		23		22		10		49		33		
10:15	37		22		21		7		58		29		
10:30	32		15		11		7		43		22		
10:45	30	126	15	75	26	80	11	35	56	206	26	110	
11:00	31		24		22		7		53		31		
11:15	34		12		16		4		50		16		
11:30	27		9		27		1		54		10		
11:45	49	141	6	51	32	97	4	16	81	238	10	67	
Total	775		2083		487		1270		1262		3353		
Percent	61.4%		62.1%		38.6%		37.9%						
Day Total	2858				1757				4615				
Peak	08:30		04:15		08:00		05:15		08:15		05:00		
Vol.	141		329		112		226		241		518		
P.H.F.	0.860		0.935		0.875		0.831		0.825		0.952		

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Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Left Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	6	13	4	0	0	0	0	0	0	0	0	0	0	23	20	16
01:00	1	5	3	1	0	0	0	0	0	0	0	0	0	10	21	19
02:00	1	2	1	1	0	0	0	0	0	0	0	0	0	5	24	19
03:00	1	3	2	0	0	0	0	0	0	0	0	0	0	6	20	17
04:00	1	3	6	1	0	0	0	0	0	0	0	0	0	11	23	20
05:00	9	23	11	0	0	0	0	0	0	0	0	0	0	43	21	17
06:00	11	33	15	6	1	0	0	0	0	0	0	0	0	66	23	18
07:00	24	33	47	6	1	0	0	0	0	0	0	0	0	111	23	18
08:00	**39**	**56**	47	**12**	**3**	0	0	0	0	0	0	0	0	**157**	23	17
09:00	35	46	**53**	4	0	0	0	0	0	0	0	0	0	138	23	17
10:00	50	45	29	2	0	0	0	0	0	0	0	0	0	126	21	14
11:00	50	54	29	2	0	0	0	0	0	0	0	0	0	135	21	15
12 PM	**75**	60	**40**	4	0	0	0	0	0	0	0	0	0	**179**	22	14
13:00	62	**67**	20	0	0	0	0	0	0	0	0	0	0	149	19	14
14:00	68	54	33	**5**	0	0	0	0	0	0	0	0	0	160	21	14
15:00	70	59	94	**20**	2	0	0	0	0	0	0	0	0	245	24	17
16:00	97	70	115	10	**4**	0	0	0	0	0	0	0	0	296	23	16
17:00	**109**	**81**	**139**	8	0	0	0	0	0	0	0	0	0	**337**	23	16
18:00	81	80	92	5	1	0	0	0	0	0	0	0	0	259	23	16
19:00	72	73	38	5	0	0	0	0	0	0	0	0	0	188	21	15
20:00	28	40	14	4	0	0	0	0	0	0	0	0	0	86	21	15
21:00	26	40	16	2	0	0	0	0	0	0	0	0	0	84	21	15
22:00	20	34	13	3	0	0	0	0	0	0	0	0	0	70	21	16
23:00	9	25	10	2	0	0	0	0	0	0	0	0	0	46	22	17
Total	945	999	871	103	12	0	0	0	0	0	0	0	0	2930		
%	32.3%	34.1%	29.7%	3.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	09:00	08:00	08:00									08:00		
Vol.	39	56	53	12	3									157		
Midday Peak	12:00	13:00	12:00	14:00										12:00		
Vol.	75	67	40	5										179		
PM Peak	17:00	17:00	17:00	15:00	16:00									17:00		
Vol.	109	81	139	20	4									337		

% iles

15th Percentile : 7 MPH
50th Percentile : 17 MPH
85th Percentile : 23 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 1870
Percent in Pace : 63.8%
Number of Vehicles > 25 MPH : 94
Percent of Vehicles > 25 MPH : 3.2%
Mean Speed(Average) : 16 MPH

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Left Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	4	13	8	3	0	0	0	0	0	0	0	0	0	28	23	19
01:00	0	3	3	1	0	0	0	0	0	0	0	0	0	7	22	20
02:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4	21	20
03:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4	17	17
04:00	3	11	7	0	0	0	0	0	0	0	0	0	0	21	21	18
05:00	10	25	13	1	0	0	0	0	0	0	0	0	0	49	22	17
06:00	10	23	15	5	1	0	0	0	0	0	0	0	0	54	24	18
07:00	18	33	34	5	**3**	0	0	0	0	0	0	0	0	93	23	18
08:00	29	**43**	**46**	9	1	0	0	0	0	0	0	0	0	**128**	23	17
09:00	**35**	37	35	**12**	1	0	0	0	0	0	0	0	0	120	24	17
10:00	57	42	25	2	0	0	0	0	0	0	0	0	0	126	21	14
11:00	46	60	33	2	0	0	0	0	0	0	0	0	0	141	21	15
12 M	P 63	49	34	0	0	0	0	0	0	0	0	0	0	146	21	14
13:00	**69**	**67**	31	**3**	0	**1**	0	0	0	0	0	0	0	**171**	21	14
14:00	58	64	**45**	1	0	0	0	0	0	0	0	0	0	168	22	15
15:00	79	71	93	7	0	0	0	0	0	0	0	0	0	250	23	16
16:00	**127**	67	103	**15**	**1**	0	0	0	0	0	0	0	0	**313**	23	15
17:00	104	**78**	**106**	9	0	0	0	0	0	0	0	0	0	297	23	16
18:00	107	62	63	7	1	0	0	0	0	0	0	0	0	240	22	14
19:00	69	59	33	3	0	0	0	0	0	0	0	0	0	164	21	14
20:00	51	45	21	1	0	0	0	0	0	0	0	0	0	118	20	14
21:00	33	32	20	4	1	0	0	0	0	0	0	0	0	90	22	15
22:00	25	35	15	0	0	0	0	0	0	0	0	0	0	75	21	15
23:00	16	29	6	0	0	0	0	0	0	0	0	0	0	51	19	15
Total	1013	952	793	90	9	1	0	0	0	0	0	0	0	2858		
%	35.4%	33.3%	27.7%	3.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	09:00	07:00									08:00		
Vol.	35	43	46	12	3									128		
Midday Peak	13:00	13:00	14:00	13:00		13:00								13:00		
Vol.	69	67	45	3		1								171		
PM Peak	16:00	17:00	17:00	16:00	16:00									16:00		
Vol.	127	78	106	15	1									313		

% iles

15th Percentile : 6 MPH
50th Percentile : 17 MPH
85th Percentile : 22 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 1745
Percent in Pace : 61.1%
Number of Vehicles > 25 MPH : 82
Percent of Vehicles > 25 MPH : 2.9%
Mean Speed(Average) : 15 MPH

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Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Right Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	2	8	9	0	0	0	0	0	0	0	0	0	0	19	22	19
01:00	1	2	5	1	0	0	0	0	0	0	0	0	0	9	24	21
02:00	0	5	3	1	0	0	0	0	0	0	0	0	0	9	22	19
03:00	1	3	4	1	0	0	0	0	0	0	0	0	0	9	23	20
04:00	1	2	3	1	0	0	0	0	0	0	0	0	0	7	22	20
05:00	1	4	3	1	0	0	0	0	0	0	0	0	0	9	22	19
06:00	3	15	13	1	**2**	0	0	0	0	0	0	0	0	34	23	20
07:00	7	22	23	**8**	0	0	0	0	0	0	0	0	0	60	24	20
08:00	**21**	22	**50**	8	1	0	0	0	0	0	0	0	0	**102**	24	19
09:00	12	**34**	28	7	0	0	0	0	0	0	0	0	0	81	23	18
10:00	22	39	27	0	0	0	0	0	0	0	0	0	0	88	22	16
11:00	20	40	30	**7**	0	0	0	0	0	0	0	0	0	97	23	18
12 PM	**36**	**43**	28	2	**1**	0	0	0	0	0	0	0	0	110	22	16
13:00	35	33	32	0	1	0	0	0	0	0	0	0	0	101	22	15
14:00	33	39	**48**	7	0	0	0	0	0	0	0	0	0	**127**	23	17
15:00	45	53	47	**10**	**1**	0	0	0	0	0	0	0	0	156	23	17
16:00	53	41	64	9	0	0	0	0	0	0	0	0	0	167	23	16
17:00	**85**	**65**	**82**	10	0	0	0	0	0	0	0	0	0	**242**	23	16
18:00	50	50	61	10	0	0	0	0	0	0	0	0	0	171	23	17
19:00	27	39	29	7	0	0	0	0	0	0	0	0	0	102	23	17
20:00	3	19	17	1	0	0	0	0	0	0	0	0	0	40	23	19
21:00	3	10	14	3	0	0	0	0	0	0	0	0	0	30	23	20
22:00	4	8	11	1	0	0	0	0	0	0	0	0	0	24	23	19
23:00	4	7	5	2	0	0	0	0	0	0	0	0	0	18	23	18
Total	469	603	636	98	6	0	0	0	0	0	0	0	0	1812		
%	25.9%	33.3%	35.1%	5.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	08:00	07:00	06:00									08:00		
Vol.	21	34	50	8	2									102		
Midday Peak	12:00	12:00	14:00	11:00	12:00									14:00		
Vol.	36	43	48	7	1									127		
PM Peak	17:00	17:00	17:00	15:00	15:00									17:00		
Vol.	85	65	82	10	1									242		

% iles

15th Percentile :	9 MPH
50th Percentile :	18 MPH
85th Percentile :	23 MPH
95th Percentile :	25 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	1239
Percent in Pace :	68.4%
Number of Vehicles > 25 MPH :	84
Percent of Vehicles > 25 MPH :	4.6%
Mean Speed(Average) :	17 MPH

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Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Right Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	2	2	5	1	0	0	0	0	0	0	0	0	0	10	23	20
01:00	1	3	3	0	0	0	0	0	0	0	0	0	0	7	21	19
02:00	1	0	3	0	0	0	0	0	0	0	0	0	0	4	21	16
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	15
04:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2	26	26
05:00	0	0	7	1	0	0	0	0	0	0	0	0	0	8	24	22
06:00	3	9	13	3	0	0	0	0	0	0	0	0	0	28	24	20
07:00	2	14	24	12	0	0	0	0	0	0	0	0	0	52	26	21
08:00	**28**	31	**39**	**14**	0	0	0	0	0	0	0	0	0	**112**	24	18
09:00	16	**36**	29	5	0	0	0	0	0	0	0	0	0	86	23	18
10:00	23	27	28	2	0	0	0	0	0	0	0	0	0	80	22	17
11:00	27	33	33	4	0	0	0	0	0	0	0	0	0	97	23	17
12 M	P 29	33	34	6	0	0	0	0	0	0	0	0	0	102	23	17
13:00	33	42	35	5	0	0	0	0	0	0	0	0	0	115	23	16
14:00	**41**	**47**	**41**	**8**	0	0	0	0	0	0	0	0	0	**137**	23	16
15:00	39	38	47	**11**	**1**	0	0	0	0	0	0	0	0	136	24	17
16:00	49	48	60	3	0	0	0	0	0	0	0	0	0	160	23	16
17:00	**59**	**71**	**80**	10	1	0	0	0	0	0	0	0	0	**221**	23	17
18:00	45	42	56	5	0	0	0	0	0	0	0	0	0	148	23	16
19:00	23	31	33	7	0	0	0	0	0	0	0	0	0	94	23	17
20:00	7	30	14	1	1	0	0	0	0	0	0	0	0	53	22	18
21:00	6	24	20	3	0	0	0	0	0	0	0	0	0	53	23	19
22:00	5	14	14	2	0	0	0	0	0	0	0	0	0	35	23	19
23:00	1	5	9	1	0	0	0	0	0	0	0	0	0	16	23	20
Total	440	581	627	106	3	0	0	0	0	0	0	0	0	1757		
%	25.0%	33.1%	35.7%	6.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	08:00	08:00										08:00		
Vol.	28	36	39	14										112		
Midday Peak	14:00	14:00	14:00	14:00										14:00		
Vol.	41	47	41	8										137		
PM Peak	17:00	17:00	17:00	15:00	15:00									17:00		
Vol.	59	71	80	11	1									221		

% iles

15th Percentile : 9 MPH
50th Percentile : 18 MPH
85th Percentile : 23 MPH
95th Percentile : 25 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 1208
Percent in Pace : 68.8%
Number of Vehicles > 25 MPH : 87
Percent of Vehicles > 25 MPH : 5.0%
Mean Speed(Average) : 17 MPH

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Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Left Lane), NB (Right Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	8	21	13	0	0	0	0	0	0	0	0	0	0	42	22	17
01:00	2	7	8	2	0	0	0	0	0	0	0	0	0	19	23	20
02:00	1	7	4	2	0	0	0	0	0	0	0	0	0	14	23	19
03:00	2	6	6	1	0	0	0	0	0	0	0	0	0	15	23	19
04:00	2	5	9	2	0	0	0	0	0	0	0	0	0	18	23	20
05:00	10	27	14	1	0	0	0	0	0	0	0	0	0	52	22	17
06:00	14	48	28	7	3	0	0	0	0	0	0	0	0	100	23	18
07:00	31	55	70	14	1	0	0	0	0	0	0	0	0	171	24	18
08:00	**60**	78	**97**	**20**	**4**	0	0	0	0	0	0	0	0	**259**	24	18
09:00	47	**80**	81	11	0	0	0	0	0	0	0	0	0	219	23	17
10:00	72	84	56	2	0	0	0	0	0	0	0	0	0	214	22	15
11:00	70	94	59	9	0	0	0	0	0	0	0	0	0	232	22	16
12 PM	**111**	**103**	68	6	**1**	0	0	0	0	0	0	0	0	**289**	22	15
13:00	97	100	52	0	1	0	0	0	0	0	0	0	0	250	21	14
14:00	101	93	**81**	**12**	0	0	0	0	0	0	0	0	0	287	23	15
15:00	115	112	141	**30**	3	0	0	0	0	0	0	0	0	401	24	17
16:00	150	111	179	19	**4**	0	0	0	0	0	0	0	0	463	23	16
17:00	**194**	**146**	**221**	18	0	0	0	0	0	0	0	0	0	**579**	23	16
18:00	131	130	153	15	1	0	0	0	0	0	0	0	0	430	23	16
19:00	99	112	67	12	0	0	0	0	0	0	0	0	0	290	22	15
20:00	31	59	31	5	0	0	0	0	0	0	0	0	0	126	22	16
21:00	29	50	30	5	0	0	0	0	0	0	0	0	0	114	22	16
22:00	24	42	24	4	0	0	0	0	0	0	0	0	0	94	22	16
23:00	13	32	15	4	0	0	0	0	0	0	0	0	0	64	22	17
Total	1414	1602	1507	201	18	0	0	0	0	0	0	0	0	4742		
%	29.8%	33.8%	31.8%	4.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	09:00	08:00	08:00	08:00									08:00		
Vol.	60	80	97	20	4									259		
Midday Peak	12:00	12:00	14:00	14:00	12:00									12:00		
Vol.	111	103	81	12	1									289		
PM Peak	17:00	17:00	17:00	15:00	16:00									17:00		
Vol.	194	146	221	30	4									579		

% iles

15th Percentile : 8 MPH
50th Percentile : 17 MPH
85th Percentile : 23 MPH
95th Percentile : 24 MPH

Stats

10 MPH Pace Speed : 15-24 MPH
Number in Pace : 3109
Percent in Pace : 65.6%
Number of Vehicles > 25 MPH : 178
Percent of Vehicles > 25 MPH : 3.8%
Mean Speed(Average) : 16 MPH

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Client: VHB/M. Miller

91863 F (NB) speed
Site Code: 10082.00

NB (Left Lane), NB (Right Lane)

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	6	15	13	4	0	0	0	0	0	0	0	0	0	38	23	19
01:00	1	6	6	1	0	0	0	0	0	0	0	0	0	14	23	20
02:00	1	1	6	0	0	0	0	0	0	0	0	0	0	8	23	20
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5	18	17
04:00	3	11	7	2	0	0	0	0	0	0	0	0	0	23	23	19
05:00	10	25	20	2	0	0	0	0	0	0	0	0	0	57	23	18
06:00	13	32	28	8	1	0	0	0	0	0	0	0	0	82	24	18
07:00	20	47	58	17	**3**	0	0	0	0	0	0	0	0	145	24	19
08:00	**57**	**74**	**85**	**23**	1	0	0	0	0	0	0	0	0	**240**	24	18
09:00	51	73	64	17	1	0	0	0	0	0	0	0	0	206	23	17
10:00	80	69	53	4	0	0	0	0	0	0	0	0	0	206	22	15
11:00	73	93	66	6	0	0	0	0	0	0	0	0	0	238	22	16
12 M	P 92	82	68	6	0	0	0	0	0	0	0	0	0	248	22	15
13:00	**102**	109	66	8	0	**1**	0	0	0	0	0	0	0	286	22	15
14:00	99	**111**	**86**	**9**	0	0	0	0	0	0	0	0	0	**305**	22	16
15:00	118	109	140	18	**1**	0	0	0	0	0	0	0	0	386	23	16
16:00	**176**	115	163	18	1	0	0	0	0	0	0	0	0	473	23	16
17:00	163	**149**	**186**	**19**	1	0	0	0	0	0	0	0	0	**518**	23	16
18:00	152	104	119	12	1	0	0	0	0	0	0	0	0	388	23	15
19:00	92	90	66	10	0	0	0	0	0	0	0	0	0	258	22	15
20:00	58	75	35	2	1	0	0	0	0	0	0	0	0	171	21	15
21:00	39	56	40	7	1	0	0	0	0	0	0	0	0	143	23	16
22:00	30	49	29	2	0	0	0	0	0	0	0	0	0	110	22	16
23:00	17	34	15	1	0	0	0	0	0	0	0	0	0	67	21	16
Total	1453	1533	1420	196	12	1	0	0	0	0	0	0	0	4615		
%	31.5%	33.2%	30.8%	4.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	07:00									08:00		
Vol.	57	74	85	23	3									240		
Midday Peak	13:00	14:00	14:00	14:00		13:00								14:00		
Vol.	102	111	86	9		1								305		
PM Peak	16:00	17:00	17:00	17:00	15:00									17:00		
Vol.	176	149	186	19	1									518		

% iles

15th Percentile :	7 MPH
50th Percentile :	17 MPH
85th Percentile :	23 MPH
95th Percentile :	24 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	2953
Percent in Pace :	64.0%
Number of Vehicles > 25 MPH :	169
Percent of Vehicles > 25 MPH :	3.7%
Mean Speed(Average) :	16 MPH

PRECISION
D A T A
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91863 F (NB) class
Site Code: 10082.00

NB (Left Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/09	0	22	0	0	1	0	0	0	0	0	0	0	0	23
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
03:00	1	3	1	0	0	1	0	0	0	0	0	0	0	6
04:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
05:00	0	35	7	0	0	1	0	0	0	0	0	0	0	43
06:00	0	58	5	0	2	1	0	0	0	0	0	0	0	66
07:00	0	100	9	0	2	0	0	0	0	0	0	0	0	111
08:00	1	143	7	0	5	1	0	0	0	0	0	0	0	157
09:00	0	122	13	0	3	0	0	0	0	0	0	0	0	138
10:00	0	110	9	2	4	0	0	1	0	0	0	0	0	126
11:00	2	123	8	0	2	0	0	0	0	0	0	0	0	135
12 M	P 2	160	13	0	4	0	0	0	0	0	0	0	0	179
13:00	0	132	14	0	3	0	0	0	0	0	0	0	0	149
14:00	0	142	15	0	1	1	0	1	0	0	0	0	0	160
15:00	2	225	14	0	4	0	0	0	0	0	0	0	0	245
16:00	1	280	12	1	2	0	0	0	0	0	0	0	0	296
17:00	0	331	5	0	1	0	0	0	0	0	0	0	0	337
18:00	3	254	1	1	0	0	0	0	0	0	0	0	0	259
19:00	1	182	5	0	0	0	0	0	0	0	0	0	0	188
20:00	0	85	1	0	0	0	0	0	0	0	0	0	0	86
21:00	1	78	5	0	0	0	0	0	0	0	0	0	0	84
22:00	0	68	2	0	0	0	0	0	0	0	0	0	0	70
23:00	1	45	0	0	0	0	0	0	0	0	0	0	0	46
Total	15	2721	149	4	34	5	0	2	0	0	0	0	0	2930
Percent	0.5%	92.9%	5.1%	0.1%	1.2%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	08:00	09:00		08:00	03:00								08:00
Vol.	1	143	13		5	1								157
Midday Peak	11:00	12:00	14:00		12:00	14:00		14:00						12:00
Vol.	2	160	15		4	1		1						179
PM Peak	18:00	17:00	15:00	16:00	15:00									17:00
Vol.	3	331	14	1	4									337

PRECISION
D A T A
INDUSTRIES, LLC
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Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) class
Site Code: 10082.00

NB (Left Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/09	0	28	0	0	0	0	0	0	0	0	0	0	0	28
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
04:00	0	15	4	0	2	0	0	0	0	0	0	0	0	21
05:00	0	36	12	0	1	0	0	0	0	0	0	0	0	49
06:00	0	47	6	0	0	0	0	1	0	0	0	0	0	54
07:00	1	83	5	0	2	1	0	1	0	0	0	0	0	93
08:00	0	123	2	1	2	0	0	0	0	0	0	0	0	128
09:00	0	107	8	1	3	1	0	0	0	0	0	0	0	120
10:00	0	110	8	2	5	0	0	1	0	0	0	0	0	126
11:00	3	125	9	2	2	0	0	0	0	0	0	0	0	141
12 M	P 0	138	7	1	0	0	0	0	0	0	0	0	0	146
13:00	0	163	5	1	2	0	0	0	0	0	0	0	0	171
14:00	1	152	10	0	5	0	0	0	0	0	0	0	0	168
15:00	2	232	7	4	4	1	0	0	0	0	0	0	0	250
16:00	3	300	8	0	2	0	0	0	0	0	0	0	0	313
17:00	3	291	2	0	1	0	0	0	0	0	0	0	0	297
18:00	0	235	4	0	1	0	0	0	0	0	0	0	0	240
19:00	0	158	5	0	1	0	0	0	0	0	0	0	0	164
20:00	1	113	4	0	0	0	0	0	0	0	0	0	0	118
21:00	1	88	1	0	0	0	0	0	0	0	0	0	0	90
22:00	0	71	3	1	0	0	0	0	0	0	0	0	0	75
23:00	0	48	2	0	1	0	0	0	0	0	0	0	0	51
Total	15	2677	113	13	34	3	0	3	0	0	0	0	0	2858
Percent	0.5%	93.7%	4.0%	0.5%	1.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	05:00	08:00	09:00	07:00		06:00						08:00
Vol.	1	123	12	1	3	1		1						128
Midday Peak	11:00	13:00	14:00	11:00	14:00									13:00
Vol.	3	163	10	2	5									171
PM Peak	16:00	16:00	16:00	15:00	15:00	15:00								16:00
Vol.	3	300	8	4	4	1								313

PRECISION
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Third Street (NB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) class
Site Code: 10082.00

NB (Right Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/0 9	0	17	2	0	0	0	0	0	0	0	0	0	0	19
01:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
02:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
03:00	0	7	0	0	2	0	0	0	0	0	0	0	0	9
04:00	1	5	0	0	0	1	0	0	0	0	0	0	0	7
05:00	0	5	1	0	3	0	0	0	0	0	0	0	0	9
06:00	0	22	10	0	0	2	0	0	0	0	0	0	0	34
07:00	0	46	8	0	5	1	0	0	0	0	0	0	0	60
08:00	1	83	10	1	7	0	0	0	0	0	0	0	0	102
09:00	1	61	10	0	9	0	0	0	0	0	0	0	0	81
10:00	0	65	15	0	7	0	1	0	0	0	0	0	0	88
11:00	0	74	15	0	7	0	0	1	0	0	0	0	0	97
12 M P	0	85	15	0	7	2	0	1	0	0	0	0	0	110
13:00	2	79	15	1	4	0	0	0	0	0	0	0	0	101
14:00	0	93	23	1	9	0	0	1	0	0	0	0	0	127
15:00	0	120	30	1	4	1	0	0	0	0	0	0	0	156
16:00	0	153	9	0	5	0	0	0	0	0	0	0	0	167
17:00	0	226	14	0	2	0	0	0	0	0	0	0	0	242
18:00	1	156	11	0	2	1	0	0	0	0	0	0	0	171
19:00	0	97	5	0	0	0	0	0	0	0	0	0	0	102
20:00	0	38	2	0	0	0	0	0	0	0	0	0	0	40
21:00	1	25	4	0	0	0	0	0	0	0	0	0	0	30
22:00	0	21	3	0	0	0	0	0	0	0	0	0	0	24
23:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
Total	7	1512	204	4	73	8	1	3	0	0	0	0	0	1812
Percent	0.4%	83.4%	11.3%	0.2%	4.0%	0.4%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	04:00	08:00	06:00	08:00	09:00	06:00								08:00
Vol.	1	83	10	1	9	2								102
Midday Peak	13:00	14:00	14:00	13:00	14:00	12:00		11:00						14:00
Vol.	2	93	23	1	9	2		1						127
PM Peak	18:00	17:00	15:00	15:00	16:00	15:00								17:00
Vol.	1	226	30	1	5	1								242

PRECISION
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Third Street (NB) between
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (NB) class
Site Code: 10082.00

NB (Right Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/0 9	0	8	2	0	0	0	0	0	0	0	0	0	0	10
01:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:00	0	5	1	0	2	0	0	0	0	0	0	0	0	8
06:00	0	22	5	0	1	0	0	0	0	0	0	0	0	28
07:00	0	43	4	1	3	0	1	0	0	0	0	0	0	52
08:00	1	90	8	5	6	2	0	0	0	0	0	0	0	112
09:00	0	65	15	0	5	1	0	0	0	0	0	0	0	86
10:00	1	58	12	2	5	1	1	0	0	0	0	0	0	80
11:00	0	78	11	0	6	2	0	0	0	0	0	0	0	97
12 M P	0	84	11	1	6	0	0	0	0	0	0	0	0	102
13:00	0	88	19	1	6	0	1	0	0	0	0	0	0	115
14:00	1	103	24	1	7	0	0	1	0	0	0	0	0	137
15:00	0	111	20	1	4	0	0	0	0	0	0	0	0	136
16:00	1	153	3	0	3	0	0	0	0	0	0	0	0	160
17:00	2	206	11	0	2	0	0	0	0	0	0	0	0	221
18:00	1	139	6	0	2	0	0	0	0	0	0	0	0	148
19:00	0	88	4	0	2	0	0	0	0	0	0	0	0	94
20:00	0	51	1	1	0	0	0	0	0	0	0	0	0	53
21:00	2	46	4	0	0	0	0	1	0	0	0	0	0	53
22:00	0	33	2	0	0	0	0	0	0	0	0	0	0	35
23:00	0	14	2	0	0	0	0	0	0	0	0	0	0	16
Total	9	1496	167	13	61	6	3	2	0	0	0	0	0	1757
Percent	0.5%	85.1%	9.5%	0.7%	3.5%	0.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	08:00	08:00	08:00	07:00							08:00
Vol.	1	90	15	5	6	2	1							112
Midday Peak	14:00	14:00	14:00	12:00	14:00	11:00	13:00	14:00						14:00
Vol.	1	103	24	1	7	2	1	1						137
PM Peak	17:00	17:00	15:00	15:00	15:00			21:00						17:00
Vol.	2	206	20	1	4			1						221

Third Street (NB) between
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Email: datarequests@pdillc.com

91863 F (NB) class
Site Code: 10082.00

NB (Left Lane), NB (Right Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/0 9	0	39	2	0	1	0	0	0	0	0	0	0	0	42
01:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
02:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
03:00	1	10	1	0	2	1	0	0	0	0	0	0	0	15
04:00	1	14	2	0	0	1	0	0	0	0	0	0	0	18
05:00	0	40	8	0	3	1	0	0	0	0	0	0	0	52
06:00	0	80	15	0	2	3	0	0	0	0	0	0	0	100
07:00	0	146	17	0	7	1	0	0	0	0	0	0	0	171
08:00	2	226	17	1	12	1	0	0	0	0	0	0	0	259
09:00	1	183	23	0	12	0	0	0	0	0	0	0	0	219
10:00	0	175	24	2	11	0	1	1	0	0	0	0	0	214
11:00	2	197	23	0	9	0	0	1	0	0	0	0	0	232
12 PM	2	245	28	0	11	2	0	1	0	0	0	0	0	289
13:00	2	211	29	1	7	0	0	0	0	0	0	0	0	250
14:00	0	235	38	1	10	1	0	2	0	0	0	0	0	287
15:00	2	345	44	1	8	1	0	0	0	0	0	0	0	401
16:00	1	433	21	1	7	0	0	0	0	0	0	0	0	463
17:00	0	557	19	0	3	0	0	0	0	0	0	0	0	579
18:00	4	410	12	1	2	1	0	0	0	0	0	0	0	430
19:00	1	279	10	0	0	0	0	0	0	0	0	0	0	290
20:00	0	123	3	0	0	0	0	0	0	0	0	0	0	126
21:00	2	103	9	0	0	0	0	0	0	0	0	0	0	114
22:00	0	89	5	0	0	0	0	0	0	0	0	0	0	94
23:00	1	63	0	0	0	0	0	0	0	0	0	0	0	64
Total	22	4233	353	8	107	13	1	5	0	0	0	0	0	4742
Percent	0.5%	89.3%	7.4%	0.2%	2.3%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	09:00	08:00	08:00	06:00								08:00
Vol.	2	226	23	1	12	3								259
Midday Peak	11:00	12:00	14:00	13:00	12:00	12:00		14:00						12:00
Vol.	2	245	38	1	11	2		2						289
PM Peak	18:00	17:00	15:00	15:00	15:00	15:00								17:00
Vol.	4	557	44	1	8	1								579

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Third Street (NB) between
Binney Street and Linskey Way
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Client: VHB/M. Miller

91863 F (NB) class
Site Code: 10082.00

NB (Left Lane), NB (Right Lane)

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/09	0	36	2	0	0	0	0	0	0	0	0	0	0	38
01:00	0	12	1	0	1	0	0	0	0	0	0	0	0	14
02:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
04:00	0	17	4	0	2	0	0	0	0	0	0	0	0	23
05:00	0	41	13	0	3	0	0	0	0	0	0	0	0	57
06:00	0	69	11	0	1	0	0	1	0	0	0	0	0	82
07:00	1	126	9	1	5	1	1	1	0	0	0	0	0	145
08:00	1	213	10	6	8	2	0	0	0	0	0	0	0	240
09:00	0	172	23	1	8	2	0	0	0	0	0	0	0	206
10:00	1	168	20	4	10	1	1	1	0	0	0	0	0	206
11:00	3	203	20	2	8	2	0	0	0	0	0	0	0	238
12 M P	0	222	18	2	6	0	0	0	0	0	0	0	0	248
13:00	0	251	24	2	8	0	1	0	0	0	0	0	0	286
14:00	2	255	34	1	12	0	0	1	0	0	0	0	0	305
15:00	2	343	27	5	8	1	0	0	0	0	0	0	0	386
16:00	4	453	11	0	5	0	0	0	0	0	0	0	0	473
17:00	5	497	13	0	3	0	0	0	0	0	0	0	0	518
18:00	1	374	10	0	3	0	0	0	0	0	0	0	0	388
19:00	0	246	9	0	3	0	0	0	0	0	0	0	0	258
20:00	1	164	5	1	0	0	0	0	0	0	0	0	0	171
21:00	3	134	5	0	0	0	0	1	0	0	0	0	0	143
22:00	0	104	5	1	0	0	0	0	0	0	0	0	0	110
23:00	0	62	4	0	1	0	0	0	0	0	0	0	0	67
Total	24	4173	280	26	95	9	3	5	0	0	0	0	0	4615
Percent	0.5%	90.4%	6.1%	0.6%	2.1%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	09:00	08:00	08:00	08:00	07:00	06:00						08:00
Vol.	1	213	23	6	8	2	1	1						240
Midday Peak	11:00	14:00	14:00	11:00	14:00	11:00	13:00	14:00						14:00
Vol.	3	255	34	2	12	2	1	1						305
PM Peak	17:00	17:00	15:00	15:00	15:00	15:00		21:00						17:00
Vol.	5	497	27	5	8	1		1						518

Third Street (SB) between
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City, State: Cambridge, MA
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91863 F (SB) VOLUME
Site Code: 10082.00

Start Time	A.M.	SB	P.M.				Tue 19-May-09
12:00	3		52				
12:15	5		39				
12:30	4		45				
12:45	2	14	50	186			
01:00	5		52				
01:15	2		55				
01:30	2		42				
01:45	2	11	39	188			
02:00	1		25				
02:15	1		53				
02:30	2		46				
02:45	0	4	41	165			
03:00	0		42				
03:15	0		43				
03:30	3		34				
03:45	2	5	55	174			
04:00	1		27				
04:15	1		40				
04:30	2		44				
04:45	7	11	50	161			
05:00	13		48				
05:15	18		51				
05:30	29		43				
05:45	35	95	33	175			
06:00	55		43				
06:15	70		34				
06:30	80		49				
06:45	84	289	38	164			
07:00	90		33				
07:15	93		28				
07:30	97		22				
07:45	87	367	31	114			
08:00	107		32				
08:15	120		23				
08:30	121		19				
08:45	131	479	20	94			
09:00	137		24				
09:15	123		22				
09:30	98		23				
09:45	99	457	16	85			
10:00	91		14				
10:15	89		18				
10:30	59		15				
10:45	58	297	15	62			
11:00	60		15				
11:15	54		13				
11:30	30		6				
11:45	32	176	7	41			
Total	2205		1609				
Percent			100.0%		0.0%	0.0%	
Day Total		3814					
Peak	08:30		00:30				
Vol.	512		202				
P.H.F.	0.934		0.918				

Third Street (SB) between
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91863 F (SB) VOLUME
Site Code: 10082.00

Start Time	A.M.	SB	P.M.				Wed 20-May-09
12:00	10		45				
12:15	4		38				
12:30	3		43				
12:45	6	23	52	178			
01:00	2		49				
01:15	4		35				
01:30	2		37				
01:45	3	11	36	157			
02:00	3		45				
02:15	1		47				
02:30	2		41				
02:45	1	7	38	171			
03:00	1		39				
03:15	4		39				
03:30	1		33				
03:45	5	11	44	155			
04:00	1		29				
04:15	1		35				
04:30	4		40				
04:45	10	16	34	138			
05:00	6		65				
05:15	22		58				
05:30	25		54				
05:45	40	93	51	228			
06:00	57		42				
06:15	67		43				
06:30	83		48				
06:45	83	290	37	170			
07:00	71		32				
07:15	89		33				
07:30	97		38				
07:45	115	372	20	123			
08:00	115		27				
08:15	114		23				
08:30	117		24				
08:45	143	489	24	98			
09:00	117		29				
09:15	127		20				
09:30	125		22				
09:45	101	470	17	88			
10:00	88		16				
10:15	84		13				
10:30	66		10				
10:45	58	296	23	62			
11:00	63		10				
11:15	44		5				
11:30	50		7				
11:45	59	216	13	35			
Total	2294		1603				
Percent			100.0%		0.0%	0.0%	
Day Total		3897					
Peak	08:45		05:00				
Vol.	512		228				
P.H.F.	0.895		0.877				

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Third Street (SB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (SB) speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	1	4	7	1	0	**1**	0	0	0	0	0	0	0	14	24	21
01:00	0	3	7	1	0	0	0	0	0	0	0	0	0	11	23	21
02:00	0	0	3	1	0	0	0	0	0	0	0	0	0	4	22	22
03:00	0	0	3	2	0	0	0	0	0	0	0	0	0	5	25	23
04:00	0	0	10	1	0	0	0	0	0	0	0	0	0	11	24	22
05:00	13	23	36	21	2	0	0	0	0	0	0	0	0	95	26	20
06:00	16	80	138	53	2	0	0	0	0	0	0	0	0	289	26	21
07:00	13	109	164	**72**	**8**	1	0	0	0	0	0	0	0	367	26	21
08:00	63	**127**	**215**	72	2	0	0	0	0	0	0	0	0	**479**	25	20
09:00	**65**	118	200	69	5	0	0	0	0	0	0	0	0	457	25	20
10:00	28	77	140	50	2	0	0	0	0	0	0	0	0	297	25	20
11:00	18	**54**	79	23	**2**	0	0	0	0	0	0	0	0	176	24	20
12 PM	28	43	**96**	18	1	0	0	0	0	0	0	0	0	186	24	19
13:00	**31**	46	86	23	2	0	0	0	0	0	0	0	0	**188**	24	19
14:00	12	41	78	**32**	2	0	0	0	0	0	0	0	0	165	26	21
15:00	16	**35**	84	**36**	**3**	0	0	0	0	0	0	0	0	174	26	21
16:00	14	27	92	25	3	0	0	0	0	0	0	0	0	161	25	21
17:00	**18**	35	**101**	21	0	0	0	0	0	0	0	0	0	**175**	24	20
18:00	6	27	97	32	2	0	0	0	0	0	0	0	0	164	26	22
19:00	9	31	50	24	0	0	0	0	0	0	0	0	0	114	26	21
20:00	6	26	46	15	1	0	0	0	0	0	0	0	0	94	25	21
21:00	4	25	43	12	1	0	0	0	0	0	0	0	0	85	24	21
22:00	2	10	34	12	3	**1**	0	0	0	0	0	0	0	62	27	22
23:00	0	10	22	9	0	0	0	0	0	0	0	0	0	41	26	22
Total	363	951	1831	625	41	3	0	0	0	0	0	0	0	3814		
%	9.5%	24.9%	48.0%	16.4%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	07:00	07:00	00:00								08:00		
Vol.	65	127	215	72	8	1								479		
Midday Peak	13:00	11:00	12:00	14:00	11:00									13:00		
Vol.	31	54	96	32	2									188		
PM Peak	17:00	15:00	17:00	15:00	15:00	22:00								17:00		
Vol.	18	35	101	36	3	1								175		

% iles

15th Percentile :	16 MPH
50th Percentile :	21 MPH
85th Percentile :	25 MPH
95th Percentile :	28 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	2782
Percent in Pace :	72.9%
Number of Vehicles > 25 MPH :	544
Percent of Vehicles > 25 MPH :	14.3%
Mean Speed(Average) :	20 MPH

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
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Third Street (SB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (SB) speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	1	4	12	4	2	0	0	0	0	0	0	0	0	23	27	22
01:00	1	2	5	3	0	0	0	0	0	0	0	0	0	11	25	22
02:00	0	1	4	2	0	0	0	0	0	0	0	0	0	7	25	22
03:00	1	2	5	3	0	0	0	0	0	0	0	0	0	11	25	22
04:00	1	2	8	4	1	0	0	0	0	0	0	0	0	16	27	22
05:00	7	22	40	20	4	0	0	0	0	0	0	0	0	93	27	22
06:00	28	69	122	66	5	0	0	0	0	0	0	0	0	290	26	21
07:00	28	98	187	55	4	0	0	0	0	0	0	0	0	372	25	20
08:00	48	**130**	**228**	77	5	**1**	0	0	0	0	0	0	0	**489**	25	20
09:00	**62**	96	208	**95**	**9**	0	0	0	0	0	0	0	0	470	26	20
10:00	43	66	140	44	3	0	0	0	0	0	0	0	0	296	25	20
11:00	**32**	**73**	**80**	29	**2**	0	0	0	0	0	0	0	0	**216**	24	19
12 M	P 26	49	75	26	2	0	0	0	0	0	0	0	0	178	25	19
13:00	21	52	66	16	1	**1**	0	0	0	0	0	0	0	157	24	19
14:00	16	54	68	**31**	1	1	0	0	0	0	0	0	0	171	25	20
15:00	12	34	72	**35**	2	0	0	0	0	0	0	0	0	155	26	21
16:00	16	24	61	34	**3**	0	0	0	0	0	0	0	0	138	27	21
17:00	**20**	**54**	**120**	33	1	0	0	0	0	0	0	0	0	**228**	24	20
18:00	7	38	93	31	1	0	0	0	0	0	0	0	0	170	25	21
19:00	9	35	63	13	3	0	0	0	0	0	0	0	0	123	24	20
20:00	12	26	44	15	1	0	0	0	0	0	0	0	0	98	25	20
21:00	3	35	43	6	1	0	0	0	0	0	0	0	0	88	24	20
22:00	9	20	23	8	2	0	0	0	0	0	0	0	0	62	25	19
23:00	10	9	12	2	2	0	0	0	0	0	0	0	0	35	24	17
Total	413	995	1779	652	55	3	0	0	0	0	0	0	0	3897		
%	10.6%	25.5%	45.7%	16.7%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	09:00	09:00	08:00								08:00		
Vol.	62	130	228	95	9	1								489		
Midday Peak	11:00	11:00	11:00	14:00	11:00	13:00								11:00		
Vol.	32	73	80	31	2	1								216		
PM Peak	17:00	17:00	17:00	15:00	16:00									17:00		
Vol.	20	54	120	35	3									228		

% iles		
	15th Percentile :	15 MPH
	50th Percentile :	21 MPH
	85th Percentile :	25 MPH
	95th Percentile :	28 MPH

Stats		
	10 MPH Pace Speed :	15-24 MPH
	Number in Pace :	2774
	Percent in Pace :	71.2%
	Number of Vehicles > 25 MPH :	579
	Percent of Vehicles > 25 MPH :	14.9%
	Mean Speed(Average) :	20 MPH

PRECISION
D A T A
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Third Street (SB) between
Binney Street and Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 F (SB) class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/09	0	14	0	0	0	0	0	0	0	0	0	0	0	14
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	9	0	0	2	0	0	0	0	0	0	0	0	11
05:00	1	71	15	2	3	0	0	2	1	0	0	0	0	95
06:00	3	229	46	3	2	2	0	3	0	0	1	0	0	289
07:00	0	328	32	2	3	0	0	2	0	0	0	0	0	367
08:00	2	451	13	1	6	2	0	1	1	0	1	0	1	479
09:00	1	416	25	4	6	3	0	0	1	1	0	0	0	457
10:00	2	261	23	3	5	1	0	1	1	0	0	0	0	297
11:00	1	149	14	4	8	0	0	0	0	0	0	0	0	176
12 M P	1	166	15	0	3	0	1	0	0	0	0	0	0	186
13:00	1	163	19	0	4	0	1	0	0	0	0	0	0	188
14:00	0	142	18	1	2	1	0	0	1	0	0	0	0	165
15:00	1	159	11	2	1	0	0	0	0	0	0	0	0	174
16:00	1	146	10	1	3	0	0	0	0	0	0	0	0	161
17:00	0	166	8	0	1	0	0	0	0	0	0	0	0	175
18:00	0	159	5	0	0	0	0	0	0	0	0	0	0	164
19:00	1	108	2	1	2	0	0	0	0	0	0	0	0	114
20:00	0	92	2	0	0	0	0	0	0	0	0	0	0	94
21:00	0	83	1	0	1	0	0	0	0	0	0	0	0	85
22:00	0	60	2	0	0	0	0	0	0	0	0	0	0	62
23:00	2	38	1	0	0	0	0	0	0	0	0	0	0	41
Total	17	3429	263	24	52	9	2	9	5	1	2	0	1	3814
Percent	0.4%	89.9%	6.9%	0.6%	1.4%	0.2%	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	09:00	08:00	09:00		06:00	05:00	09:00	06:00		08:00	08:00
Vol.	3	451	46	4	6	3	3		1	1	1		1	479
Midday Peak	11:00	12:00	13:00	11:00	11:00	14:00	12:00		14:00					13:00
Vol.	1	166	19	4	8	1	1		1					188
PM Peak	23:00	17:00	15:00	15:00	16:00									17:00
Vol.	2	166	11	2	3									175

PRECISION
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91863 F (SB) class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/09	0	23	0	0	0	0	0	0	0	0	0	0	0	23
01:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	12	1	0	2	0	0	1	0	0	0	0	0	16
05:00	1	72	16	0	4	0	0	0	0	0	0	0	0	93
06:00	5	233	43	3	4	0	0	2	0	0	0	0	0	290
07:00	4	334	20	2	8	1	0	3	0	0	0	0	0	372
08:00	2	458	22	0	7	0	0	0	0	0	0	0	0	489
09:00	1	423	25	3	11	2	0	3	0	1	0	1	0	470
10:00	5	262	22	2	5	0	0	0	0	0	0	0	0	296
11:00	2	178	23	2	7	1	0	2	1	0	0	0	0	216
12 M	P 0	148	16	4	8	1	0	0	0	0	1	0	0	178
13:00	0	129	21	2	5	0	0	0	0	0	0	0	0	157
14:00	0	148	16	1	5	0	0	1	0	0	0	0	0	171
15:00	1	135	13	1	4	0	0	1	0	0	0	0	0	155
16:00	0	126	10	0	1	0	0	1	0	0	0	0	0	138
17:00	1	216	7	0	1	1	0	2	0	0	0	0	0	228
18:00	0	163	5	1	1	0	0	0	0	0	0	0	0	170
19:00	0	115	7	0	0	0	0	1	0	0	0	0	0	123
20:00	0	93	4	0	1	0	0	0	0	0	0	0	0	98
21:00	0	84	3	0	0	0	0	1	0	0	0	0	0	88
22:00	0	61	1	0	0	0	0	0	0	0	0	0	0	62
23:00	0	35	0	0	0	0	0	0	0	0	0	0	0	35
Total	22	3476	276	21	74	6	0	18	1	1	1	1	0	3897
Percent	0.6%	89.2%	7.1%	0.5%	1.9%	0.2%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	08:00	06:00	06:00	09:00	09:00		07:00		09:00		09:00		08:00
Vol.	5	458	43	3	11	2		3	1		1			489
Midday Peak	11:00	11:00	11:00	12:00	12:00	11:00		11:00	11:00		12:00			11:00
Vol.	2	178	23	4	8	1	2		1	1				216
PM Peak	15:00	17:00	15:00	15:00	15:00	17:00		17:00						17:00
Vol.	1	216	13	1	4	1		2						228

Third Street
south of Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

PRECISION DATA INDUSTRIES, LLC
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91863 J volume
Site Code: 10082.00

Start	SB				NB				Combined				19-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	4		40		8		69		12		109		
12:15	4		41		11		68		15		109		
12:30	3		38		7		68		10		106		
12:45	3	14	44	163	4	30	59	264	7	44	103	427	
01:00	4		46		6		61		10		107		
01:15	1		51		5		59		6		110		
01:30	2		39		2		61		4		100		
01:45	2	9	33	169	3	16	56	237	5	25	89	406	
02:00	4		31		3		75		7		106		
02:15	1		53		1		67		2		120		
02:30	2		41		2		73		4		114		
02:45	0	7	40	165	1	7	70	285	1	14	110	450	
03:00	0		49		4		98		4		147		
03:15	0		43		1		99		1		142		
03:30	3		49		2		107		5		156		
03:45	3	6	54	195	1	8	86	390	4	14	140	585	
04:00	0		41		0		126		0		167		
04:15	1		53		8		92		9		145		
04:30	2		41		6		118		8		159		
04:45	9	12	56	191	7	21	118	454	16	33	174	645	
05:00	15		64		10		134		25		198		
05:15	17		50		6		149		23		199		
05:30	27		41		21		129		48		170		
05:45	36	95	48	203	31	68	128	540	67	163	176	743	
06:00	44		49		30		136		74		185		
06:15	64		38		37		102		101		140		
06:30	73		55		33		86		106		141		
06:45	81	262	39	181	28	128	82	406	109	390	121	587	
07:00	80		44		41		79		121		123		
07:15	96		23		43		91		139		114		
07:30	84		25		43		54		127		79		
07:45	75	335	31	123	52	179	58	282	127	514	89	405	
08:00	114		34		60		33		174		67		
08:15	103		25		81		30		184		55		
08:30	106		20		73		37		179		57		
08:45	138	461	26	105	78	292	38	138	216	753	64	243	
09:00	112		23		79		32		191		55		
09:15	113		23		75		26		188		49		
09:30	80		24		80		38		160		62		
09:45	90	395	12	82	69	303	27	123	159	698	39	205	
10:00	87		17		56		24		143		41		
10:15	85		18		56		36		141		54		
10:30	53		14		58		23		111		37		
10:45	52	277	15	64	46	216	20	103	98	493	35	167	
11:00	56		14		48		23		104		37		
11:15	48		14		63		15		111		29		
11:30	27		5		45		12		72		17		
11:45	34	165	9	42	82	238	11	61	116	403	20	103	
Total	2038		1683		1506		3283		3544		4966		
Percent	57.5%		33.9%		42.5%		66.1%						
Day Total	3721				4789				8510				
Peak	08:30		04:15		08:45		05:15		08:30		05:00		
Vol.	469		214		312		542		774		743		
P.H.F.	0.850		0.836		0.975		0.909		0.896		0.933		

Third Street
south of Linskey Way
City, State: Cambridge, MA
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91863 J volume
Site Code: 10082.00

Start	SB				NB				Combined				20-May-09
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	8		35		19		62		27		97		
12:15	6		39		11		68		17		107		
12:30	5		46		5		61		10		107		
12:45	7	26	47	167	6	41	55	246	13	67	102	413	
01:00	2		56		4		65		6		121		
01:15	4		28		4		69		8		97		
01:30	2		37		1		65		3		102		
01:45	3	11	37	158	3	12	64	263	6	23	101	421	
02:00	3		41		1		83		4		124		
02:15	1		48		4		82		5		130		
02:30	2		43		1		73		3		116		
02:45	1	7	34	166	0	6	79	317	1	13	113	483	
03:00	1		51		1		98		2		149		
03:15	4		41		1		92		5		133		
03:30	1		43		2		95		3		138		
03:45	5	11	45	180	3	7	97	382	8	18	142	562	
04:00	1		54		2		111		3		165		
04:15	1		32		6		95		7		127		
04:30	5		49		14		126		19		175		
04:45	9	16	44	179	6	28	99	431	15	44	143	610	
05:00	9		75		12		136		21		211		
05:15	22		66		17		141		39		207		
05:30	26		61		14		119		40		180		
05:45	32	89	63	265	26	69	116	512	58	158	179	777	
06:00	50		46		26		114		76		160		
06:15	63		41		26		102		89		143		
06:30	68		47		32		75		100		122		
06:45	78	259	41	175	26	110	81	372	104	369	122	547	
07:00	72		41		25		90		97		131		
07:15	78		34		40		58		118		92		
07:30	77		39		50		47		127		86		
07:45	103	330	26	140	51	166	45	240	154	496	71	380	
08:00	106		24		47		50		153		74		
08:15	96		24		63		40		159		64		
08:30	120		24		63		39		183		63		
08:45	119	441	25	97	71	244	40	169	190	685	65	266	
09:00	114		28		65		41		179		69		
09:15	106		24		62		41		168		65		
09:30	99		24		66		24		165		48		
09:45	89	408	14	90	50	243	29	135	139	651	43	225	
10:00	76		18		56		34		132		52		
10:15	77		13		50		30		127		43		
10:30	60		9		50		20		110		29		
10:45	51	264	17	57	41	197	21	105	92	461	38	162	
11:00	55		11		49		31		104		42		
11:15	49		6		53		12		102		18		
11:30	45		6		59		11		104		17		
11:45	52	201	12	35	79	240	11	65	131	441	23	100	
Total	2063		1709		1363		3237		3426		4946		
Percent	60.2%		34.6%		39.8%		65.4%						
Day Total	3772				4600				8372				
Peak	08:30		05:00		08:45		05:00		08:30		05:00		
Vol.	459		265		264		512		720		777		
P.H.F.	0.956		0.883		0.930		0.908		0.947		0.921		

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Third Street
south of Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 J speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	1	2	2	6	2	0	**1**	0	0	0	0	0	0	14	30	26
01:00	0	0	2	7	0	0	0	0	0	0	0	0	0	9	28	26
02:00	1	1	2	3	0	0	0	0	0	0	0	0	0	7	26	23
03:00	0	0	1	2	2	1	0	0	0	0	0	0	0	6	31	30
04:00	1	0	1	7	3	0	0	0	0	0	0	0	0	12	30	25
05:00	10	11	20	35	16	3	0	0	0	0	0	0	0	95	31	24
06:00	11	13	71	127	**38**	2	0	0	0	0	0	0	0	262	30	25
07:00	17	19	108	150	36	**5**	0	0	0	0	0	0	0	335	29	25
08:00	**45**	**43**	**187**	**154**	32	0	0	0	0	0	0	0	0	**461**	28	22
09:00	33	43	146	143	27	2	1	0	0	0	0	0	0	395	28	23
10:00	37	34	97	93	14	2	0	0	0	0	0	0	0	277	28	22
11:00	15	18	**69**	47	14	1	**1**	0	0	0	0	0	0	165	28	23
12 PM	22	**29**	57	43	11	1	0	0	0	0	0	0	0	163	28	21
13:00	**23**	26	60	46	12	**2**	0	0	0	0	0	0	0	**169**	28	22
14:00	10	23	63	**50**	**18**	1	0	0	0	0	0	0	0	165	29	23
15:00	22	**24**	73	58	**18**	0	0	0	0	0	0	0	0	195	28	22
16:00	22	21	57	**73**	18	0	0	0	0	0	0	0	0	191	29	23
17:00	**30**	15	**75**	66	16	1	0	0	0	0	0	0	0	**203**	28	22
18:00	26	15	63	62	13	2	0	0	0	0	0	0	0	181	28	22
19:00	16	16	30	49	11	1	0	0	0	0	0	0	0	123	29	23
20:00	12	9	43	31	10	0	0	0	0	0	0	0	0	105	28	22
21:00	8	9	34	24	6	1	0	0	0	0	0	0	0	82	28	23
22:00	3	5	21	22	8	**4**	1	0	0	0	0	0	0	64	31	25
23:00	4	6	8	11	9	1	**3**	0	0	0	0	0	0	42	33	26
Total	369	382	1290	1309	334	30	7	0	0	0	0	0	0	3721		
%	9.9%	10.3%	34.7%	35.2%	9.0%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	08:00	06:00	07:00	00:00							08:00		
Vol.	45	43	187	154	38	5	1							461		
Midday Peak	13:00	12:00	11:00	14:00	14:00	13:00	11:00							13:00		
Vol.	23	29	69	50	18	2	1							169		
PM Peak	17:00	15:00	17:00	16:00	15:00	22:00	23:00							17:00		
Vol.	30	24	75	73	18	4	3							203		

% iles

15th Percentile :	17 MPH
50th Percentile :	24 MPH
85th Percentile :	29 MPH
95th Percentile :	32 MPH

Stats

10 MPH Pace Speed :	20-29 MPH
Number in Pace :	2599
Percent in Pace :	69.8%
Number of Vehicles > 25 MPH :	1418
Percent of Vehicles > 25 MPH :	38.1%
Mean Speed(Average) :	23 MPH

PRECISION DATA INDUSTRIES, LLC
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Third Street
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City, State: Cambridge, MA
Client: VHB/M. Miller

91863 J speed
Site Code: 10082.00

SB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	3	4	7	6	5	1	0	0	0	0	0	0	0	26	31	24
01:00	1	1	2	6	1	0	0	0	0	0	0	0	0	11	28	25
02:00	0	0	3	3	1	0	0	0	0	0	0	0	0	7	27	25
03:00	0	1	2	5	2	1	0	0	0	0	0	0	0	11	30	27
04:00	2	0	3	4	5	2	0	0	0	0	0	0	0	16	34	26
05:00	4	4	29	30	19	2	**1**	0	0	0	0	0	0	89	32	26
06:00	2	9	85	115	41	**7**	0	0	0	0	0	0	0	259	30	26
07:00	20	26	124	120	39	1	0	0	0	0	0	0	0	330	29	24
08:00	16	**35**	**184**	158	**45**	3	0	0	0	0	0	0	0	**441**	29	24
09:00	**25**	27	146	**165**	41	3	1	0	0	0	0	0	0	408	29	24
10:00	30	31	118	66	17	1	1	0	0	0	0	0	0	264	28	22
11:00	**42**	**33**	**59**	51	15	1	0	0	0	0	0	0	0	**201**	28	20
12 PM	21	27	54	46	**18**	1	0	0	0	0	0	0	0	167	29	22
13:00	19	27	53	48	9	1	**1**	0	0	0	0	0	0	158	28	22
14:00	21	23	44	**61**	12	**5**	0	0	0	0	0	0	0	166	29	23
15:00	15	21	57	60	**24**	2	**1**	0	0	0	0	0	0	180	29	24
16:00	**29**	19	49	56	22	3	1	0	0	0	0	0	0	179	29	22
17:00	25	**32**	**101**	**84**	19	**4**	0	0	0	0	0	0	0	**265**	28	23
18:00	17	20	61	60	16	1	0	0	0	0	0	0	0	175	29	23
19:00	14	27	50	41	8	0	0	0	0	0	0	0	0	140	28	22
20:00	7	16	39	24	10	1	0	0	0	0	0	0	0	97	28	23
21:00	8	5	39	33	4	1	0	0	0	0	0	0	0	90	28	23
22:00	5	8	26	12	4	1	1	0	0	0	0	0	0	57	28	23
23:00	5	5	15	6	3	1	0	0	0	0	0	0	0	35	28	22
Total	331	401	1350	1260	380	43	7	0	0	0	0	0	0	3772		
%	8.8%	10.6%	35.8%	33.4%	10.1%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	09:00	08:00	06:00	05:00							08:00		
Vol.	25	35	184	165	45	7	1							441		
Midday Peak	11:00	11:00	11:00	14:00	12:00	14:00	13:00							11:00		
Vol.	42	33	59	61	18	5	1							201		
PM Peak	16:00	17:00	17:00	17:00	15:00	17:00	15:00							17:00		
Vol.	29	32	101	84	24	4	1							265		

% iles

15th Percentile : 17 MPH
50th Percentile : 24 MPH
85th Percentile : 29 MPH
95th Percentile : 33 MPH

Stats

10 MPH Pace Speed : 20-29 MPH
Number in Pace : 2610
Percent in Pace : 69.2%
Number of Vehicles > 25 MPH : 1438
Percent of Vehicles > 25 MPH : 38.1%
Mean Speed(Average) : 23 MPH

PRECISION
D A T A
INDUSTRIES, LLC
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Third Street
south of Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 J speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/19/0 9	1	2	9	13	5	0	0	0	0	0	0	0	0	30	29	25
01:00	2	0	4	7	2	1	0	0	0	0	0	0	0	16	30	23
02:00	1	0	3	1	2	0	0	0	0	0	0	0	0	7	30	22
03:00	1	1	3	2	1	0	0	0	0	0	0	0	0	8	26	22
04:00	2	1	8	4	3	**3**	0	0	0	0	0	0	0	21	34	24
05:00	1	9	24	26	8	0	0	0	0	0	0	0	0	68	29	24
06:00	15	20	41	40	**10**	2	0	0	0	0	0	0	0	128	29	22
07:00	16	28	68	56	8	3	0	0	0	0	0	0	0	179	28	22
08:00	31	60	**124**	**69**	6	2	0	0	0	0	0	0	0	292	27	21
09:00	**54**	**85**	111	50	3	0	0	0	0	0	0	0	0	**303**	25	19
10:00	28	59	87	32	10	0	0	0	0	0	0	0	0	216	26	20
11:00	15	73	106	38	6	0	0	0	0	0	0	0	0	238	25	21
12 PM	**32**	**84**	102	40	6	0	0	0	0	0	0	0	0	264	25	20
13:00	21	72	103	40	1	0	0	0	0	0	0	0	0	237	25	20
14:00	23	77	**116**	**60**	**8**	**1**	0	0	0	0	0	0	0	**285**	27	21
15:00	36	75	173	88	**16**	**2**	0	0	0	0	0	0	0	390	27	21
16:00	46	126	**202**	69	10	1	0	0	0	0	0	0	0	454	25	20
17:00	**143**	**140**	195	56	6	0	0	0	0	0	0	0	0	**540**	24	17
18:00	63	62	182	**93**	5	1	0	0	0	0	0	0	0	406	26	20
19:00	27	51	115	82	7	0	0	0	0	0	0	0	0	282	27	21
20:00	16	15	62	32	13	0	0	0	0	0	0	0	0	138	28	22
21:00	10	27	56	28	2	0	0	0	0	0	0	0	0	123	26	21
22:00	2	12	44	40	4	1	0	0	0	0	0	0	0	103	28	24
23:00	7	6	21	24	2	1	0	0	0	0	0	0	0	61	28	22
Total	593	1085	1959	990	144	18	0	0	0	0	0	0	0	4789		
%	12.4%	22.7%	40.9%	20.7%	3.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	08:00	08:00	06:00	04:00								09:00		
Vol.	54	85	124	69	10	3								303		
Midday Peak	12:00	12:00	14:00	14:00	14:00	14:00								14:00		
Vol.	32	84	116	60	8	1								285		
PM Peak	17:00	17:00	16:00	18:00	15:00	15:00								17:00		
Vol.	143	140	202	93	16	2								540		

% iles

15th Percentile :	15 MPH
50th Percentile :	21 MPH
85th Percentile :	27 MPH
95th Percentile :	29 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	3044
Percent in Pace :	63.6%
Number of Vehicles > 25 MPH :	954
Percent of Vehicles > 25 MPH :	19.9%
Mean Speed(Average) :	20 MPH

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91863 J speed
Site Code: 10082.00

NB

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
05/20/0 9	5	1	14	13	7	1	0	0	0	0	0	0	0	41	30	23
01:00	0	2	2	7	0	1	0	0	0	0	0	0	0	12	28	25
02:00	0	1	0	2	3	0	0	0	0	0	0	0	0	6	31	28
03:00	0	3	1	3	0	0	0	0	0	0	0	0	0	7	26	21
04:00	0	1	12	9	5	1	0	0	0	0	0	0	0	28	31	26
05:00	3	6	26	23	11	0	0	0	0	0	0	0	0	69	30	24
06:00	11	14	35	40	8	1	**1**	0	0	0	0	0	0	110	29	23
07:00	15	28	77	38	7	1	0	0	0	0	0	0	0	166	27	21
08:00	25	33	**118**	**57**	8	**3**	0	0	0	0	0	0	0	**244**	27	22
09:00	**29**	**37**	103	56	**16**	2	0	0	0	0	0	0	0	243	28	21
10:00	33	53	73	32	6	0	0	0	0	0	0	0	0	197	26	19
11:00	34	70	98	34	**4**	0	0	0	0	0	0	0	0	240	25	19
12 PM	**36**	67	108	31	4	0	0	0	0	0	0	0	0	246	24	19
13:00	28	73	116	43	2	**1**	0	0	0	0	0	0	0	263	25	20
14:00	27	**90**	**138**	**58**	4	0	0	0	0	0	0	0	0	**317**	26	20
15:00	38	106	160	72	5	1	0	0	0	0	0	0	0	382	26	20
16:00	59	113	175	77	7	0	0	0	0	0	0	0	0	431	26	20
17:00	**66**	**156**	**205**	**80**	4	1	0	0	0	0	0	0	0	**512**	25	20
18:00	41	94	168	58	**9**	**2**	0	0	0	0	0	0	0	372	26	20
19:00	20	41	114	57	6	2	0	0	0	0	0	0	0	240	27	22
20:00	11	41	79	30	8	0	0	0	0	0	0	0	0	169	27	21
21:00	14	26	60	27	7	1	0	0	0	0	0	0	0	135	27	21
22:00	13	20	39	29	4	0	0	0	0	0	0	0	0	105	27	21
23:00	18	22	17	7	1	0	0	0	0	0	0	0	0	65	24	17
Total	526	1098	1938	883	136	18	1	0	0	0	0	0	0	4600		
%	11.4%	23.9%	42.1%	19.2%	3.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	09:00	08:00	08:00	09:00	08:00	06:00							08:00		
Vol.	29	37	118	57	16	3	1							244		
Midday Peak	12:00	14:00	14:00	14:00	11:00	13:00								14:00		
Vol.	36	90	138	58	4	1								317		
PM Peak	17:00	17:00	17:00	17:00	18:00	18:00								17:00		
Vol.	66	156	205	80	9	2								512		

% iles

15th Percentile :	15 MPH
50th Percentile :	21 MPH
85th Percentile :	26 MPH
95th Percentile :	29 MPH

Stats

10 MPH Pace Speed :	15-24 MPH
Number in Pace :	3036
Percent in Pace :	66.0%
Number of Vehicles > 25 MPH :	861
Percent of Vehicles > 25 MPH :	18.7%
Mean Speed(Average) :	20 MPH

PRECISION
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91863 J class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/19/09	0	13	1	0	0	0	0	0	0	0	0	0	0	14
01:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
04:00	0	9	1	0	2	0	0	0	0	0	0	0	0	12
05:00	2	64	23	1	2	1	0	1	1	0	0	0	0	95
06:00	6	185	55	3	10	1	0	1	1	0	0	0	0	262
07:00	5	295	27	0	8	0	0	0	0	0	0	0	0	335
08:00	12	410	29	2	4	2	0	1	1	0	0	0	0	461
09:00	8	333	32	6	11	4	0	1	0	0	0	0	0	395
10:00	3	233	26	6	6	1	1	1	0	0	0	0	0	277
11:00	2	130	23	3	5	2	0	0	0	0	0	0	0	165
12 M	P 1	138	20	1	1	0	1	0	1	0	0	0	0	163
13:00	4	139	21	1	3	0	1	0	0	0	0	0	0	169
14:00	1	127	29	1	6	1	0	0	0	0	0	0	0	165
15:00	3	162	23	2	3	2	0	0	0	0	0	0	0	195
16:00	1	164	20	2	4	0	0	0	0	0	0	0	0	191
17:00	1	184	14	0	4	0	0	0	0	0	0	0	0	203
18:00	0	168	11	1	0	1	0	0	0	0	0	0	0	181
19:00	5	109	7	0	2	0	0	0	0	0	0	0	0	123
20:00	2	97	6	0	0	0	0	0	0	0	0	0	0	105
21:00	1	70	9	0	2	0	0	0	0	0	0	0	0	82
22:00	0	58	6	0	0	0	0	0	0	0	0	0	0	64
23:00	2	36	4	0	0	0	0	0	0	0	0	0	0	42
Total	59	3144	389	29	73	15	3	5	4	0	0	0	0	3721
Percent	1.6%	84.5%	10.5%	0.8%	2.0%	0.4%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	09:00	09:00	09:00		05:00	05:00					08:00
Vol.	12	410	55	6	11	4		1	1					461
Midday Peak	13:00	13:00	14:00	11:00	14:00	11:00	12:00		12:00					13:00
Vol.	4	139	29	3	6	2	1		1					169
PM Peak	19:00	17:00	15:00	15:00	16:00	15:00								17:00
Vol.	5	184	23	2	4	2								203

PRECISION
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INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Third Street
south of Linskey Way
City, State: Cambridge, MA
Client: VHB/M. Miller

91863 J class
Site Code: 10082.00

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/20/0 9	1	22	3	0	0	0	0	0	0	0	0	0	0	26
01:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
02:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
03:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
04:00	0	13	0	0	2	1	0	0	0	0	0	0	0	16
05:00	3	61	18	0	6	1	0	0	0	0	0	0	0	89
06:00	6	183	48	3	13	3	0	3	0	0	0	0	0	259
07:00	3	283	30	2	8	2	0	1	1	0	0	0	0	330
08:00	8	385	34	3	8	0	0	3	0	0	0	0	0	441
09:00	1	354	36	3	11	2	0	1	0	0	0	0	0	408
10:00	6	217	31	2	6	2	0	0	0	0	0	0	0	264
11:00	5	159	26	3	5	1	0	1	1	0	0	0	0	201
12 M	P 7	128	18	4	8	1	0	1	0	0	0	0	0	167
13:00	4	129	20	1	3	0	0	1	0	0	0	0	0	158
14:00	2	132	22	2	7	0	0	1	0	0	0	0	0	166
15:00	3	140	26	1	9	1	0	0	0	0	0	0	0	180
16:00	4	148	21	0	4	1	0	1	0	0	0	0	0	179
17:00	2	236	22	0	2	2	0	1	0	0	0	0	0	265
18:00	2	161	8	1	3	0	0	0	0	0	0	0	0	175
19:00	0	122	13	0	3	1	0	1	0	0	0	0	0	140
20:00	2	85	8	0	2	0	0	0	0	0	0	0	0	97
21:00	1	78	10	0	1	0	0	0	0	0	0	0	0	90
22:00	2	50	5	0	0	0	0	0	0	0	0	0	0	57
23:00	0	34	1	0	0	0	0	0	0	0	0	0	0	35
Total	62	3144	405	25	101	18	0	15	2	0	0	0	0	3772
Percent	1.6%	83.4%	10.7%	0.7%	2.7%	0.5%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	06:00	06:00	06:00	06:00		06:00	07:00					08:00
Vol.	8	385	48	3	13	3		3	1					441
Midday Peak	12:00	11:00	11:00	12:00	12:00	11:00		11:00	11:00					11:00
Vol.	7	159	26	4	8	1		1	1					201
PM Peak	16:00	17:00	15:00	15:00	15:00	17:00		16:00						17:00
Vol.	4	236	26	1	9	2		1						265

PRECISION
D A T A
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05/19/0														
9	0	26	3	0	0	1	0	0	0	0	0	0	0	30
01:00	0	16	0	0	0	0	0	0	0	0	0	0	0	16
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	0	6	0	1	1	0	0	0	0	0	0	0	0	8
04:00	0	15	5	0	1	0	0	0	0	0	0	0	0	21
05:00	1	54	11	0	2	0	0	0	0	0	0	0	0	68
06:00	0	103	18	1	4	2	0	0	0	0	0	0	0	128
07:00	0	154	13	2	6	3	0	1	0	0	0	0	0	179
08:00	2	244	33	6	5	1	0	1	0	0	0	0	0	292
09:00	4	238	34	8	16	2	0	1	0	0	0	0	0	303
10:00	0	162	38	5	7	3	0	1	0	0	0	0	0	216
11:00	1	191	36	1	9	0	0	0	0	0	0	0	0	238
12 PM	2	210	30	3	13	5	0	1	0	0	0	0	0	264
13:00	1	205	16	2	10	2	0	1	0	0	0	0	0	237
14:00	2	232	38	2	10	1	0	0	0	0	0	0	0	285
15:00	8	321	45	8	7	0	0	1	0	0	0	0	0	390
16:00	2	418	27	4	2	1	0	0	0	0	0	0	0	454
17:00	3	513	18	2	3	0	0	1	0	0	0	0	0	540
18:00	6	385	9	4	2	0	0	0	0	0	0	0	0	406
19:00	2	264	13	0	3	0	0	0	0	0	0	0	0	282
20:00	0	135	2	0	1	0	0	0	0	0	0	0	0	138
21:00	1	114	8	0	0	0	0	0	0	0	0	0	0	123
22:00	0	98	4	0	1	0	0	0	0	0	0	0	0	103
23:00	1	57	2	0	0	0	0	1	0	0	0	0	0	61
Total	36	4167	404	49	103	21	0	9	0	0	0	0	0	4789
Percent	0.8%	87.0%	8.4%	1.0%	2.2%	0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	09:00	09:00	09:00	07:00		07:00						09:00
Vol.	4	244	34	8	16	3		1						303
Midday Peak	12:00	14:00	14:00	12:00	12:00	12:00		12:00						14:00
Vol.	2	232	38	3	13	5		1						285
PM Peak	15:00	17:00	15:00	15:00	15:00	16:00		15:00						17:00
Vol.	8	513	45	8	7	1		1						540

Third Street
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05/20/09	1	40	0	0	0	0	0	0	0	0	0	0	0	41
01:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
04:00	0	21	4	0	2	1	0	0	0	0	0	0	0	28
05:00	1	47	17	0	2	1	0	0	1	0	0	0	0	69
06:00	1	84	19	1	2	2	0	1	0	0	0	0	0	110
07:00	0	123	23	6	11	1	1	1	0	0	0	0	0	166
08:00	0	221	15	1	5	2	0	0	0	0	0	0	0	244
09:00	2	206	19	5	10	1	0	0	0	0	0	0	0	243
10:00	0	157	25	7	6	0	0	2	0	0	0	0	0	197
11:00	4	188	30	6	10	1	0	1	0	0	0	0	0	240
12 M	P 1	207	22	5	9	1	0	1	0	0	0	0	0	246
13:00	0	218	30	5	8	1	0	1	0	0	0	0	0	263
14:00	4	259	36	6	11	1	0	0	0	0	0	0	0	317
15:00	7	318	41	7	7	0	0	2	0	0	0	0	0	382
16:00	5	395	20	6	5	0	0	0	0	0	0	0	0	431
17:00	5	483	17	1	6	0	0	0	0	0	0	0	0	512
18:00	3	352	11	3	3	0	0	0	0	0	0	0	0	372
19:00	2	231	5	1	1	0	0	0	0	0	0	0	0	240
20:00	0	159	10	0	0	0	0	0	0	0	0	0	0	169
21:00	3	127	5	0	0	0	0	0	0	0	0	0	0	135
22:00	2	97	4	1	1	0	0	0	0	0	0	0	0	105
23:00	0	63	2	0	0	0	0	0	0	0	0	0	0	65
Total	41	4017	358	61	100	12	1	9	1	0	0	0	0	4600
Percent	0.9%	87.3%	7.8%	1.3%	2.2%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	07:00	07:00	07:00	06:00	07:00	06:00	05:00					08:00
Vol.	2	221	23	6	11	2	1	1	1					244
Midday Peak	11:00	14:00	14:00	11:00	14:00	11:00		11:00						14:00
Vol.	4	259	36	6	11	1		1						317
PM Peak	15:00	17:00	15:00	15:00	15:00			15:00						17:00
Vol.	7	483	41	7	7			2						512

October 2013 Binney Street Project ATRs

Binney Street
between 2nd and 3rd Streets
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

133563 A Volume
Site Code: TBA
Date Start: 08-Oct-13

Start	EB				WB				Combined				08-Oct-13
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Tue
12:00	10		82		11		93		21		175		
12:15	7		49		14		101		21		150		
12:30	5		69		7		95		12		164		
12:45	5	27	64	264	10	42	103	392	15	69	167	656	
01:00	8		82		6		77		14		159		
01:15	4		71		7		88		11		159		
01:30	3		75		10		82		13		157		
01:45	6	21	74	302	4	27	80	327	10	48	154	629	
02:00	8		97		5		82		13		179		
02:15	3		99		4		94		7		193		
02:30	2		98		4		83		6		181		
02:45	4	17	79	373	1	14	84	343	5	31	163	716	
03:00	2		122		5		76		7		198		
03:15	0		110		6		78		6		188		
03:30	1		124		4		89		5		213		
03:45	3	6	101	457	6	21	84	327	9	27	185	784	
04:00	4		124		11		85		15		209		
04:15	2		134		10		94		12		228		
04:30	6		136		16		83		22		219		
04:45	4	16	157	551	23	60	104	366	27	76	261	917	
05:00	7		122		31		98		38		220		
05:15	15		171		68		131		83		302		
05:30	12		178		101		108		113		286		
05:45	15	49	154	625	112	312	108	445	127	361	262	1070	
06:00	21		117		116		116		137		233		
06:15	36		118		117		106		153		224		
06:30	42		84		119		95		161		179		
06:45	48	147	86	405	133	485	87	404	181	632	173	809	
07:00	43		69		149		71		192		140		
07:15	43		71		148		56		191		127		
07:30	50		68		157		61		207		129		
07:45	52	188	54	262	163	617	75	263	215	805	129	525	
08:00	58		44		169		41		227		85		
08:15	53		44		173		56		226		100		
08:30	54		37		176		49		230		86		
08:45	59	224	38	163	177	695	53	199	236	919	91	362	
09:00	49		31		188		43		237		74		
09:15	51		34		156		64		207		98		
09:30	56		26		164		47		220		73		
09:45	63	219	22	113	138	646	43	197	201	865	65	310	
10:00	46		20		122		44		168		64		
10:15	61		21		129		28		190		49		
10:30	48		12		100		30		148		42		
10:45	62	217	17	70	96	447	17	119	158	664	34	189	
11:00	50		20		111		20		161		40		
11:15	52		17		96		17		148		34		
11:30	54		9		107		9		161		18		
11:45	50	206	7	53	99	413	16	62	149	619	23	115	
Total	1337		3638		3779		3444		5116		7082		
Percent	26.1%		51.4%		73.9%		48.6%						
Day Total		4975				7223				12198			
Peak	09:30	-	04:45	-	08:15	-	05:15	-	08:15	-	05:15	-	-	-
Vol.	226	-	628	-	714	-	463	-	929	-	1083	-	-	-
P.H.F.	0.897		0.882		0.949		0.884		0.980		0.897			

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133563 A Volume
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Start	EB				WB				Combined				09-Oct-13
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Wed
12:00	9		74		12		109		21		183		
12:15	3		79		20		111		23		190		
12:30	6		65		5		89		11		154		
12:45	7	25	87	305	10	47	109	418	17	72	196	723	
01:00	4		59		11		84		15		143		
01:15	3		79		8		103		11		182		
01:30	3		93		5		93		8		186		
01:45	5	15	78	309	8	32	96	376	13	47	174	685	
02:00	4		100		5		86		9		186		
02:15	5		107		10		87		15		194		
02:30	5		90		3		83		8		173		
02:45	5	19	98	395	4	22	105	361	9	41	203	756	
03:00	3		121		6		67		9		188		
03:15	1		120		6		94		7		214		
03:30	4		110		12		78		16		188		
03:45	1	9	88	439	11	35	90	329	12	44	178	768	
04:00	0		104		11		88		11		192		
04:15	1		131		11		96		12		227		
04:30	6		120		12		105		18		225		
04:45	5	12	107	462	22	56	90	379	27	68	197	841	
05:00	9		127		31		101		40		228		
05:15	14		132		79		95		93		227		
05:30	10		112		95		114		105		226		
05:45	14	47	120	491	112	317	117	427	126	364	237	918	
06:00	25		118		121		110		146		228		
06:15	30		97		147		105		177		202		
06:30	42		94		116		97		158		191		
06:45	36	133	89	398	125	509	93	405	161	642	182	803	
07:00	41		87		134		89		175		176		
07:15	42		66		154		71		196		137		
07:30	41		51		152		68		193		119		
07:45	47	171	54	258	157	597	79	307	204	768	133	565	
08:00	68		51		171		79		239		130		
08:15	52		36		190		63		242		99		
08:30	54		49		188		57		242		106		
08:45	48	222	35	171	165	714	58	257	213	936	93	428	
09:00	63		36		182		46		245		82		
09:15	58		27		143		57		201		84		
09:30	55		25		119		42		174		67		
09:45	60	236	37	125	149	593	47	192	209	829	84	317	
10:00	55		25		116		50		171		75		
10:15	59		27		117		37		176		64		
10:30	51		9		94		39		145		48		
10:45	57	222	14	75	106	433	42	168	163	655	56	243	
11:00	45		24		119		26		164		50		
11:15	76		18		116		24		192		42		
11:30	58		16		121		18		179		34		
11:45	69	248	10	68	120	476	22	90	189	724	32	158	
Total	1359		3496		3831		3709		5190		7205		
Percent	26.2%		48.5%		73.8%		51.5%						
Day Total		4855				7540				12395			
Peak	11:00	-	05:00	-	08:15	-	05:30	-	08:15	-	05:00	-	-	-
Vol.	248	-	491	-	725	-	446	-	942	-	918	-	-	-
P.H.F.	0.816		0.930		0.954		0.953		0.961		0.968			

City of Cambridge TP&T Database ATRs

City of Cambridge, MA 24 Hour Average Daily Traffic Counts

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Acorn Park Drive	South of Frontage Road																	1350		1746				
Acorn Park Drive	South of Route 2													510										
Acorn Park Drive	West of Discovery Park internal driveway													740										
Albany Street	South of Pacific Street					3899						4981	4369			4954					5988			
Albany Street	West of Massachusetts Avenue														4150									
Alewife Brook Parkway	North of Cambridgepark Drive								56550					50300				47015				43311	44938	
Alewife Brook Parkway	North of Route 2																	36337						
Alewife Brook Parkway	West Whittemore Ave.							34573																
Alewife Station Access Road	East of Alewife Brook Parkway																	5454						
Alewife Station Access Road	South of Route 2																	8944				10244		

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Allston Street	Between Pearl Street and Brookline Street																					569		
Allston Street	West of Brookline Street											886	689			626								
Ames Street	Between Broadway and Main Street														6000									
Ames Street	North of Memorial Drive	3290						2205																
Ames Street	South of Amherst Street									2150														
Ames Street	South of Main Street																5400							
Ames Street	South of Main Street								4670															
Ames Street	South of Main Street								4705															
Ames Street	West of Third St							13400																
Amherst Street	East of Ames Street									4400														
Arrow Street	South of Mass. Ave.											2030												
Auburn Street	West of Brookline Street											860	679			581								

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Bay State Road	East of Birch Street															4796								
Bay State Road	East of New Street																					5336		
Beech Street	East of Massachusetts Ave.	9991						11358																
Beech Street	East of Massachusetts Avenue																		8472					
Bent Street	West of First Street																940							
Binney St	East of Cardinal Medeiros Ave								4710															
Binney Street	200' West of Fulkerson								4690										3475	3582	3654	3802	3974	3929
Binney Street	Between 2nd and 3rd St.																		12545					
Binney Street	Between 5th and 6th Street																		12597					
Binney Street	East of First Street											9445												
Binney Street	East of Fulkerson Street											13323												
Binney Street	East of One Kendall garage exit driveway											4700												

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Binney Street	East of One Kendall garage exit driveway													3250										
Binney Street	East of Third Street								12640															
Binney Street	West of Land Boulevard							11619																
Binney Street	West of One Kendall garage entrance driveway													3500										
Binney Street	West of Third Street		8800	10900	11200	11750	12050	13400	13850	14100	14250		13200	12800	13550	12750	14550	12950	12900	13100	12050	13050	13200	11821
Blanchard														960										
Blanchard Road	By the raised device.													12850		11980	11800		10100	12200				
Brattle Street	East of Ash Street								2771															
Brattle Street	West of Lexington Avenue	7922						11264																
Broadway	East of Midblock Connector							21350																
Broadway	East of Midblock Connector.			18200	18700	17850	18200	21350	20400	20150	21500		18200	19250	19300	18450	19700	18450	16850	19200	20100	17300	19900	
Broadway	East of Moore St							12690																

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Broadway	West of Hampshire Street											20500												
Broadway	West of Main Street															19501								
Broadway	West of MidBlock Connector							15370																
Broadway	West of Midblock Connector.		36700	17700																				
Broadway	West of Portland (at 201 Broadway site)		11120																					
Broadway	West of Prescott St								12636															
Broadway	West of Third Street												16200											
Broadway	West of Trowbridge St. 2013 TP&T Citywide Counts;											14750											9037	
Brookford Street	South of Massachusetts Avenue																				186			
Brookline Street	North of Henry Street											5280	5987			6142					4650			
Brookline Street	South of Granite St.	16134						13184				18830	18869			16298					11186			
Brookline Street	South of Putnam Avenue																					5151		

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Brookline Street	South of Putnam Avenue					6847										4208								
BU Bridge	BU Bridge																		35400					
Cambridge Street	East of First Street	9619						15982																
Cambridge Street	East of Prescott Street									14500														
Cambridge Street	West of First Street												9800											
Cambridge Street	West of First Street											9600											7731	
Cambridgepark Drive	100 Cambridgepark Drive Site Driveway																	849						
Cambridgepark Drive	150 Cambridgepark Drive Site Driveway - East																	845						
Cambridgepark Drive	150 Cambridgepark Drive Site Driveway - West																	184						
Cambridgepark Drive	West of Alewife Access Road																	4475			3634	4034		
Cambridgepark Drive	West of Alewife Brook Parkway/East of Alewife								12100									10069				9743		
Cambridgepark Drive	West of Alewife Station Access Road																					4327		

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cameron Avenue	East of Fairoaks	5823						5936																
Cameron Avenue	East of Massachusetts Avenue																		6000					
Cardinal Medeiros Ave	North of Binney St								8100															
Charles Street	West of First Street																2080							
Charlestown Avenue	(Gilmore Bridge) North of O'Brien Highway							40175																
Charlestown Avenue	North of O'Brien Hwy.											35500												
Chestnut Street	West of Brookline Street											772	738			530								
Columbia Street	North of Bishop Allen Drive																				6448			
Columbus Avenue	South of Massachsuettts Avenue																				1190			
Concord Avenue	East of Blanchard							17780																
Concord Avenue	East of Chauncy Street								13905															
Concord Avenue	East of Fawcett Street									20000						21525						22338	21868	

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Concord Avenue	East of Fresh Pond Parkway (West of Birch St.)							17631								14097						14256	12911	
Concord Avenue	West of Smith Place															18877								
Cottage Park Avenue	South of Massachusetts Avenue																				332			
Day Street	East of Massachusetts Ave	2077						2406																
Dewolfe Street	East of Memorial Drive	6606						4561																
DeWolfe Street	South of Grant Street													4806										
Dover Street	East of Massachusetts Avenue	3268						3212																
East Street	North of O'Brien Hwy.											3000										2883		
Edmunds Street	South of Massachusetts Avenue																				260			
Education Street	North of North Point Blvd.																			371				
Erie Street	West of Waverly Street											1312	1308			2268					2846			
Everett Street	West of Oxford Street												3407											

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fawcett Street	In front of 70 Fawcett Street															1838								
Fifth Street	100' North of Charles St.																		948	841	688	780	816	1106
Fifth Street	Between Bent and Charles St.																		848					
First Street	100' North of Charles St.																		7039	7045	6259	6766	8456	7591
First Street	Between Rogers and Binney St.																		5529					
First Street	North of Athanaeum Street											3639												
First Street	North of Charles Street																						8427	
First Street	North of Land Boulevard							5615																
First Street	South of Bent Street																6800							
First Street	South of Cambridge Street											6800	8300										7883	
Florence Street	South of Pleasant Street								1256															
Francis Avenue	North of Kirkland Street												897											

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Franklin Street	West of Brookline Street											2737	2396			2103							2318	
Fresh Pond Parkway	South of Concord Avenue							41450																
Frontage Road	East of Lake Street													5900										
Frontage Road	West of Acorn Park Drive																	7440		8498				
Fulkerson St. (one-way)	100' North of Charles St.																		2490	2449	2342	2397	2190	2588
Fulkerson Street	North of Bent Street											4674												
Fulkerson Street	North of Binney Street											3700												
Fulkerson Street	North of Rogers Street								5283															
Galileo Galilei Way	Between Broadway and Main Street														13400									
Galileo Galilei Way	North of Main Street								12339															
Garden Street	East of Chauncy St.								6060															
Gore Street	City Line	16666						14884																

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gore Street	West of Seventh Street										6460													
Granite Street	West of Brookline Street					4697										4270					3240			
Green Street	West of Pearl Street											4915	5153			4064					4122		3666	
Hamilton Street	West of Brookline Street											795	748			630								
Hammond Street	East of Oxford Street												616											
Hampshire Street	North of Cambridge Street	15420						14259																
Hampshire Street	West of Webster St.		7040																					
Harvard Street	West of Prescott St.								4201															
Henry Street	East of Brookline Street					6407						7814	8379			246								
Hingham Street	West of Banks Street													1284										
Hurley Street	West of First Street																2000							
Huron Avenue	East of Grove Street							10595																

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Huron Avenue	West of Larch Rd.							10371															9018	
J.F.K. Street	North of Memorial Drive							24639												20900				
Kinnaird Street	Between Martin Luther King Jr. School driveways.																					1032		
Kirkland Street	East of Myrtle Avenue							14342																
Kirkland Street	East of Oxford Street												6773											
Kirkland Street	East of Quincy Street												10170										9163	
Kirkland Street	West of Sumner Road								11254															
Land Boulevard	At O'Brien Highway																							
Land Boulevard	South of Binney Street																		27624					
Land Boulevard	South of O'Brien Hwy.							35592				32600												
Landsdowne Street	North of Pilgrim Street								1730														2868	
Leighton Street	South of Glassworks Avenue																					830		

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Linskey Way	East of Second Street											954												
Linskey Way	East of Third Street												950											
Magazine Street	North of Memorial Drive							3064													3012			
Magazine Street	South of Putnam Avenue											4837	3843			3728					3742			
Magee Street	East of Putnam Avenue																					439		
Magoun Street	South of Massachusetts Avenue																				312			
Main Street	Between Portland St. & Osborn St.																	8629			7597			
Main Street	Between Vassar and Ames Street								8684															
Main Street	Between Vassar Street and Ames Street																8200							
Main Street	East of Tech Square Driveway No. 3.											11500												
Main Street	East of Wadsworth Street															4706								
Main Street	Near MBTA station (Eastbound only for Main		4250	6300	5400	4050	5250	5900	5800	5500	5950		5700	5400	5100	4900	5400	5100	5150	5400	5450	5450	5250	

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Main Street	West of Ames Street and Midblock Connector								8773															
Main Street	West of Memorial Drive. Between Longfellow bridge							25278															25551	
Mason Street	East of Brattle St.								13904															
Mass. Ave	West of Prescott St.								14118															
Mass. Avenue	North of Roseland Street																			17613				
Mass. Avenue	North of Upland Road																			21188				
Massachusetts Avenue	East of Arrow Street											11670											8230	
Massachusetts Avenue	East of Bow St.								11440															
Massachusetts Avenue	East of Sidney Street								19440												15219		13566	
Massachusetts Avenue	North of Davenport								53931															
Massachusetts Avenue	North of Memorial Drive							29551																
Massachusetts Avenue	North/West of Albany Street														18050						18543		16377	

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Massachusetts Avenue	Northwest of Memorial Drive									27200														
Massachusetts Avenue	South of Chauncy St.								28898														16079	
Massachusetts Avenue	South of Upland Road								29562															
Massachusetts Avenue	South or East of Magoun Street							29347														25805	21891	
McGrath O'Brien Highway	at Twin City Plaza										34371													
Memorial Drive	East of JFK Street																			20800				
Memorial Drive	North of Hingham Street													26245										
Memorial Drive	North of Pleasant Street								35596															
Memorial Drive	South of Mt. Auburn Street							9096																
Memorial Drive	South of Pleasant Street								38255															
Midblock Connector	Between Main St. and Broadway								6566															
Mount Auburn Street	East of Dewolfe St.								11728															

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Mount Auburn Street	East of Hawthorne St.								8773															
Mt. Auburn St	at Athens Street											9860												
Mt. Auburn Street	East of Hawthorne Street													10810										
Mt. Auburn Street	West of Eliot Street																	5720						
Mt. Auburn Street	West of Homer Ave.	21304						22111																
Mt. Auburn Street	West of Trail Street							12050						11310									11155	
Museum Way	North of O'Brien Highway																					3752		
New Street	South of Denehy Park																					5123		
North Point Boulevard	Below the Gilmore Bridge																					1958		
North Point Boulevard	West of Education Street																			570				
O'Brien Highway	East of Industrial Way											39700												
O'Brien Highway	East of Land Blvd.							45270																

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
O'Brien Highway	West of Cambridge Street											32400												
O'Brien Highway	West of Land Blvd.							37032																
O'Brien Highway	West of Land Boulevard.										37900													
O'Brien Highway	West of Water Street															23850								
Osborn Street	South of State Street																				222			
Oxford Street	North of Forest Street	6631						4987																
Oxford Street	South of Everett Street												7123											
Oxford Street	South of Hammond Street												6806											
Oxford Street	South of Sacramento Street												6576											
Pacific Street	West of Landsdowne Street								2030															
Pearl Street	Between McTernan Street and Erie Street														3300									
Pearl Street	North of Putnam Avenue											3109	2742			2746					1997			

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Pleasant Street	North or East of Chestnut Street						1716																	
Pleasant Street	North or East of Florence Street											1870	2140			2816					2612			
Pleasant Street	North or East of Memorial Drive						1191																	
Pleasant Street	North or East of Putnam Avenue						812					744	904			900					767			
Pleasant Street	South or West of Florence St.						895	1131																
Plympton Street	East of Memorial Drive	2017						2128																
Portland Street	Between Main St. & Albany St.																	4174						
Portland Street	South of Tech Square Driveway No. 3											8300												
Prospect Street	North of Cambridge Street	13616						14778															10683	
Prospect Street	South of Hampshire Street												18413									16880		
Putnam Avenue	North of Pedestrian Crossing in front of Martin																					6642		
Putnam Avenue	North of Pleasant Street								7447															

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Putnam Avenue	South of Green Street													6328										
Putnam Avenue	South of Pleasant Street								6298															
Putnam Avenue	West of Brookline Street											3583	3825			2929					4376			
Putnam Avenue	West of Sidney Street					2554										1774								
Putnam Avenue	West of Waverly Street																					1394		
Quincy Street	North of Cambridge Street												13099											
Richdale Avenue	Between Upland Rd. and Walden St.																						1159	
Rindge Ave	East of Alewife Brook Parkway								12050														9768	
Rindge Avenue	East of Alewife Brook Parkway									12000														
Rindge Avenue	East of Alewife Brook Pkwy	9117						11546															9164	
River Street	East of Memorial Drive	17568						17386															11637	
Rogers Street	West of First Street																830							

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Roseland Street	East of Mass. Avenue																			4015				
Route 2	Exit ramp, east of Acorn Park Drive													11100										
Route 2	West of Alewife Brook Parkway																	58315						
Route 2	West of Alewife Brook Parkway																	57940		53367				
Route 2	West of Alewife Brook Parkway													62600										
Route 2	West of Alewife Brook Pkwy	55675						61724																
Russell Street	East of Mass. Avenue							3290																
Sacramento Street	West of Oxford Street												1041											
Sciarappa Street	100' North of Charles St.																		418	466	352	825	456	447
Scott Street	West of Bryant							1461																
Second Street	100' North of Charles St.																		1929	1920	1756	1683	1982	1932
Second Street	Between Rogers and Binney St.																		2022					

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Second Street	North of Charles Street																						1874	
Second Street	North of Otis Street												3400											
Second Street	South of Charles Street																2640							
Second Street	South of Thorndike Street																						2105	
Sidney Street	North of Pacific Street								5250															
Sidney Street	North of Putnam Ave.					5781										4640								
Sidney Street	South of Massachusetts Ave.																						4918	
Sidney Street	South of Putnam Avenue											5065	4748			3891					3248		3508	
Sixth Street	100' North of Charles St.																		2619	2629	2475	2286	2618	2329
Sixth Street	Between Bent and Charles St.																		2026					
Sixth Street	North of Bent Street								2190															
Sixth Street	North of Binney Street								2450															

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sixth Street	South of Charles Street								3045															
Somerville Avenue	East of White Street	20333						17053																
Spring Street	West of First Street																						2114	
Springfield Street	North of Cambridge Street							3331																
State Street	West of Osborn Street																				487			
T Access Road (Alewife)	North of Egress Rd.							10266																
T Egress Road (Alewife)	North of Alewife Center Dr.							5932																
Third Street	100' North of Charles St.																		8009	8625	8859	8740	9162	7915
Third Street	Between Binney and Linskey Way																		8534					
Third Street	Between Rogers and Binney St.																		8880					
Third Street	North of Broadway			10600	10350	12400	11000	11200	11050	11750	11650		11550	10600	9200	9300	8550	9200	8500	10050	10450	10650	10500	
Third Street	North of Charles Street																						9164	

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Third Street	North of Charles Street																8600							
Third Street	South of Cambridge Street											8200												
Third Street	South of Linskey Way												8700											
Third Street	South of O'Brien Hwy.	14192						14184																
Thorndike Street	West of First Street																						2897	
Trowbridge Street (one-way NB)	North of Massachusetts Avenue																			3500				
Tyler Court	South of Massachusetts Avenue																				363			
Upland Road	West of Massachusetts Avenue								5507															
Vassar Street	Southwest of Main Street								11765															
Vassar Street	Southwest of Massachusetts Avenue									7950														
Vassar Street	West or South of Main Street			10300	10600	9950	10000	10100	10550	11300	10400		3900	11150	14450	11500	9700	9400	9300	11450	11700	11600	12750	
Vasser Street	North of Memorial Drive	6169						5677																

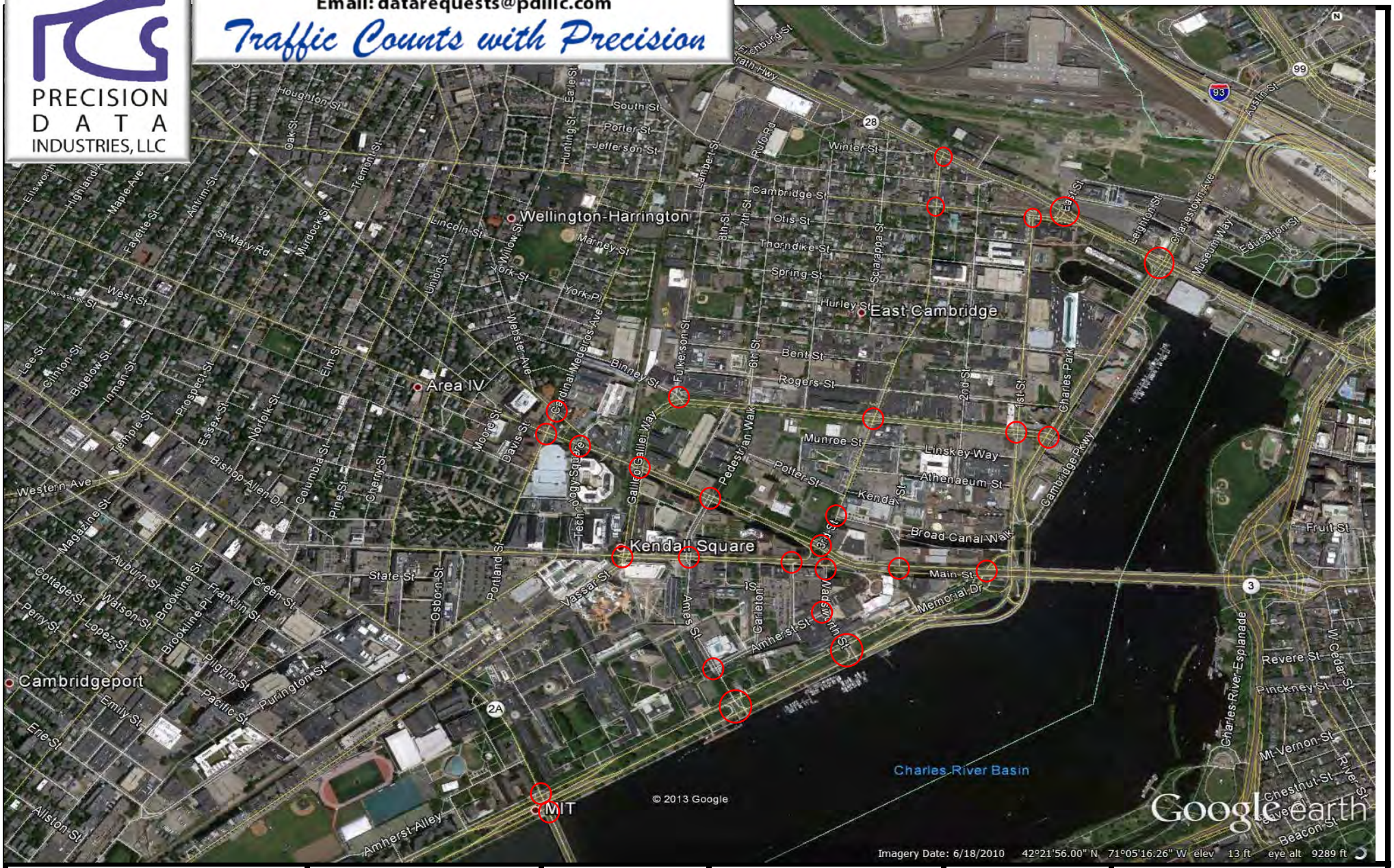
Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Wadsworth Street	North of Memorial Drive	4763						3257																
Wadsworth Street	South of Main Street															2412								
Warren Street	North of Cambridge St.							4898																
Water Street	North of O'Brien Highway															680								
Waverly Street	East of Brookline Street															5828								
Waverly Street	South of Erie Street					3214						3764	3487			3099					3602			
Webster Avenue	North of Cambridge Street	9159						9143																
Wendall Street	West of Oxford Street												3872											
Western Avenue	East of Memorial Drive	17439						16032																
Western Avenue	West of Blackstone Street													19416										
Whittemore Avenue	West of Madison Avenue																				1027	454		
Windsor Street	North of School Street																				4830			

Street/Route	Location	1987	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Windsor Street	South of State Street																				3899			

Turning Movement Counts

PRECISION DATA INDUSTRIES, LLC
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Traffic Counts with Precision



Client:	Engineer:	Site Code:	Date:	PDI Job Number:	City, State:
VHB	M. Houdlette	TBA	Thursday 5/16/13	133347	Cambridge, MA

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 A
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	74	9	3	7	0	37	0	157	393	0	1	681
07:45 AM	0	0	0	0	0	77	8	2	7	0	40	0	150	339	0	1	624
Total	0	0	0	0	0	151	17	5	14	0	77	0	307	732	0	2	1305
08:00 AM	0	0	0	0	0	68	19	4	8	0	44	0	140	394	0	0	677
08:15 AM	0	0	0	0	0	78	9	9	6	0	25	0	148	396	0	2	673
08:30 AM	0	0	0	0	0	90	13	5	6	0	36	0	157	426	0	0	733
08:45 AM	0	0	0	0	0	84	9	4	5	0	39	0	150	345	0	3	639
Total	0	0	0	0	0	320	50	22	25	0	144	0	595	1561	0	5	2722
09:00 AM	1	0	0	0	0	84	11	2	9	0	28	0	161	380	1	1	678
09:15 AM	0	0	0	0	0	84	9	1	4	0	47	0	143	305	0	2	595
Grand Total	1	0	0	0	0	639	87	30	52	0	296	0	1206	2978	1	10	5300
Apprch %	100	0	0	0	0	84.5	11.5	4	14.9	0	85.1	0	28.7	71	0	0.2	
Total %	0	0	0	0	0	12.1	1.6	0.6	1	0	5.6	0	22.8	56.2	0	0.2	
Cars	1	0	0	0	0	572	75	30	42	0	287	0	1188	2880	1	10	5086
% Cars	100	0	0	0	0	89.5	86.2	100	80.8	0	97	0	98.5	96.7	100	100	96
Heavy Vehicles	0	0	0	0	0	43	3	0	0	0	9	0	17	75	0	0	147
% Heavy Vehicles	0	0	0	0	0	6.7	3.4	0	0	0	3	0	1.4	2.5	0	0	2.8
Buses	0	0	0	0	0	24	9	0	10	0	0	0	1	23	0	0	67
% Buses	0	0	0	0	0	3.8	10.3	0	19.2	0	0	0	0.1	0.8	0	0	1.3

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	78	9	9	96	6	0	25	0	31	148	396	0	2	546	673
08:30 AM	0	0	0	0	0	0	90	13	5	108	6	0	36	0	42	157	426	0	0	583	733
08:45 AM	0	0	0	0	0	0	84	9	4	97	5	0	39	0	44	150	345	0	3	498	639
09:00 AM	1	0	0	0	1	0	84	11	2	97	9	0	28	0	37	161	380	1	1	543	678
Total Volume	1	0	0	0	1	0	336	42	20	398	26	0	128	0	154	616	1547	1	6	2170	2723
% App. Total																					
PHF	.250	.000	.000	.000	.250	.000	.933	.808	.556	.921	.722	.000	.821	.000	.875	.957	.908	.250	.500	.931	.929
Cars	1	0	0	0	1	0	299	35	20	354	20	0	124	0	144	604	1493	1	6	2104	2603
% Cars	100	0	0	0	100	0	89.0	83.3	100	88.9	76.9	0	96.9	0	93.5	98.1	96.5	100	100	97.0	95.6
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	7.7	4.8	0	7.0	0	0	3.1	0	2.6	1.9	2.7	0	0	2.4	3.1
Buses	0	0	0	0	0	0	11	5	0	16	6	0	0	0	6	0	13	0	0	13	35
% Buses	0	0	0	0	0	0	3.3	11.9	0	4.0	23.1	0	0	0	3.9	0	0.8	0	0	0.6	1.3

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	63	8	3	6	0	37	0	157	384	0	1	659
07:45 AM	0	0	0	0	0	71	6	2	6	0	40	0	148	327	0	1	601
Total	0	0	0	0	0	134	14	5	12	0	77	0	305	711	0	2	1260
08:00 AM	0	0	0	0	0	62	18	4	6	0	41	0	139	385	0	0	655
08:15 AM	0	0	0	0	0	71	7	9	5	0	25	0	146	384	0	2	649
08:30 AM	0	0	0	0	0	80	11	5	4	0	34	0	155	411	0	0	700
08:45 AM	0	0	0	0	0	72	8	4	5	0	39	0	145	333	0	3	609
Total	0	0	0	0	0	285	44	22	20	0	139	0	585	1513	0	5	2613
09:00 AM	1	0	0	0	0	76	9	2	6	0	26	0	158	365	1	1	645
09:15 AM	0	0	0	0	0	77	8	1	4	0	45	0	140	291	0	2	568
Grand Total	1	0	0	0	0	572	75	30	42	0	287	0	1188	2880	1	10	5086
Apprch %	100	0	0	0	0	84.5	11.1	4.4	12.8	0	87.2	0	29.1	70.6	0	0.2	
Total %	0	0	0	0	0	11.2	1.5	0.6	0.8	0	5.6	0	23.4	56.6	0	0.2	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	62	18	4	84	6	0	41	0	47	139	385	0	0	524	655
08:15 AM	0	0	0	0	0	0	71	7	9	87	5	0	25	0	30	146	384	0	2	532	649
08:30 AM	0	0	0	0	0	0	80	11	5	96	4	0	34	0	38	155	411	0	0	566	700
08:45 AM	0	0	0	0	0	0	72	8	4	84	5	0	39	0	44	145	333	0	3	481	609
Total Volume	0	0	0	0	0	0	285	44	22	351	20	0	139	0	159	585	1513	0	5	2103	2613
% App. Total																					
PHF	.000	.000	.000	.000	.000	.000	.891	.611	.611	.914	.833	.000	.848	.000	.846	.944	.920	.000	.417	.929	.933

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Heavy Vehicles

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	8	0	0	14
07:45 AM	0	0	0	0	0	4	0	0	0	0	0	0	2	9	0	0	15
Total	0	0	0	0	0	10	0	0	0	0	0	0	2	17	0	0	29
08:00 AM	0	0	0	0	0	4	0	0	0	0	3	0	1	8	0	0	16
08:15 AM	0	0	0	0	0	5	0	0	0	0	0	0	2	8	0	0	15
08:30 AM	0	0	0	0	0	8	1	0	0	0	2	0	2	11	0	0	24
08:45 AM	0	0	0	0	0	9	0	0	0	0	0	0	5	9	0	0	23
Total	0	0	0	0	0	26	1	0	0	0	5	0	10	36	0	0	78
09:00 AM	0	0	0	0	0	4	1	0	0	0	2	0	3	13	0	0	23
09:15 AM	0	0	0	0	0	3	1	0	0	0	2	0	2	9	0	0	17
Grand Total	0	0	0	0	0	43	3	0	0	0	9	0	17	75	0	0	147
Apprch %	0	0	0	0	0	93.5	6.5	0	0	0	100	0	18.5	81.5	0	0	
Total %	0	0	0	0	0	29.3	2	0	0	0	6.1	0	11.6	51	0	0	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	0	0	0	0	0	8	1	0	9	0	0	2	0	2	2	11	0	0	13	24
08:45 AM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	5	9	0	0	14	23
09:00 AM	0	0	0	0	0	0	4	1	0	5	0	0	2	0	2	3	13	0	0	16	23
09:15 AM	0	0	0	0	0	0	3	1	0	4	0	0	2	0	2	2	9	0	0	11	17
Total Volume	0	0	0	0	0	0	24	3	0	27	0	0	6	0	6	12	42	0	0	54	87
% App. Total	0	0	0	0		0	88.9	11.1	0		0	0	100	0		22.2	77.8	0	0		
PHF	.000	.000	.000	.000	.000	.000	.667	.750	.000	.750	.000	.000	.750	.000	.750	.600	.808	.000	.000	.844	.906

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Buses

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	5	1	0	1	0	0	0	0	1	0	0	8
07:45 AM	0	0	0	0	0	2	2	0	1	0	0	0	0	3	0	0	8
Total	0	0	0	0	0	7	3	0	2	0	0	0	0	4	0	0	16
08:00 AM	0	0	0	0	0	2	1	0	2	0	0	0	0	1	0	0	6
08:15 AM	0	0	0	0	0	2	2	0	1	0	0	0	0	4	0	0	9
08:30 AM	0	0	0	0	0	2	1	0	2	0	0	0	0	4	0	0	9
08:45 AM	0	0	0	0	0	3	1	0	0	0	0	0	0	3	0	0	7
Total	0	0	0	0	0	9	5	0	5	0	0	0	0	12	0	0	31
09:00 AM	0	0	0	0	0	4	1	0	3	0	0	0	0	2	0	0	10
09:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	1	5	0	0	10
Grand Total	0	0	0	0	0	24	9	0	10	0	0	0	1	23	0	0	67
Apprch %	0	0	0	0	0	72.7	27.3	0	100	0	0	0	4.2	95.8	0	0	
Total %	0	0	0	0	0	35.8	13.4	0	14.9	0	0	0	1.5	34.3	0	0	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	0	0	0	0	0	2	1	0	3	2	0	0	0	2	0	4	0	0	4	9
08:45 AM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	3	0	0	3	7
09:00 AM	0	0	0	0	0	0	4	1	0	5	3	0	0	0	3	0	2	0	0	2	10
09:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	1	5	0	0	6	10
Total Volume	0	0	0	0	0	0	13	3	0	16	5	0	0	0	5	1	14	0	0	15	36
% App. Total	0	0	0	0		0	81.2	18.8	0		100	0	0	0		6.7	93.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.813	.750	.000	.800	.417	.000	.000	.000	.417	.250	.700	.000	.000	.625	.900

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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File Name : 133347 A
Site Code : TBA
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Groups Printed- Peds and Bicycles

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	2	0	0	0	0	2	0	0	0	0	3	1	0	1	0	1	2	12
07:45 AM	0	0	0	3	2	0	0	0	3	1	0	0	0	1	5	0	1	0	0	1	17
Total	0	0	0	5	2	0	0	0	5	1	0	0	0	4	6	0	2	0	1	3	29
08:00 AM	0	0	0	6	0	0	0	0	2	0	0	0	0	5	2	0	4	0	0	1	20
08:15 AM	0	0	0	1	0	0	1	0	2	1	0	0	0	5	4	0	1	0	0	0	15
08:30 AM	0	0	0	3	0	0	0	0	1	3	0	0	0	1	5	1	0	0	0	1	15
08:45 AM	0	0	0	1	0	0	1	0	1	2	0	0	0	6	9	0	1	0	0	1	22
Total	0	0	0	11	0	0	2	0	6	6	0	0	0	17	20	1	6	0	0	3	72
09:00 AM	0	0	1	5	4	0	0	0	3	3	0	0	0	0	3	1	4	0	0	0	24
09:15 AM	0	0	0	1	1	0	0	0	2	0	0	0	0	3	1	0	2	0	2	0	12
Grand Total	0	0	1	22	7	0	2	0	16	10	0	0	0	24	30	2	14	0	3	6	137
Apprch %	0	0	3.3	73.3	23.3	0	7.1	0	57.1	35.7	0	0	0	44.4	55.6	8	56	0	12	24	
Total %	0	0	0.7	16.1	5.1	0	1.5	0	11.7	7.3	0	0	0	17.5	21.9	1.5	10.2	0	2.2	4.4	

	Driveway From North						Monsignior O'Brien Highway (Rt 28) From East						3rd Street From South						Monsignior O'Brien Highway (Rt 28) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	0	0	1	0	1	0	1	0	2	1	4	0	0	0	5	4	9	0	1	0	0	0	1	15
08:30 AM	0	0	0	3	0	3	0	0	0	1	3	4	0	0	0	1	5	6	1	0	0	0	1	2	15
08:45 AM	0	0	0	1	0	1	0	1	0	1	2	4	0	0	0	6	9	15	0	1	0	0	1	2	22
09:00 AM	0	0	1	5	4	10	0	0	0	3	3	6	0	0	0	0	3	3	1	4	0	0	0	5	24
Total Volume	0	0	1	10	4	15	0	2	0	7	9	18	0	0	0	12	21	33	2	6	0	0	2	10	76
% App. Total	0	0	6.7	66.7	26.7		0	11.1	0	38.9	50		0	0	0	36.4	63.6		20	60	0	0	20		
PHF	.000	.000	.250	.500	.250	.375	.000	.500	.000	.583	.750	.750	.000	.000	.000	.500	.583	.550	.500	.375	.000	.000	.500	.500	.792

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
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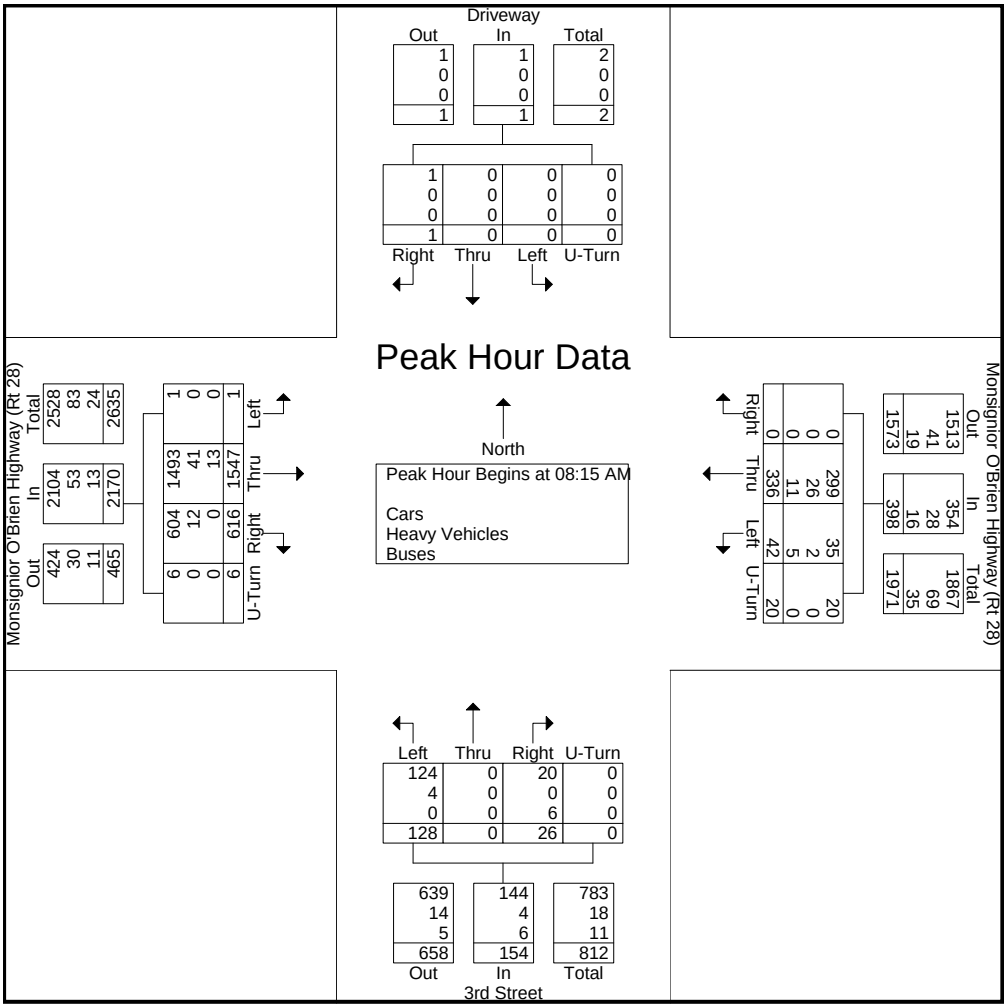
	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	78	9	9	96	6	0	25	0	31	148	396	0	2	546	673
08:30 AM	0	0	0	0	0	0	90	13	5	108	6	0	36	0	42	157	426	0	0	583	733
08:45 AM	0	0	0	0	0	0	84	9	4	97	5	0	39	0	44	150	345	0	3	498	639
09:00 AM	1	0	0	0	1	0	84	11	2	97	9	0	28	0	37	161	380	1	1	543	678
Total Volume	1	0	0	0	1	0	336	42	20	398	26	0	128	0	154	616	1547	1	6	2170	2723
% App. Total																					
PHF	.250	.000	.000	.000	.250	.000	.933	.808	.556	.921	.722	.000	.821	.000	.875	.957	.908	.250	.500	.931	.929
Cars	1	0	0	0	1	0	299	35	20	354	20	0	124	0	144	604	1493	1	6	2104	2603
% Cars	100	0	0	0	100	0	89.0	83.3	100	88.9	76.9	0	96.9	0	93.5	98.1	96.5	100	100	97.0	95.6
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	7.7	4.8	0	7.0	0	0	3.1	0	2.6	1.9	2.7	0	0	2.4	3.1
Buses	0	0	0	0	0	0	11	5	0	16	6	0	0	0	6	0	13	0	0	13	35
% Buses	0	0	0	0	0	0	3.3	11.9	0	4.0	23.1	0	0	0	3.9	0	0.8	0	0	0.6	1.3



N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
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Groups Printed- Cars - Heavy Vehicles - Buses

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	1	0	0	245	6	0	5	1	210	0	69	234	0	3	774
04:45 PM	1	0	0	0	1	235	7	3	11	0	205	0	87	218	0	1	769
Total	1	0	1	0	1	480	13	3	16	1	415	0	156	452	0	4	1543
05:00 PM	1	0	0	0	0	255	10	2	4	0	206	0	81	214	0	4	777
05:15 PM	1	0	0	0	0	252	10	5	2	0	208	0	101	265	0	6	850
05:30 PM	0	0	0	0	0	230	18	2	2	0	188	0	101	217	0	1	759
05:45 PM	2	0	1	0	0	209	9	1	4	0	192	0	81	213	0	6	718
Total	4	0	1	0	0	946	47	10	12	0	794	0	364	909	0	17	3104
06:00 PM	2	0	2	0	0	201	15	0	4	0	170	0	85	201	1	3	684
06:15 PM	2	0	1	0	0	177	15	1	5	0	169	0	73	181	2	0	626
Grand Total	9	0	5	0	1	1804	90	14	37	1	1548	0	678	1743	3	24	5957
Apprch %	64.3	0	35.7	0	0.1	94.5	4.7	0.7	2.3	0.1	97.6	0	27.7	71.2	0.1	1	
Total %	0.2	0	0.1	0	0	30.3	1.5	0.2	0.6	0	26	0	11.4	29.3	0.1	0.4	
Cars	9	0	5	0	1	1753	84	14	32	1	1539	0	674	1705	3	24	5844
% Cars	100	0	100	0	100	97.2	93.3	100	86.5	100	99.4	0	99.4	97.8	100	100	98.1
Heavy Vehicles	0	0	0	0	0	21	2	0	3	0	7	0	4	18	0	0	55
% Heavy Vehicles	0	0	0	0	0	1.2	2.2	0	8.1	0	0.5	0	0.6	1	0	0	0.9
Buses	0	0	0	0	0	30	4	0	2	0	2	0	0	20	0	0	58
% Buses	0	0	0	0	0	1.7	4.4	0	5.4	0	0.1	0	0	1.1	0	0	1

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	1	0	1	0	245	6	0	251	5	1	210	0	216	69	234	0	3	306	774
04:45 PM	1	0	0	0	1	1	235	7	3	246	11	0	205	0	216	87	218	0	1	306	769
05:00 PM	1	0	0	0	1	0	255	10	2	267	4	0	206	0	210	81	214	0	4	299	777
05:15 PM	1	0	0	0	1	0	252	10	5	267	2	0	208	0	210	101	265	0	6	372	850
Total Volume	3	0	1	0	4	1	987	33	10	1031	22	1	829	0	852	338	931	0	14	1283	3170
% App. Total	75	0	25	0		0.1	95.7	3.2	1		2.6	0.1	97.3	0		26.3	72.6	0	1.1		
PHF	.750	.000	.250	.000	1.00	.250	.968	.825	.500	.965	.500	.250	.987	.000	.986	.837	.878	.000	.583	.862	.932
Cars	3	0	1	0	4	1	957	30	10	998	20	1	823	0	844	337	912	0	14	1263	3109
% Cars	100	0	100	0	100	100	97.0	90.9	100	96.8	90.9	100	99.3	0	99.1	99.7	98.0	0	100	98.4	98.1
Heavy Vehicles	0	0	0	0	0	0	12	2	0	14	2	0	4	0	6	1	8	0	0	9	29
% Heavy Vehicles	0	0	0	0	0	0	1.2	6.1	0	1.4	9.1	0	0.5	0	0.7	0.3	0.9	0	0	0.7	0.9
Buses	0	0	0	0	0	0	18	1	0	19	0	0	2	0	2	0	11	0	0	11	32
% Buses	0	0	0	0	0	0	1.8	3.0	0	1.8	0	0	0.2	0	0.2	0	1.2	0	0	0.9	1.0

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	1	0	0	236	5	0	5	1	206	0	69	228	0	3	754
04:45 PM	1	0	0	0	1	231	6	3	9	0	205	0	87	216	0	1	760
Total	1	0	1	0	1	467	11	3	14	1	411	0	156	444	0	4	1514
05:00 PM	1	0	0	0	0	245	9	2	4	0	205	0	80	207	0	4	757
05:15 PM	1	0	0	0	0	245	10	5	2	0	207	0	101	261	0	6	838
05:30 PM	0	0	0	0	0	222	17	2	2	0	187	0	99	213	0	1	743
05:45 PM	2	0	1	0	0	204	9	1	4	0	192	0	80	207	0	6	706
Total	4	0	1	0	0	916	45	10	12	0	791	0	360	888	0	17	3044
06:00 PM	2	0	2	0	0	197	14	0	2	0	170	0	85	194	1	3	670
06:15 PM	2	0	1	0	0	173	14	1	4	0	167	0	73	179	2	0	616
Grand Total	9	0	5	0	1	1753	84	14	32	1	1539	0	674	1705	3	24	5844
Apprch %	64.3	0	35.7	0	0.1	94.7	4.5	0.8	2	0.1	97.9	0	28	70.9	0.1	1	
Total %	0.2	0	0.1	0	0	30	1.4	0.2	0.5	0	26.3	0	11.5	29.2	0.1	0.4	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	1	0	1	0	236	5	0	241	5	1	206	0	212	69	228	0	3	300	754
04:45 PM	1	0	0	0	1	1	231	6	3	241	9	0	205	0	214	87	216	0	1	304	760
05:00 PM	1	0	0	0	1	0	245	9	2	256	4	0	205	0	209	80	207	0	4	291	757
05:15 PM	1	0	0	0	1	0	245	10	5	260	2	0	207	0	209	101	261	0	6	368	838
Total Volume	3	0	1	0	4	1	957	30	10	998	20	1	823	0	844	337	912	0	14	1263	3109
% App. Total	75	0	25	0		0.1	95.9	3	1		2.4	0.1	97.5	0		26.7	72.2	0	1.1		
PHF	.750	.000	.250	.000	1.00	.250	.977	.750	.500	.960	.556	.250	.994	.000	.986	.834	.874	.000	.583	.858	.928

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	3	0	0	0	0	2	0	0	1	0	0	6
04:45 PM	0	0	0	0	0	2	1	0	2	0	0	0	0	1	0	0	6
Total	0	0	0	0	0	5	1	0	2	0	2	0	0	2	0	0	12
05:00 PM	0	0	0	0	0	5	1	0	0	0	1	0	1	6	0	0	14
05:15 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	5	0	0	0	0	1	0	2	1	0	0	9
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	3	0	0	5
Total	0	0	0	0	0	13	1	0	0	0	3	0	4	10	0	0	31
06:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	7
06:15 PM	0	0	0	0	0	1	0	0	1	0	2	0	0	1	0	0	5
Grand Total	0	0	0	0	0	21	2	0	3	0	7	0	4	18	0	0	55
Apprch %	0	0	0	0	0	91.3	8.7	0	30	0	70	0	18.2	81.8	0	0	
Total %	0	0	0	0	0	38.2	3.6	0	5.5	0	12.7	0	7.3	32.7	0	0	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	2	1	0	3	2	0	0	0	2	0	1	0	0	1	6
05:00 PM	0	0	0	0	0	0	5	1	0	6	0	0	1	0	1	1	6	0	0	7	14
05:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	2	1	0	0	3	9
Total Volume	0	0	0	0	0	0	14	2	0	16	2	0	3	0	5	3	8	0	0	11	32
% App. Total	0	0	0	0		0	87.5	12.5	0		40	0	60	0		27.3	72.7	0	0		
PHF	.000	.000	.000	.000	.000	.000	.700	.500	.000	.667	.250	.000	.750	.000	.625	.375	.333	.000	.000	.393	.571

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Site Code : TBA
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Groups Printed- Buses

	Driveway From North				Monsignior O'Brien Highway (Rt 28) From East				3rd Street From South				Monsignior O'Brien Highway (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	6	1	0	0	0	2	0	0	5	0	0	14
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	8	1	0	0	0	2	0	0	6	0	0	17
05:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	6
05:15 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
05:30 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	3	0	0	7
05:45 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	7
Total	0	0	0	0	0	17	1	0	0	0	0	0	0	11	0	0	29
06:00 PM	0	0	0	0	0	2	1	0	2	0	0	0	0	2	0	0	7
06:15 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	5
Grand Total	0	0	0	0	0	30	4	0	2	0	2	0	0	20	0	0	58
Apprch %	0	0	0	0	0	88.2	11.8	0	50	0	50	0	0	100	0	0	
Total %	0	0	0	0	0	51.7	6.9	0	3.4	0	3.4	0	0	34.5	0	0	

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	6	1	0	7	0	0	2	0	2	0	5	0	0	5	14
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
05:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	6
05:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9
Total Volume	0	0	0	0	0	0	18	1	0	19	0	0	2	0	2	0	11	0	0	11	32
% App. Total	0	0	0	0		0	94.7	5.3	0		0	0	100	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.250	.000	.679	.000	.000	.250	.000	.250	.000	.550	.000	.000	.550	.571

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 AA
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Peds and Bicycles

	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	1	7	0	1	0	1	6	0	0	0	6	3	0	3	0	1	0	29
04:45 PM	0	0	0	1	4	0	5	0	1	3	0	0	0	6	3	0	0	0	0	0	23
Total	0	0	0	2	11	0	6	0	2	9	0	0	0	12	6	0	3	0	1	0	52
05:00 PM	0	0	0	3	4	0	2	0	2	4	1	0	1	8	7	0	0	0	0	1	33
05:15 PM	0	0	0	4	7	0	6	1	0	3	0	0	0	6	5	0	0	0	1	0	33
05:30 PM	0	0	0	0	4	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	9
05:45 PM	0	0	0	2	12	0	4	0	2	1	1	0	0	7	1	0	3	0	0	0	33
Total	0	0	0	9	27	1	12	1	4	11	3	0	1	21	13	0	3	0	1	1	108
06:00 PM	0	0	0	2	7	0	1	2	4	2	0	0	0	10	4	0	0	0	0	0	32
06:15 PM	0	0	0	2	6	0	6	0	2	2	0	0	0	1	6	0	0	0	0	0	25
Grand Total	0	0	0	15	51	1	25	3	12	24	3	0	1	44	29	0	6	0	2	1	217
Apprch %	0	0	0	22.7	77.3	1.5	38.5	4.6	18.5	36.9	3.9	0	1.3	57.1	37.7	0	66.7	0	22.2	11.1	
Total %	0	0	0	6.9	23.5	0.5	11.5	1.4	5.5	11.1	1.4	0	0.5	20.3	13.4	0	2.8	0	0.9	0.5	

	Driveway From North						Monsignior O'Brien Highway (Rt 28) From East						3rd Street From South						Monsignior O'Brien Highway (Rt 28) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
04:30 PM	0	0	0	1	7	8	0	1	0	1	6	8	0	0	0	6	3	9	0	3	0	1	0	4	29
04:45 PM	0	0	0	1	4	5	0	5	0	1	3	9	0	0	0	6	3	9	0	0	0	0	0	0	23
05:00 PM	0	0	0	3	4	7	0	2	0	2	4	8	1	0	1	8	7	17	0	0	0	0	1	1	33
05:15 PM	0	0	0	4	7	11	0	6	1	0	3	10	0	0	0	6	5	11	0	0	0	1	0	1	33
Total Volume	0	0	0	9	22	31	0	14	1	4	16	35	1	0	1	26	18	46	0	3	0	2	1	6	118
% App. Total	0	0	0	29	71		0	40	2.9	11.4	45.7		2.2	0	2.2	56.5	39.1		0	50	0	33.3	16.7		
PHF	.000	.000	.000	.563	.786	.705	.000	.583	.250	.500	.667	.875	.250	.000	.250	.813	.643	.676	.000	.250	.000	.500	.250	.375	.894

N/S: Driveway/ 3rd Street
E/W: Monsignior O'Brien Highway (Rt 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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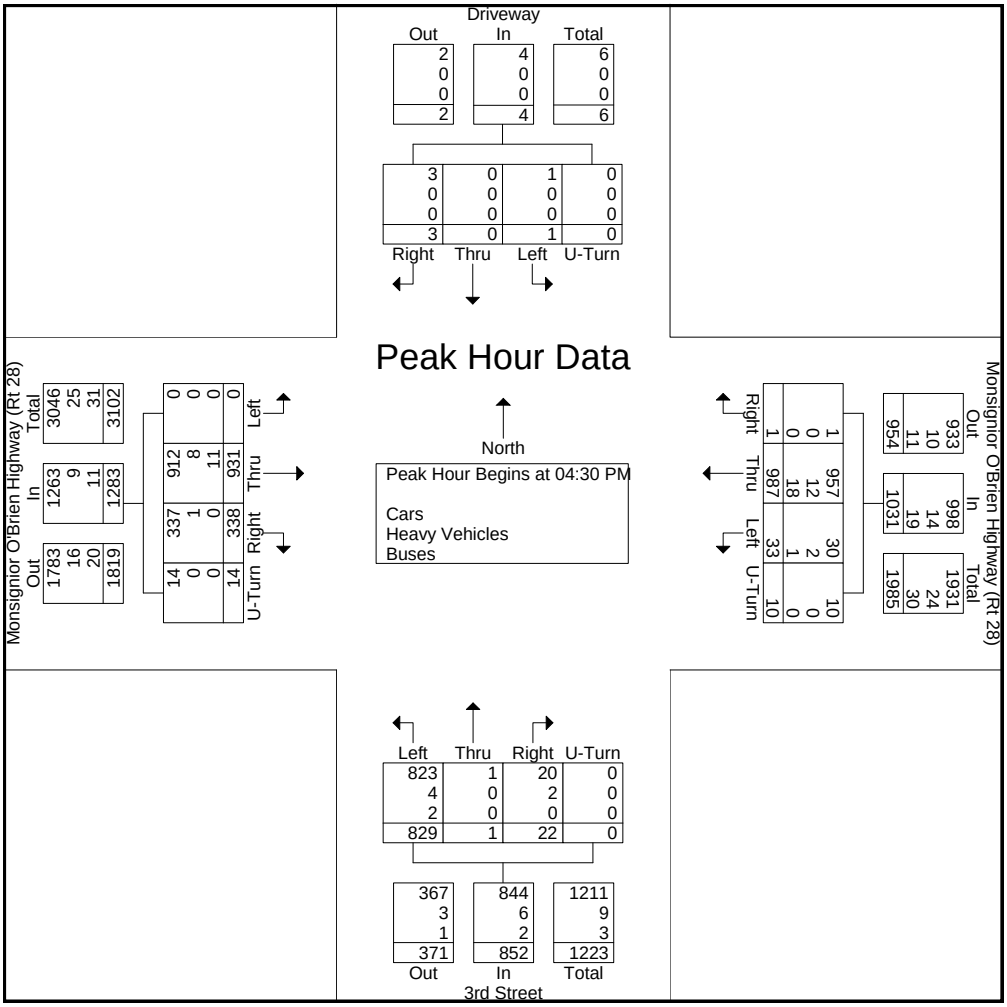
	Driveway From North					Monsignior O'Brien Highway (Rt 28) From East					3rd Street From South					Monsignior O'Brien Highway (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	1	0	1	0	245	6	0	251	5	1	210	0	216	69	234	0	3	306	774
04:45 PM	1	0	0	0	1	1	235	7	3	246	11	0	205	0	216	87	218	0	1	306	769
05:00 PM	1	0	0	0	1	0	255	10	2	267	4	0	206	0	210	81	214	0	4	299	777
05:15 PM	1	0	0	0	1	0	252	10	5	267	2	0	208	0	210	101	265	0	6	372	850
Total Volume	3	0	1	0	4	1	987	33	10	1031	22	1	829	0	852	338	931	0	14	1283	3170
% App. Total	75	0	25	0		0.1	95.7	3.2	1		2.6	0.1	97.3	0		26.3	72.6	0	1.1		
PHF	.750	.000	.250	.000	1.00	.250	.968	.825	.500	.965	.500	.250	.987	.000	.986	.837	.878	.000	.583	.862	.932
Cars	3	0	1	0	4	1	957	30	10	998	20	1	823	0	844	337	912	0	14	1263	3109
% Cars	100	0	100	0	100	100	97.0	90.9	100	96.8	90.9	100	99.3	0	99.1	99.7	98.0	0	100	98.4	98.1
Heavy Vehicles	0	0	0	0	0	0	12	2	0	14	2	0	4	0	6	1	8	0	0	9	29
% Heavy Vehicles	0	0	0	0	0	0	1.2	6.1	0	1.4	9.1	0	0.5	0	0.7	0.3	0.9	0	0	0.7	0.9
Buses	0	0	0	0	0	0	18	1	0	19	0	0	2	0	2	0	11	0	0	11	32
% Buses	0	0	0	0	0	0	1.8	3.0	0	1.8	0	0	0.2	0	0.2	0	1.2	0	0	0.9	1.0



N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	13	127	21	0	9	42	5	0	3	24	3	0	12	67	5	0	331
07:45 AM	17	120	15	0	14	53	8	0	2	27	2	0	14	53	12	0	337
Total	30	247	36	0	23	95	13	0	5	51	5	0	26	120	17	0	668
08:00 AM	13	119	19	0	10	58	9	0	7	40	4	0	10	58	10	0	357
08:15 AM	8	142	10	0	6	58	9	0	2	24	4	0	20	63	8	0	354
08:30 AM	14	130	19	0	13	47	13	0	5	29	7	0	12	67	7	0	363
08:45 AM	13	131	9	0	7	40	10	0	5	26	4	0	11	61	10	0	327
Total	48	522	57	0	36	203	41	0	19	119	19	0	53	249	35	0	1401
09:00 AM	14	130	27	0	10	54	6	0	11	23	6	0	22	51	11	0	365
09:15 AM	15	119	12	0	12	52	8	0	12	30	11	0	14	65	10	1	361
Grand Total	107	1018	132	0	81	404	68	0	47	223	41	0	115	485	73	1	2795
Apprch %	8.5	81	10.5	0	14.6	73.1	12.3	0	15.1	71.7	13.2	0	17.1	72	10.8	0.1	
Total %	3.8	36.4	4.7	0	2.9	14.5	2.4	0	1.7	8	1.5	0	4.1	17.4	2.6	0	
Cars	94	1005	127	0	81	368	64	0	43	215	40	0	108	438	61	1	2645
% Cars	87.9	98.7	96.2	0	100	91.1	94.1	0	91.5	96.4	97.6	0	93.9	90.3	83.6	100	94.6
Heavy Vehicles	4	11	4	0	0	30	4	0	2	7	0	0	5	45	4	0	116
% Heavy Vehicles	3.7	1.1	3	0	0	7.4	5.9	0	4.3	3.1	0	0	4.3	9.3	5.5	0	4.2
Buses	9	2	1	0	0	6	0	0	2	1	1	0	2	2	8	0	34
% Buses	8.4	0.2	0.8	0	0	1.5	0	0	4.3	0.4	2.4	0	1.7	0.4	11	0	1.2

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:30 AM

08:30 AM	14	130	19	0	163	13	47	13	0	73	5	29	7	0	41	12	67	7	0	86	363
08:45 AM	13	131	9	0	153	7	40	10	0	57	5	26	4	0	35	11	61	10	0	82	327
09:00 AM	14	130	27	0	171	10	54	6	0	70	11	23	6	0	40	22	51	11	0	84	365
09:15 AM	15	119	12	0	146	12	52	8	0	72	12	30	11	0	53	14	65	10	1	90	361
Total Volume	56	510	67	0	633	42	193	37	0	272	33	108	28	0	169	59	244	38	1	342	1416
% App. Total	8.8	80.6	10.6	0		15.4	71	13.6	0		19.5	63.9	16.6	0		17.3	71.3	11.1	0.3		
PHF	.933	.973	.620	.000	.925	.808	.894	.712	.000	.932	.688	.900	.636	.000	.797	.670	.910	.864	.250	.950	.970
Cars	48	502	63	0	613	42	175	35	0	252	32	105	27	0	164	56	215	31	1	303	1332
% Cars	85.7	98.4	94.0	0	96.8	100	90.7	94.6	0	92.6	97.0	97.2	96.4	0	97.0	94.9	88.1	81.6	100	88.6	94.1
Heavy Vehicles	4	7	3	0	14	0	15	2	0	17	1	3	0	0	4	3	28	4	0	35	70
% Heavy Vehicles	7.1	1.4	4.5	0	2.2	0	7.8	5.4	0	6.3	3.0	2.8	0	0	2.4	5.1	11.5	10.5	0	10.2	4.9
Buses	4	1	1	0	6	0	3	0	0	3	0	0	1	0	1	0	1	3	0	4	14
% Buses	7.1	0.2	1.5	0	0.9	0	1.6	0	0	1.1	0	0	3.6	0	0.6	0	0.4	7.9	0	1.2	1.0

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Cars

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	12	126	20	0	9	37	5	0	1	24	3	0	11	62	4	0	314
07:45 AM	15	118	15	0	14	50	8	0	2	26	2	0	12	51	11	0	324
Total	27	244	35	0	23	87	13	0	3	50	5	0	23	113	15	0	638
08:00 AM	12	118	19	0	10	54	7	0	6	37	4	0	10	53	8	0	338
08:15 AM	7	141	10	0	6	52	9	0	2	23	4	0	19	57	7	0	337
08:30 AM	12	127	18	0	13	45	13	0	5	28	6	0	9	60	5	0	341
08:45 AM	11	129	7	0	7	37	8	0	5	26	4	0	11	52	10	0	307
Total	42	515	54	0	36	188	37	0	18	114	18	0	49	222	30	0	1323
09:00 AM	13	128	26	0	10	48	6	0	11	21	6	0	22	45	7	0	343
09:15 AM	12	118	12	0	12	45	8	0	11	30	11	0	14	58	9	1	341
Grand Total	94	1005	127	0	81	368	64	0	43	215	40	0	108	438	61	1	2645
Apprch %	7.7	82	10.4	0	15.8	71.7	12.5	0	14.4	72.1	13.4	0	17.8	72	10	0.2	
Total %	3.6	38	4.8	0	3.1	13.9	2.4	0	1.6	8.1	1.5	0	4.1	16.6	2.3	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	15	118	15	0	148	14	50	8	0	72	2	26	2	0	30	12	51	11	0	74	324
08:00 AM	12	118	19	0	149	10	54	7	0	71	6	37	4	0	47	10	53	8	0	71	338
08:15 AM	7	141	10	0	158	6	52	9	0	67	2	23	4	0	29	19	57	7	0	83	337
08:30 AM	12	127	18	0	157	13	45	13	0	71	5	28	6	0	39	9	60	5	0	74	341
Total Volume	46	504	62	0	612	43	201	37	0	281	15	114	16	0	145	50	221	31	0	302	1340
% App. Total	7.5	82.4	10.1	0		15.3	71.5	13.2	0		10.3	78.6	11	0		16.6	73.2	10.3	0		
PHF	.767	.894	.816	.000	.968	.768	.931	.712	.000	.976	.625	.770	.667	.000	.771	.658	.921	.705	.000	.910	.982

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	1	0	0	4	0	0	0	0	0	0	0	5	0	0	11
07:45 AM	0	1	0	0	0	3	0	0	0	1	0	0	1	1	0	0	7
Total	0	2	1	0	0	7	0	0	0	1	0	0	1	6	0	0	18
08:00 AM	0	1	0	0	0	4	2	0	1	2	0	0	0	5	0	0	15
08:15 AM	0	1	0	0	0	4	0	0	0	1	0	0	1	6	0	0	13
08:30 AM	0	3	1	0	0	2	0	0	0	1	0	0	3	7	0	0	17
08:45 AM	1	2	2	0	0	3	2	0	0	0	0	0	0	9	0	0	19
Total	1	7	3	0	0	13	4	0	1	4	0	0	4	27	0	0	64
09:00 AM	0	2	0	0	0	6	0	0	0	2	0	0	0	5	3	0	18
09:15 AM	3	0	0	0	0	4	0	0	1	0	0	0	0	7	1	0	16
Grand Total	4	11	4	0	0	30	4	0	2	7	0	0	5	45	4	0	116
Apprch %	21.1	57.9	21.1	0	0	88.2	11.8	0	22.2	77.8	0	0	9.3	83.3	7.4	0	
Total %	3.4	9.5	3.4	0	0	25.9	3.4	0	1.7	6	0	0	4.3	38.8	3.4	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	3	1	0	4	0	2	0	0	2	0	1	0	0	1	3	7	0	0	10	17
08:45 AM	1	2	2	0	5	0	3	2	0	5	0	0	0	0	0	0	9	0	0	9	19
09:00 AM	0	2	0	0	2	0	6	0	0	6	0	2	0	0	2	0	5	3	0	8	18
09:15 AM	3	0	0	0	3	0	4	0	0	4	1	0	0	0	1	0	7	1	0	8	16
Total Volume	4	7	3	0	14	0	15	2	0	17	1	3	0	0	4	3	28	4	0	35	70
% App. Total	28.6	50	21.4	0		0	88.2	11.8	0		25	75	0	0		8.6	80	11.4	0		
PHF	.333	.583	.375	.000	.700	.000	.625	.250	.000	.708	.250	.375	.000	.000	.500	.250	.778	.333	.000	.875	.921

N/S: 3rd Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	1	0	0	2	0	0	0	1	0	1	0	6
07:45 AM	2	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	6
Total	3	1	0	0	0	1	0	0	2	0	0	0	2	1	2	0	12
08:00 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	4
08:15 AM	1	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	4
08:30 AM	2	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	5
08:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	5	0	0	0	0	2	0	0	0	1	1	0	0	0	5	0	14
09:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	4
09:15 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Grand Total	9	2	1	0	0	6	0	0	2	1	1	0	2	2	8	0	34
Apprch %	75	16.7	8.3	0	0	100	0	0	50	25	25	0	16.7	16.7	66.7	0	
Total %	26.5	5.9	2.9	0	0	17.6	0	0	5.9	2.9	2.9	0	5.9	5.9	23.5	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	0	0	0	1	0	1	0	0	1	2	0	0	0	2	1	0	1	0	2	6
07:45 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	6
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	4
08:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	4
Total Volume	5	1	0	0	6	0	3	0	0	3	2	1	0	0	3	2	1	5	0	8	20
% App. Total	83.3	16.7	0	0		0	100	0	0		66.7	33.3	0	0		25	12.5	62.5	0		
PHF	.625	.250	.000	.000	.500	.000	.375	.000	.000	.375	.250	.250	.000	.000	.375	.500	.250	.625	.000	.667	.833

N/S: 3rd Street
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Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Peds and Bicycles

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	16	11	0	1	0	8	5	0	0	0	2	12	1	17	0	7	18	98
07:45 AM	0	0	0	24	4	0	2	0	7	3	0	0	0	3	11	1	14	0	9	13	91
Total	0	0	0	40	15	0	3	0	15	8	0	0	0	5	23	2	31	0	16	31	189
08:00 AM	0	2	1	27	16	0	1	0	11	4	0	0	2	6	16	1	12	0	2	6	107
08:15 AM	0	0	3	27	3	0	1	0	4	3	0	0	0	5	11	1	23	0	4	16	101
08:30 AM	0	4	4	44	15	0	4	1	6	4	0	1	0	7	10	2	26	0	8	9	145
08:45 AM	0	4	1	32	8	0	1	0	6	4	2	1	0	2	9	1	27	0	4	11	113
Total	0	10	9	130	42	0	7	1	27	15	2	2	2	20	46	5	88	0	18	42	466
09:00 AM	1	2	1	32	8	0	1	0	7	8	0	0	0	13	15	1	20	0	14	13	136
09:15 AM	0	1	0	13	9	0	1	0	4	6	0	0	0	6	14	1	10	0	3	5	73
Grand Total	1	13	10	215	74	0	12	1	53	37	2	2	2	44	98	9	149	0	51	91	864
Apprch %	0.3	4.2	3.2	68.7	23.6	0	11.7	1	51.5	35.9	1.4	1.4	1.4	29.7	66.2	3	49.7	0	17	30.3	
Total %	0.1	1.5	1.2	24.9	8.6	0	1.4	0.1	6.1	4.3	0.2	0.2	0.2	5.1	11.3	1	17.2	0	5.9	10.5	

	3rd Street From North						Cambridge Street From East						3rd Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	0	3	27	3	33	0	1	0	4	3	8	0	0	0	5	11	16	1	23	0	4	16	44	101
08:30 AM	0	4	4	44	15	67	0	4	1	6	4	15	0	1	0	7	10	18	2	26	0	8	9	45	145
08:45 AM	0	4	1	32	8	45	0	1	0	6	4	11	2	1	0	2	9	14	1	27	0	4	11	43	113
09:00 AM	1	2	1	32	8	44	0	1	0	7	8	16	0	0	0	13	15	28	1	20	0	14	13	48	136
Total Volume	1	10	9	135	34	189	0	7	1	23	19	50	2	2	0	27	45	76	5	96	0	30	49	180	495
% App. Total	0.5	5.3	4.8	71.4	18		0	14	2	46	38		2.6	2.6	0	35.5	59.2		2.8	53.3	0	16.7	27.2		
PHF	.250	.625	.563	.767	.567	.705	.000	.438	.250	.821	.594	.781	.250	.500	.000	.519	.750	.679	.625	.889	.000	.536	.766	.938	.853

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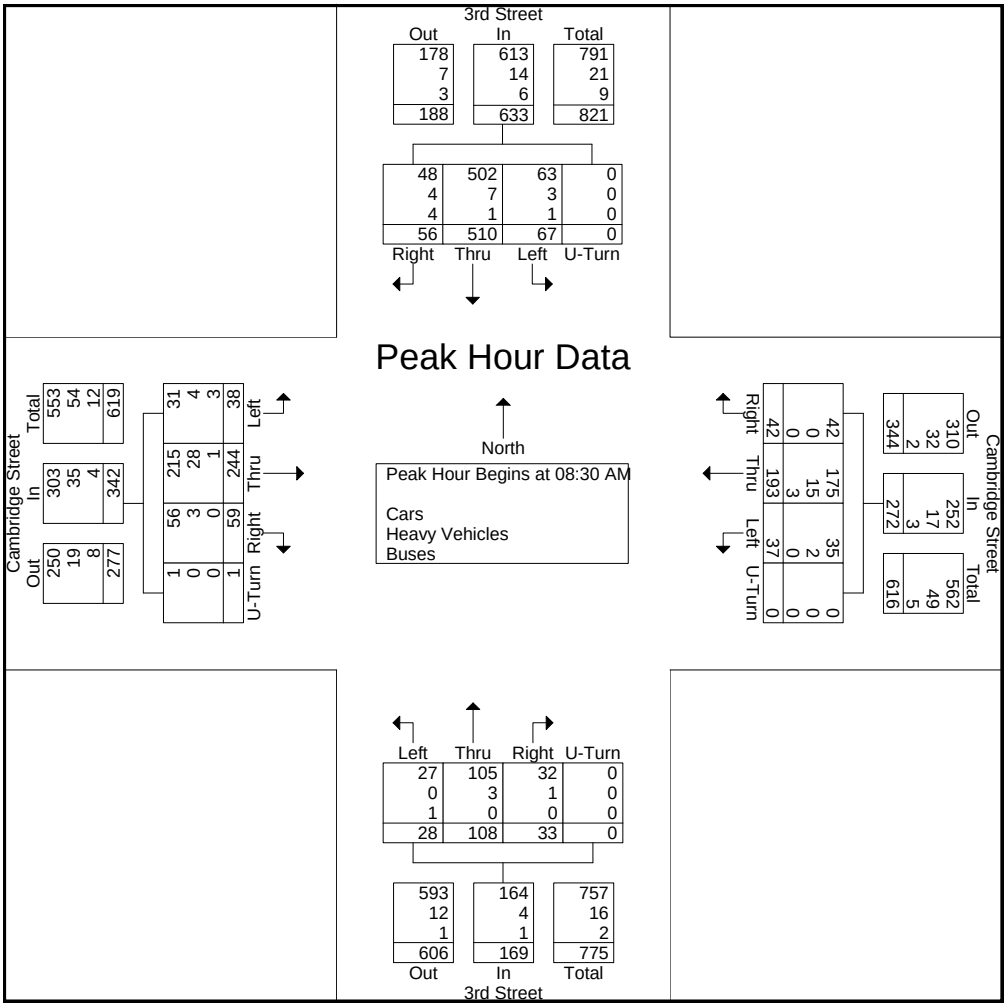
	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	14	130	19	0	163	13	47	13	0	73	5	29	7	0	41	12	67	7	0	86	363
08:45 AM	13	131	9	0	153	7	40	10	0	57	5	26	4	0	35	11	61	10	0	82	327
09:00 AM	14	130	27	0	171	10	54	6	0	70	11	23	6	0	40	22	51	11	0	84	365
09:15 AM	15	119	12	0	146	12	52	8	0	72	12	30	11	0	53	14	65	10	1	90	361
Total Volume	56	510	67	0	633	42	193	37	0	272	33	108	28	0	169	59	244	38	1	342	1416
% App. Total	8.8	80.6	10.6	0		15.4	71	13.6	0		19.5	63.9	16.6	0		17.3	71.3	11.1	0.3		
PHF	.933	.973	.620	.000	.925	.808	.894	.712	.000	.932	.688	.900	.636	.000	.797	.670	.910	.864	.250	.950	.970
Cars	48	502	63	0	613	42	175	35	0	252	32	105	27	0	164	56	215	31	1	303	1332
% Cars	85.7	98.4	94.0	0	96.8	100	90.7	94.6	0	92.6	97.0	97.2	96.4	0	97.0	94.9	88.1	81.6	100	88.6	94.1
Heavy Vehicles	4	7	3	0	14	0	15	2	0	17	1	3	0	0	4	3	28	4	0	35	70
% Heavy Vehicles	7.1	1.4	4.5	0	2.2	0	7.8	5.4	0	6.3	3.0	2.8	0	0	2.4	5.1	11.5	10.5	0	10.2	4.9
Buses	4	1	1	0	6	0	3	0	0	3	0	0	1	0	1	0	1	3	0	4	14
% Buses	7.1	0.2	1.5	0	0.9	0	1.6	0	0	1.1	0	0	3.6	0	0.6	0	0.4	7.9	0	1.2	1.0



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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	17	63	9	0	76	45	3	0	3	109	1	0	8	58	23	0	415
04:45 PM	12	69	10	0	64	40	5	0	2	131	4	0	18	79	15	0	449
Total	29	132	19	0	140	85	8	0	5	240	5	0	26	137	38	0	864
05:00 PM	16	77	11	0	62	50	1	0	2	113	1	0	4	64	17	0	418
05:15 PM	16	85	10	0	58	60	2	0	3	131	7	0	8	63	18	0	461
05:30 PM	17	89	11	0	56	65	2	0	1	120	6	0	4	46	12	0	429
05:45 PM	12	66	5	0	36	64	2	0	5	128	5	0	7	58	8	0	396
Total	61	317	37	0	212	239	7	0	11	492	19	0	23	231	55	0	1704
06:00 PM	16	79	12	0	38	56	4	0	3	130	5	0	7	71	11	0	432
06:15 PM	13	61	7	0	32	70	1	0	9	122	11	0	13	69	10	0	418
Grand Total	119	589	75	0	422	450	20	0	28	984	40	0	69	508	114	0	3418
Apprch %	15.2	75.2	9.6	0	47.3	50.4	2.2	0	2.7	93.5	3.8	0	10	73.5	16.5	0	
Total %	3.5	17.2	2.2	0	12.3	13.2	0.6	0	0.8	28.8	1.2	0	2	14.9	3.3	0	
Cars	113	588	73	0	422	437	19	0	28	979	39	0	67	487	106	0	3358
% Cars	95	99.8	97.3	0	100	97.1	95	0	100	99.5	97.5	0	97.1	95.9	93	0	98.2
Heavy Vehicles	1	0	2	0	0	12	0	0	0	5	1	0	1	19	1	0	42
% Heavy Vehicles	0.8	0	2.7	0	0	2.7	0	0	0	0.5	2.5	0	1.4	3.7	0.9	0	1.2
Buses	5	1	0	0	0	1	1	0	0	0	0	0	1	2	7	0	18
% Buses	4.2	0.2	0	0	0	0.2	5	0	0	0	0	0	1.4	0.4	6.1	0	0.5

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	12	69	10	0	91	64	40	5	0	109	2	131	4	0	137	18	79	15	0	112	449
05:00 PM	16	77	11	0	104	62	50	1	0	113	2	113	1	0	116	4	64	17	0	85	418
05:15 PM	16	85	10	0	111	58	60	2	0	120	3	131	7	0	141	8	63	18	0	89	461
05:30 PM	17	89	11	0	117	56	65	2	0	123	1	120	6	0	127	4	46	12	0	62	429
Total Volume	61	320	42	0	423	240	215	10	0	465	8	495	18	0	521	34	252	62	0	348	1757
% App. Total	14.4	75.7	9.9	0		51.6	46.2	2.2	0		1.5	95	3.5	0		9.8	72.4	17.8	0		
PHF	.897	.899	.955	.000	.904	.938	.827	.500	.000	.945	.667	.945	.643	.000	.924	.472	.797	.861	.000	.777	.953
Cars	57	319	40	0	416	240	208	10	0	458	8	492	17	0	517	34	240	58	0	332	1723
% Cars	93.4	99.7	95.2	0	98.3	100	96.7	100	0	98.5	100	99.4	94.4	0	99.2	100	95.2	93.5	0	95.4	98.1
Heavy Vehicles	1	0	2	0	3	0	6	0	0	6	0	3	1	0	4	0	12	1	0	13	26
% Heavy Vehicles	1.6	0	4.8	0	0.7	0	2.8	0	0	1.3	0	0.6	5.6	0	0.8	0	4.8	1.6	0	3.7	1.5
Buses	3	1	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	8
% Buses	4.9	0.3	0	0	0.9	0	0.5	0	0	0.2	0	0	0	0	0	0	0	4.8	0	0.9	0.5

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 BB
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	17	63	9	0	76	43	3	0	3	108	1	0	7	55	21	0	406
04:45 PM	12	68	10	0	64	39	5	0	2	131	4	0	18	77	13	0	443
Total	29	131	19	0	140	82	8	0	5	239	5	0	25	132	34	0	849
05:00 PM	15	77	11	0	62	48	1	0	2	113	1	0	4	59	15	0	408
05:15 PM	14	85	10	0	58	58	2	0	3	129	6	0	8	60	18	0	451
05:30 PM	16	89	9	0	56	63	2	0	1	119	6	0	4	44	12	0	421
05:45 PM	12	66	5	0	36	63	1	0	5	128	5	0	7	58	8	0	394
Total	57	317	35	0	212	232	6	0	11	489	18	0	23	221	53	0	1674
06:00 PM	15	79	12	0	38	56	4	0	3	130	5	0	7	68	9	0	426
06:15 PM	12	61	7	0	32	67	1	0	9	121	11	0	12	66	10	0	409
Grand Total	113	588	73	0	422	437	19	0	28	979	39	0	67	487	106	0	3358
Apprch %	14.6	76	9.4	0	48.1	49.8	2.2	0	2.7	93.6	3.7	0	10.2	73.8	16.1	0	
Total %	3.4	17.5	2.2	0	12.6	13	0.6	0	0.8	29.2	1.2	0	2	14.5	3.2	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	68	10	0	90	64	39	5	0	108	2	131	4	0	137	18	77	13	0	108	443
05:00 PM	15	77	11	0	103	62	48	1	0	111	2	113	1	0	116	4	59	15	0	78	408
05:15 PM	14	85	10	0	109	58	58	2	0	118	3	129	6	0	138	8	60	18	0	86	451
05:30 PM	16	89	9	0	114	56	63	2	0	121	1	119	6	0	126	4	44	12	0	60	421
Total Volume	57	319	40	0	416	240	208	10	0	458	8	492	17	0	517	34	240	58	0	332	1723
% App. Total	13.7	76.7	9.6	0		52.4	45.4	2.2	0		1.5	95.2	3.3	0		10.2	72.3	17.5	0		
PHF	.891	.896	.909	.000	.912	.938	.825	.500	.000	.946	.667	.939	.708	.000	.937	.472	.779	.806	.000	.769	.955

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	2	0	0	0	1	0	0	1	3	0	0	7
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Total	0	0	0	0	0	3	0	0	0	1	0	0	1	5	0	0	10
05:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	5	1	0	8
05:15 PM	1	0	0	0	0	1	0	0	0	2	1	0	0	3	0	0	8
05:30 PM	0	0	2	0	0	2	0	0	0	1	0	0	0	2	0	0	7
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	2	0	0	6	0	0	0	3	1	0	0	10	1	0	24
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
06:15 PM	0	0	0	0	0	3	0	0	0	1	0	0	0	2	0	0	6
Grand Total	1	0	2	0	0	12	0	0	0	5	1	0	1	19	1	0	42
Apprch %	33.3	0	66.7	0	0	100	0	0	0	83.3	16.7	0	4.8	90.5	4.8	0	
Total %	2.4	0	4.8	0	0	28.6	0	0	0	11.9	2.4	0	2.4	45.2	2.4	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	1	3	0	0	4	7
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
05:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	8
05:15 PM	1	0	0	0	1	0	1	0	0	1	0	2	1	0	3	0	3	0	0	3	8
Total Volume	1	0	0	0	1	0	6	0	0	6	0	3	1	0	4	1	13	1	0	15	26
% App. Total	100	0	0	0		0	100	0	0		0	75	25	0		6.7	86.7	6.7	0		
PHF	.250	.000	.000	.000	.250	.000	.750	.000	.000	.750	.000	.375	.250	.000	.333	.250	.650	.250	.000	.625	.813

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 BB
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Buses

	3rd Street From North				Cambridge Street From East				3rd Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	5
05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
05:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	3	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	6
06:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	4
06:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3
Grand Total	5	1	0	0	0	1	1	0	0	0	0	0	1	2	7	0	18
Apprch %	83.3	16.7	0	0	0	50	50	0	0	0	0	0	10	20	70	0	
Total %	27.8	5.6	0	0	0	5.6	5.6	0	0	0	0	0	5.6	11.1	38.9	0	

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total Volume	2	1	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	5	0	5	9
% App. Total	66.7	33.3	0	0		0	100	0	0		0	0	0	0		0	0	100	0		
PHF	.500	.250	.000	.000	.750	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.625	.000	.625	.750

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 BB
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Peds and Bicycles

	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	18	14	0	7	0	10	6	0	1	0	14	4	0	3	0	8	8	93
04:45 PM	0	0	0	11	16	1	7	0	2	5	0	0	0	14	8	1	3	0	4	3	75
Total	0	0	0	29	30	1	14	0	12	11	0	1	0	28	12	1	6	0	12	11	168
05:00 PM	0	1	0	25	28	0	13	0	2	4	0	2	0	10	13	0	5	0	8	5	116
05:15 PM	0	0	0	16	20	0	22	0	4	10	0	1	4	13	11	0	6	0	2	7	116
05:30 PM	0	0	0	14	22	0	14	0	5	9	1	0	0	11	13	0	3	1	2	5	100
05:45 PM	0	1	3	8	19	1	21	0	4	8	0	0	4	19	10	0	3	0	5	3	109
Total	0	2	3	63	89	1	70	0	15	31	1	3	8	53	47	0	17	1	17	20	441
06:00 PM	0	2	0	22	18	0	22	0	5	6	0	0	1	9	11	0	2	0	7	10	115
06:15 PM	0	0	0	14	7	0	12	0	1	5	0	3	2	11	17	0	4	0	5	1	82
Grand Total	0	4	3	128	144	2	118	0	33	53	1	7	11	101	87	1	29	1	41	42	806
Apprch %	0	1.4	1.1	45.9	51.6	1	57.3	0	16	25.7	0.5	3.4	5.3	48.8	42	0.9	25.4	0.9	36	36.8	
Total %	0	0.5	0.4	15.9	17.9	0.2	14.6	0	4.1	6.6	0.1	0.9	1.4	12.5	10.8	0.1	3.6	0.1	5.1	5.2	

	3rd Street From North						Cambridge Street From East						3rd Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	1	0	25	28	54	0	13	0	2	4	19	0	2	0	10	13	25	0	5	0	8	5	18	116
05:15 PM	0	0	0	16	20	36	0	22	0	4	10	36	0	1	4	13	11	29	0	6	0	2	7	15	116
05:30 PM	0	0	0	14	22	36	0	14	0	5	9	28	1	0	0	11	13	25	0	3	1	2	5	11	100
05:45 PM	0	1	3	8	19	31	1	21	0	4	8	34	0	0	4	19	10	33	0	3	0	5	3	11	109
Total Volume	0	2	3	63	89	157	1	70	0	15	31	117	1	3	8	53	47	112	0	17	1	17	20	55	441
% App. Total	0	1.3	1.9	40.1	56.7		0.9	59.8	0	12.8	26.5		0.9	2.7	7.1	47.3	42		0	30.9	1.8	30.9	36.4		
PHF	.000	.500	.250	.630	.795	.727	.250	.795	.000	.750	.775	.813	.250	.375	.500	.697	.904	.848	.000	.708	.250	.531	.714	.764	.950

N/S: 3rd Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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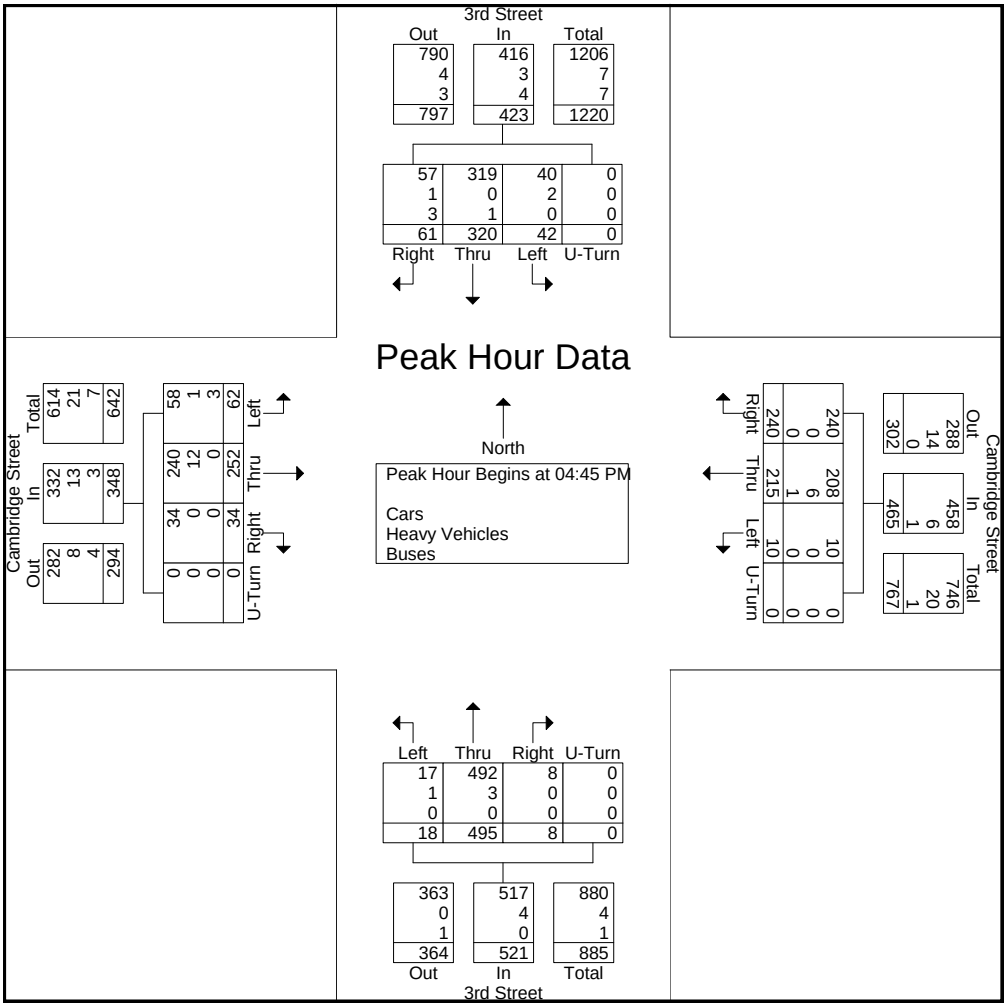
	3rd Street From North					Cambridge Street From East					3rd Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	69	10	0	91	64	40	5	0	109	2	131	4	0	137	18	79	15	0	112	449
05:00 PM	16	77	11	0	104	62	50	1	0	113	2	113	1	0	116	4	64	17	0	85	418
05:15 PM	16	85	10	0	111	58	60	2	0	120	3	131	7	0	141	8	63	18	0	89	461
05:30 PM	17	89	11	0	117	56	65	2	0	123	1	120	6	0	127	4	46	12	0	62	429
Total Volume	61	320	42	0	423	240	215	10	0	465	8	495	18	0	521	34	252	62	0	348	1757
% App. Total	14.4	75.7	9.9	0		51.6	46.2	2.2	0		1.5	95	3.5	0		9.8	72.4	17.8	0		
PHF	.897	.899	.955	.000	.904	.938	.827	.500	.000	.945	.667	.945	.643	.000	.924	.472	.797	.861	.000	.777	.953
Cars	57	319	40	0	416	240	208	10	0	458	8	492	17	0	517	34	240	58	0	332	1723
% Cars	93.4	99.7	95.2	0	98.3	100	96.7	100	0	98.5	100	99.4	94.4	0	99.2	100	95.2	93.5	0	95.4	98.1
Heavy Vehicles	1	0	2	0	3	0	6	0	0	6	0	3	1	0	4	0	12	1	0	13	26
% Heavy Vehicles	1.6	0	4.8	0	0.7	0	2.8	0	0	1.3	0	0.6	5.6	0	0.8	0	4.8	1.6	0	3.7	1.5
Buses	3	1	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	8
% Buses	4.9	0.3	0	0	0.9	0	0.5	0	0	0.2	0	0	0	0	0	0	0	4.8	0	0.9	0.5



N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 C
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	48	49	0	27	0	4	0	8	65	0	0	201
07:45 AM	0	0	0	0	0	70	52	0	23	0	7	0	10	52	0	0	214
Total	0	0	0	0	0	118	101	0	50	0	11	0	18	117	0	0	415
08:00 AM	0	0	0	0	0	65	65	0	28	0	6	0	9	54	0	0	227
08:15 AM	0	0	0	0	0	74	79	0	38	0	7	0	13	52	0	0	263
08:30 AM	0	0	0	0	0	59	73	0	24	0	8	0	15	56	1	0	236
08:45 AM	0	0	0	0	0	53	84	0	25	0	11	0	17	52	0	0	242
Total	0	0	0	0	0	251	301	0	115	0	32	0	54	214	1	0	968
09:00 AM	0	0	0	0	0	57	67	0	35	0	10	0	20	41	0	0	230
09:15 AM	0	0	0	0	0	58	62	0	44	0	6	0	16	55	0	0	241
Grand Total	0	0	0	0	0	484	531	0	244	0	59	0	108	427	1	0	1854
Apprch %	0	0	0	0	0	47.7	52.3	0	80.5	0	19.5	0	20.1	79.7	0.2	0	
Total %	0	0	0	0	0	26.1	28.6	0	13.2	0	3.2	0	5.8	23	0.1	0	
Cars	0	0	0	0	0	454	458	0	171	0	50	0	97	394	1	0	1625
% Cars	0	0	0	0	0	93.8	86.3	0	70.1	0	84.7	0	89.8	92.3	100	0	87.6
Heavy Vehicles	0	0	0	0	0	25	56	0	58	0	9	0	11	30	0	0	189
% Heavy Vehicles	0	0	0	0	0	5.2	10.5	0	23.8	0	15.3	0	10.2	7	0	0	10.2
Buses	0	0	0	0	0	5	17	0	15	0	0	0	0	3	0	0	40
% Buses	0	0	0	0	0	1	3.2	0	6.1	0	0	0	0	0.7	0	0	2.2

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	74	79	0	153	38	0	7	0	45	13	52	0	0	65	263
08:30 AM	0	0	0	0	0	0	59	73	0	132	24	0	8	0	32	15	56	1	0	72	236
08:45 AM	0	0	0	0	0	0	53	84	0	137	25	0	11	0	36	17	52	0	0	69	242
09:00 AM	0	0	0	0	0	0	57	67	0	124	35	0	10	0	45	20	41	0	0	61	230
Total Volume	0	0	0	0	0	0	243	303	0	546	122	0	36	0	158	65	201	1	0	267	971
% App. Total	0	0	0	0		0	44.5	55.5	0		77.2	0	22.8	0		24.3	75.3	0.4	0		
PHF	.000	.000	.000	.000	.000	.000	.821	.902	.000	.892	.803	.000	.818	.000	.878	.813	.897	.250	.000	.927	.923
Cars	0	0	0	0	0	0	232	266	0	498	82	0	31	0	113	57	184	1	0	242	853
% Cars	0	0	0	0	0	0	95.5	87.8	0	91.2	67.2	0	86.1	0	71.5	87.7	91.5	100	0	90.6	87.8
Heavy Vehicles	0	0	0	0	0	0	10	28	0	38	33	0	5	0	38	8	16	0	0	24	100
% Heavy Vehicles	0	0	0	0	0	0	4.1	9.2	0	7.0	27.0	0	13.9	0	24.1	12.3	8.0	0	0	9.0	10.3
Buses	0	0	0	0	0	0	1	9	0	10	7	0	0	0	7	0	1	0	0	1	18
% Buses	0	0	0	0	0	0	0.4	3.0	0	1.8	5.7	0	0	0	4.4	0	0.5	0	0	0.4	1.9

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Groups Printed- Cars

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	43	39	0	20	0	4	0	8	58	0	0	172
07:45 AM	0	0	0	0	0	67	45	0	18	0	7	0	9	51	0	0	197
Total	0	0	0	0	0	110	84	0	38	0	11	0	17	109	0	0	369
08:00 AM	0	0	0	0	0	60	54	0	18	0	4	0	8	53	0	0	197
08:15 AM	0	0	0	0	0	69	71	0	28	0	6	0	9	52	0	0	235
08:30 AM	0	0	0	0	0	59	62	0	15	0	7	0	12	49	1	0	205
08:45 AM	0	0	0	0	0	51	75	0	17	0	10	0	16	45	0	0	214
Total	0	0	0	0	0	239	262	0	78	0	27	0	45	199	1	0	851
09:00 AM	0	0	0	0	0	53	58	0	22	0	8	0	20	38	0	0	199
09:15 AM	0	0	0	0	0	52	54	0	33	0	4	0	15	48	0	0	206
Grand Total	0	0	0	0	0	454	458	0	171	0	50	0	97	394	1	0	1625
Apprch %	0	0	0	0	0	49.8	50.2	0	77.4	0	22.6	0	19.7	80.1	0.2	0	
Total %	0	0	0	0	0	27.9	28.2	0	10.5	0	3.1	0	6	24.2	0.1	0	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	69	71	0	140	28	0	6	0	34	9	52	0	0	61	235
08:30 AM	0	0	0	0	0	0	59	62	0	121	15	0	7	0	22	12	49	1	0	62	205
08:45 AM	0	0	0	0	0	0	51	75	0	126	17	0	10	0	27	16	45	0	0	61	214
09:00 AM	0	0	0	0	0	0	53	58	0	111	22	0	8	0	30	20	38	0	0	58	199
Total Volume	0	0	0	0	0	0	232	266	0	498	82	0	31	0	113	57	184	1	0	242	853
% App. Total	0	0	0	0		0	46.6	53.4	0		72.6	0	27.4	0		23.6	76	0.4	0		
PHF	.000	.000	.000	.000	.000	.000	.841	.887	.000	.889	.732	.000	.775	.000	.831	.713	.885	.250	.000	.976	.907

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
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Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	4	8	0	6	0	0	0	0	5	0	0	23
07:45 AM	0	0	0	0	0	3	6	0	2	0	0	0	1	1	0	0	13
Total	0	0	0	0	0	7	14	0	8	0	0	0	1	6	0	0	36
08:00 AM	0	0	0	0	0	5	8	0	8	0	2	0	1	1	0	0	25
08:15 AM	0	0	0	0	0	4	6	0	8	0	1	0	4	0	0	0	23
08:30 AM	0	0	0	0	0	0	8	0	7	0	1	0	3	7	0	0	26
08:45 AM	0	0	0	0	0	2	7	0	6	0	1	0	1	6	0	0	23
Total	0	0	0	0	0	11	29	0	29	0	5	0	9	14	0	0	97
09:00 AM	0	0	0	0	0	4	7	0	12	0	2	0	0	3	0	0	28
09:15 AM	0	0	0	0	0	3	6	0	9	0	2	0	1	7	0	0	28
Grand Total	0	0	0	0	0	25	56	0	58	0	9	0	11	30	0	0	189
Apprch %	0	0	0	0	0	30.9	69.1	0	86.6	0	13.4	0	26.8	73.2	0	0	
Total %	0	0	0	0	0	13.2	29.6	0	30.7	0	4.8	0	5.8	15.9	0	0	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	0	0	0	0	0	0	8	0	8	7	0	1	0	8	3	7	0	0	10	26
08:45 AM	0	0	0	0	0	0	2	7	0	9	6	0	1	0	7	1	6	0	0	7	23
09:00 AM	0	0	0	0	0	0	4	7	0	11	12	0	2	0	14	0	3	0	0	3	28
09:15 AM	0	0	0	0	0	0	3	6	0	9	9	0	2	0	11	1	7	0	0	8	28
Total Volume	0	0	0	0	0	0	9	28	0	37	34	0	6	0	40	5	23	0	0	28	105
% App. Total	0	0	0	0		0	24.3	75.7	0		85	0	15	0		17.9	82.1	0	0		
PHF	.000	.000	.000	.000	.000	.000	.563	.875	.000	.841	.708	.000	.750	.000	.714	.417	.821	.000	.000	.700	.938

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
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Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	1	2	0	1	0	0	0	0	2	0	0	6
07:45 AM	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	1	3	0	4	0	0	0	0	2	0	0	10
08:00 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
08:15 AM	0	0	0	0	0	1	2	0	2	0	0	0	0	0	0	0	5
08:30 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
08:45 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	5
Total	0	0	0	0	0	1	10	0	8	0	0	0	0	1	0	0	20
09:00 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
09:15 AM	0	0	0	0	0	3	2	0	2	0	0	0	0	0	0	0	7
Grand Total	0	0	0	0	0	5	17	0	15	0	0	0	0	3	0	0	40
Apprch %	0	0	0	0	0	22.7	77.3	0	100	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	12.5	42.5	0	37.5	0	0	0	0	7.5	0	0	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	0	2	0	0	2	6
07:45 AM	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	3	0	3	2	0	0	0	2	0	0	0	0	0	5
08:15 AM	0	0	0	0	0	0	1	2	0	3	2	0	0	0	2	0	0	0	0	0	5
Total Volume	0	0	0	0	0	0	2	8	0	10	8	0	0	0	8	0	2	0	0	2	20
% App. Total	0	0	0	0		0	20	80	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.667	.000	.833	.667	.000	.000	.000	.667	.000	.250	.000	.000	.250	.833

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	6	20	0	1	0	54	5	0	0	0	7	2	1	15	0	6	14	131
07:45 AM	0	0	0	3	18	0	2	1	61	2	1	0	0	22	2	0	12	0	6	18	148
Total	0	0	0	9	38	0	3	1	115	7	1	0	0	29	4	1	27	0	12	32	279
08:00 AM	0	0	0	3	47	0	3	0	59	4	0	0	1	13	3	1	10	0	7	44	195
08:15 AM	0	0	0	2	39	0	2	0	69	3	2	0	1	6	4	2	16	0	7	43	196
08:30 AM	0	0	0	5	39	0	2	3	72	6	1	0	0	15	4	2	27	0	9	33	218
08:45 AM	0	0	0	6	42	0	0	1	86	7	1	0	0	18	5	3	23	0	5	28	225
Total	0	0	0	16	167	0	7	4	286	20	4	0	2	52	16	8	76	0	28	148	834
09:00 AM	0	0	0	8	30	0	1	0	76	3	1	0	1	16	3	2	15	0	6	32	194
09:15 AM	0	0	0	4	28	0	0	0	58	7	0	0	1	7	6	3	8	0	14	16	152
Grand Total	0	0	0	37	263	0	11	5	535	37	6	0	4	104	29	14	126	0	60	228	1459
Apprch %	0	0	0	12.3	87.7	0	1.9	0.9	91	6.3	4.2	0	2.8	72.7	20.3	3.3	29.4	0	14	53.3	
Total %	0	0	0	2.5	18	0	0.8	0.3	36.7	2.5	0.4	0	0.3	7.1	2	1	8.6	0	4.1	15.6	

	MBTA Driveway From North						Cambridge Street From East						1st Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	0	0	0	3	47	50	0	3	0	59	4	66	0	0	1	13	3	17	1	10	0	7	44	62	195
08:15 AM	0	0	0	2	39	41	0	2	0	69	3	74	2	0	1	6	4	13	2	16	0	7	43	68	196
08:30 AM	0	0	0	5	39	44	0	2	3	72	6	83	1	0	0	15	4	20	2	27	0	9	33	71	218
08:45 AM	0	0	0	6	42	48	0	0	1	86	7	94	1	0	0	18	5	24	3	23	0	5	28	59	225
Total Volume	0	0	0	16	167	183	0	7	4	286	20	317	4	0	2	52	16	74	8	76	0	28	148	260	834
% App. Total	0	0	0	8.7	91.3		0	2.2	1.3	90.2	6.3		5.4	0	2.7	70.3	21.6		3.1	29.2	0	10.8	56.9		
PHF	.000	.000	.000	.667	.888	.915	.000	.583	.333	.831	.714	.843	.500	.000	.500	.722	.800	.771	.667	.704	.000	.778	.841	.915	.927

N/S: MBTA Driveway/ 1st Street
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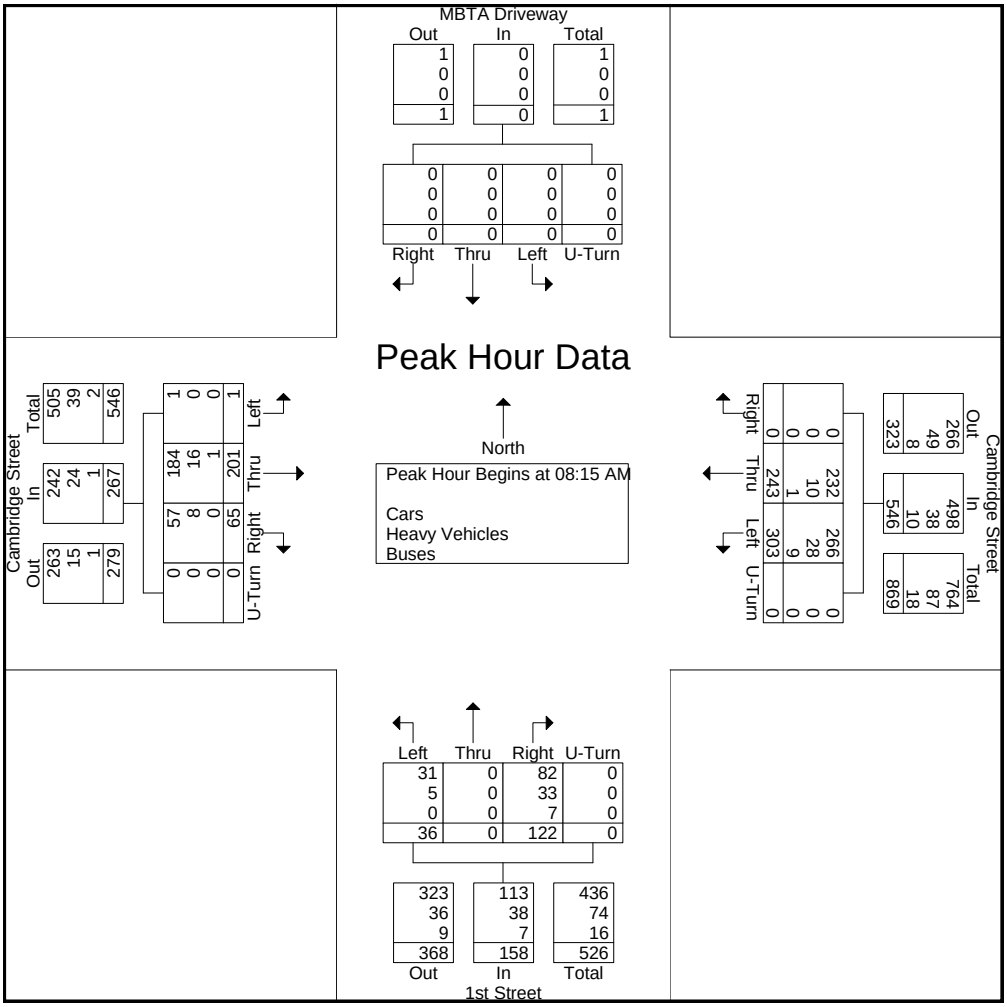
	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	74	79	0	153	38	0	7	0	45	13	52	0	0	65	263
08:30 AM	0	0	0	0	0	0	59	73	0	132	24	0	8	0	32	15	56	1	0	72	236
08:45 AM	0	0	0	0	0	0	53	84	0	137	25	0	11	0	36	17	52	0	0	69	242
09:00 AM	0	0	0	0	0	0	57	67	0	124	35	0	10	0	45	20	41	0	0	61	230
Total Volume	0	0	0	0	0	0	243	303	0	546	122	0	36	0	158	65	201	1	0	267	971
% App. Total	0	0	0	0		0	44.5	55.5	0		77.2	0	22.8	0		24.3	75.3	0.4	0		
PHF	.000	.000	.000	.000	.000	.000	.821	.902	.000	.892	.803	.000	.818	.000	.878	.813	.897	.250	.000	.927	.923
Cars	0	0	0	0	0	0	232	266	0	498	82	0	31	0	113	57	184	1	0	242	853
% Cars	0	0	0	0	0	0	95.5	87.8	0	91.2	67.2	0	86.1	0	71.5	87.7	91.5	100	0	90.6	87.8
Heavy Vehicles	0	0	0	0	0	0	10	28	0	38	33	0	5	0	38	8	16	0	0	24	100
% Heavy Vehicles	0	0	0	0	0	0	4.1	9.2	0	7.0	27.0	0	13.9	0	24.1	12.3	8.0	0	0	9.0	10.3
Buses	0	0	0	0	0	0	1	9	0	10	7	0	0	0	7	0	1	0	0	1	18
% Buses	0	0	0	0	0	0	0.4	3.0	0	1.8	5.7	0	0	0	4.4	0	0.5	0	0	0.4	1.9



N/S: MBTA Driveway/ 1st Street
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Groups Printed- Cars - Heavy Vehicles - Buses

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	35	27	0	125	0	40	0	10	58	0	0	295
04:45 PM	0	0	0	0	0	41	33	0	119	0	43	0	11	72	0	0	319
Total	0	0	0	0	0	76	60	0	244	0	83	0	21	130	0	0	614
05:00 PM	0	0	0	0	0	34	26	1	119	0	36	0	17	57	0	2	292
05:15 PM	0	0	0	0	0	48	48	0	124	0	38	0	11	64	0	0	333
05:30 PM	0	0	0	0	0	34	45	0	100	0	30	0	14	44	0	0	267
05:45 PM	0	0	0	0	0	36	41	0	105	0	35	0	16	56	0	0	289
Total	0	0	0	0	0	152	160	1	448	0	139	0	58	221	0	2	1181
06:00 PM	0	0	0	0	0	40	39	0	76	0	33	0	13	64	0	0	265
06:15 PM	0	0	0	0	0	56	24	0	71	0	18	0	14	66	0	0	249
Grand Total	0	0	0	0	0	324	283	1	839	0	273	0	106	481	0	2	2309
Apprch %	0	0	0	0	0	53.3	46.5	0.2	75.4	0	24.6	0	18	81.7	0	0.3	
Total %	0	0	0	0	0	14	12.3	0	36.3	0	11.8	0	4.6	20.8	0	0.1	
Cars	0	0	0	0	0	318	268	1	808	0	269	0	100	468	0	2	2234
% Cars	0	0	0	0	0	98.1	94.7	100	96.3	0	98.5	0	94.3	97.3	0	100	96.8
Heavy Vehicles	0	0	0	0	0	5	2	0	15	0	2	0	6	11	0	0	41
% Heavy Vehicles	0	0	0	0	0	1.5	0.7	0	1.8	0	0.7	0	5.7	2.3	0	0	1.8
Buses	0	0	0	0	0	1	13	0	16	0	2	0	0	2	0	0	34
% Buses	0	0	0	0	0	0.3	4.6	0	1.9	0	0.7	0	0	0.4	0	0	1.5

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	35	27	0	62	125	0	40	0	165	10	58	0	0	68	295
04:45 PM	0	0	0	0	0	0	41	33	0	74	119	0	43	0	162	11	72	0	0	83	319
05:00 PM	0	0	0	0	0	0	34	26	1	61	119	0	36	0	155	17	57	0	2	76	292
05:15 PM	0	0	0	0	0	0	48	48	0	96	124	0	38	0	162	11	64	0	0	75	333
Total Volume	0	0	0	0	0	0	158	134	1	293	487	0	157	0	644	49	251	0	2	302	1239
% App. Total	0	0	0	0		0	53.9	45.7	0.3		75.6	0	24.4	0		16.2	83.1	0	0.7		
PHF	.000	.000	.000	.000	.000	.000	.823	.698	.250	.763	.974	.000	.913	.000	.976	.721	.872	.000	.250	.910	.930
Cars	0	0	0	0	0	0	156	126	1	283	468	0	154	0	622	46	246	0	2	294	1199
% Cars	0	0	0	0	0	0	98.7	94.0	100	96.6	96.1	0	98.1	0	96.6	93.9	98.0	0	100	97.4	96.8
Heavy Vehicles	0	0	0	0	0	0	2	1	0	3	10	0	2	0	12	3	5	0	0	8	23
% Heavy Vehicles	0	0	0	0	0	0	1.3	0.7	0	1.0	2.1	0	1.3	0	1.9	6.1	2.0	0	0	2.6	1.9
Buses	0	0	0	0	0	0	0	7	0	7	9	0	1	0	10	0	0	0	0	0	17
% Buses	0	0	0	0	0	0	0	5.2	0	2.4	1.8	0	0.6	0	1.6	0	0	0	0	0	1.4

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 CC
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	35	24	0	120	0	40	0	9	58	0	0	286
04:45 PM	0	0	0	0	0	41	31	0	115	0	43	0	11	71	0	0	312
Total	0	0	0	0	0	76	55	0	235	0	83	0	20	129	0	0	598
05:00 PM	0	0	0	0	0	32	25	1	112	0	35	0	17	54	0	2	278
05:15 PM	0	0	0	0	0	48	46	0	121	0	36	0	9	63	0	0	323
05:30 PM	0	0	0	0	0	33	44	0	94	0	30	0	12	42	0	0	255
05:45 PM	0	0	0	0	0	35	39	0	102	0	34	0	16	55	0	0	281
Total	0	0	0	0	0	148	154	1	429	0	135	0	54	214	0	2	1137
06:00 PM	0	0	0	0	0	40	37	0	74	0	33	0	12	61	0	0	257
06:15 PM	0	0	0	0	0	54	22	0	70	0	18	0	14	64	0	0	242
Grand Total	0	0	0	0	0	318	268	1	808	0	269	0	100	468	0	2	2234
Apprch %	0	0	0	0	0	54.2	45.7	0.2	75	0	25	0	17.5	82.1	0	0.4	
Total %	0	0	0	0	0	14.2	12	0	36.2	0	12	0	4.5	20.9	0	0.1	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	35	24	0	59	120	0	40	0	160	9	58	0	0	67	286
04:45 PM	0	0	0	0	0	0	41	31	0	72	115	0	43	0	158	11	71	0	0	82	312
05:00 PM	0	0	0	0	0	0	32	25	1	58	112	0	35	0	147	17	54	0	2	73	278
05:15 PM	0	0	0	0	0	0	48	46	0	94	121	0	36	0	157	9	63	0	0	72	323
Total Volume	0	0	0	0	0	0	156	126	1	283	468	0	154	0	622	46	246	0	2	294	1199
% App. Total	0	0	0	0		0	55.1	44.5	0.4		75.2	0	24.8	0		15.6	83.7	0	0.7		
PHF	.000	.000	.000	.000	.000	.000	.813	.685	.250	.753	.967	.000	.895	.000	.972	.676	.866	.000	.250	.896	.928

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	0	1	0	4	0	0	0	1	1	0	0	7
05:00 PM	0	0	0	0	0	2	0	0	4	0	1	0	0	3	0	0	10
05:15 PM	0	0	0	0	0	0	0	0	2	0	1	0	2	1	0	0	6
05:30 PM	0	0	0	0	0	1	0	0	4	0	0	0	2	2	0	0	9
05:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	4	0	0	11	0	2	0	4	7	0	0	28
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
06:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3
Grand Total	0	0	0	0	0	5	2	0	15	0	2	0	6	11	0	0	41
Apprch %	0	0	0	0	0	71.4	28.6	0	88.2	0	11.8	0	35.3	64.7	0	0	
Total %	0	0	0	0	0	12.2	4.9	0	36.6	0	4.9	0	14.6	26.8	0	0	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	3
05:00 PM	0	0	0	0	0	0	2	0	0	2	4	0	1	0	5	0	3	0	0	3	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	2	1	0	0	3	6
05:30 PM	0	0	0	0	0	0	1	0	0	1	4	0	0	0	4	2	2	0	0	4	9
Total Volume	0	0	0	0	0	0	3	0	0	3	12	0	2	0	14	4	7	0	0	11	28
% App. Total	0	0	0	0		0	100	0	0		85.7	0	14.3	0		36.4	63.6	0	0		
PHF	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.750	.000	.500	.000	.700	.500	.583	.000	.000	.688	.700

N/S: MBTA Driveway/ 1st Street
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Groups Printed- Buses

	MBTA Driveway From North				Cambridge Street From East				1st Street From South				Cambridge Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	4	0	5	0	0	0	0	0	0	0	9
05:00 PM	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	2	0	2	0	1	0	0	0	0	0	5
Total	0	0	0	0	0	0	6	0	8	0	2	0	0	0	0	0	16
06:00 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	5
06:15 PM	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	0	4
Grand Total	0	0	0	0	0	1	13	0	16	0	2	0	0	2	0	0	34
Apprch %	0	0	0	0	0	7.1	92.9	0	88.9	0	11.1	0	0	100	0	0	
Total %	0	0	0	0	0	2.9	38.2	0	47.1	0	5.9	0	0	5.9	0	0	

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	2	0	2	2	0	0	0	2	0	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	2	0	2	1	0	1	0	2	0	0	0	0	0	4
Total Volume	0	0	0	0	0	0	0	7	0	7	9	0	1	0	10	0	0	0	0	0	17
% App. Total	0	0	0	0		0	0	100	0		90	0	10	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.875	.000	.875	.750	.000	.250	.000	.833	.000	.000	.000	.000	.000	.850

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
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Groups Printed- Peds and Bicycles

	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	4	10	0	6	0	80	53	1	0	1	5	0	0	3	0	24	5	192
04:45 PM	0	0	0	4	14	0	5	0	87	41	0	0	2	4	5	1	3	0	21	2	189
Total	0	0	0	8	24	0	11	0	167	94	1	0	3	9	5	1	6	0	45	7	381
05:00 PM	0	0	0	4	18	0	9	0	100	58	1	0	7	6	0	0	5	0	43	11	262
05:15 PM	0	0	0	12	4	0	20	2	28	65	0	0	1	9	5	3	6	0	49	2	206
05:30 PM	0	0	0	12	13	0	10	0	127	110	4	0	5	6	5	0	2	0	41	6	341
05:45 PM	0	0	0	11	6	0	16	1	90	89	1	0	9	9	9	2	2	0	47	2	294
Total	0	0	0	39	41	0	55	3	345	322	6	0	22	30	19	5	15	0	180	21	1103
06:00 PM	0	0	0	13	9	0	15	0	57	77	3	0	5	3	13	0	3	0	51	3	252
06:15 PM	0	0	0	11	6	0	10	1	55	94	2	0	3	2	6	1	1	0	28	5	225
Grand Total	0	0	0	71	80	0	91	4	624	587	12	0	33	44	43	7	25	0	304	36	1961
Apprch %	0	0	0	47	53	0	7	0.3	47.8	44.9	9.1	0	25	33.3	32.6	1.9	6.7	0	81.7	9.7	
Total %	0	0	0	3.6	4.1	0	4.6	0.2	31.8	29.9	0.6	0	1.7	2.2	2.2	0.4	1.3	0	15.5	1.8	

	MBTA Driveway From North						Cambridge Street From East						1st Street From South						Cambridge Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:30 PM																									
05:30 PM	0	0	0	12	13	25	0	10	0	127	110	247	4	0	5	6	5	20	0	2	0	41	6	49	341
05:45 PM	0	0	0	11	6	17	0	16	1	90	89	196	1	0	9	9	9	28	2	2	0	47	2	53	294
06:00 PM	0	0	0	13	9	22	0	15	0	57	77	149	3	0	5	3	13	24	0	3	0	51	3	57	252
06:15 PM	0	0	0	11	6	17	0	10	1	55	94	160	2	0	3	2	6	13	1	1	0	28	5	35	225
Total Volume	0	0	0	47	34	81	0	51	2	329	370	752	10	0	22	20	33	85	3	8	0	167	16	194	1112
% App. Total	0	0	0	58	42		0	6.8	0.3	43.8	49.2		11.8	0	25.9	23.5	38.8		1.5	4.1	0	86.1	8.2		
PHF	.000	.000	.000	.904	.654	.810	.000	.797	.500	.648	.841	.761	.625	.000	.611	.556	.635	.759	.375	.667	.000	.819	.667	.851	.815

N/S: MBTA Driveway/ 1st Street
E/W: Cambridge Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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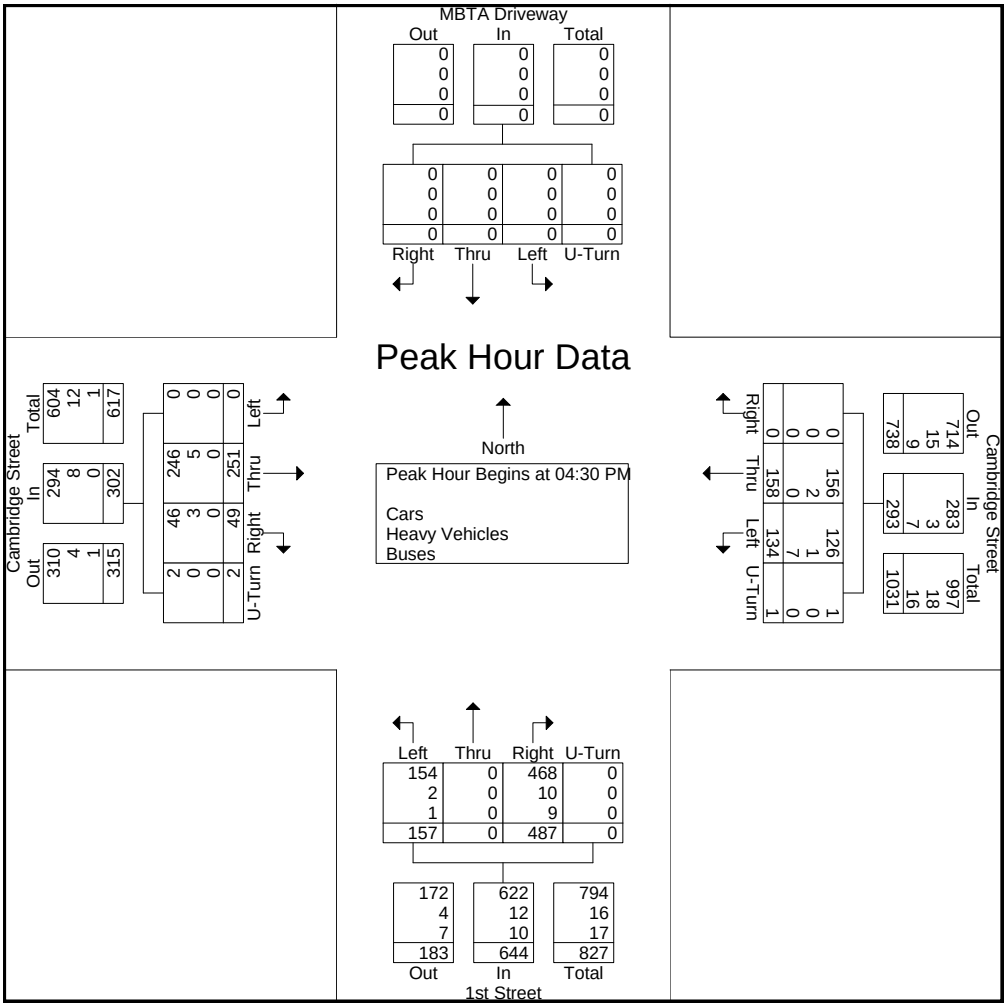
	MBTA Driveway From North					Cambridge Street From East					1st Street From South					Cambridge Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	35	27	0	62	125	0	40	0	165	10	58	0	0	68	295
04:45 PM	0	0	0	0	0	0	41	33	0	74	119	0	43	0	162	11	72	0	0	83	319
05:00 PM	0	0	0	0	0	0	34	26	1	61	119	0	36	0	155	17	57	0	2	76	292
05:15 PM	0	0	0	0	0	0	48	48	0	96	124	0	38	0	162	11	64	0	0	75	333
Total Volume	0	0	0	0	0	0	158	134	1	293	487	0	157	0	644	49	251	0	2	302	1239
% App. Total	0	0	0	0		0	53.9	45.7	0.3		75.6	0	24.4	0		16.2	83.1	0	0.7		
PHF	.000	.000	.000	.000	.000	.000	.823	.698	.250	.763	.974	.000	.913	.000	.976	.721	.872	.000	.250	.910	.930
Cars	0	0	0	0	0	0	156	126	1	283	468	0	154	0	622	46	246	0	2	294	1199
% Cars	0	0	0	0	0	0	98.7	94.0	100	96.6	96.1	0	98.1	0	96.6	93.9	98.0	0	100	97.4	96.8
Heavy Vehicles	0	0	0	0	0	0	2	1	0	3	10	0	2	0	12	3	5	0	0	8	23
% Heavy Vehicles	0	0	0	0	0	0	1.3	0.7	0	1.0	2.1	0	1.3	0	1.9	6.1	2.0	0	0	2.6	1.9
Buses	0	0	0	0	0	0	0	7	0	7	9	0	1	0	10	0	0	0	0	0	17
% Buses	0	0	0	0	0	0	0	5.2	0	2.4	1.8	0	0.6	0	1.6	0	0	0	0	0	1.4



N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 D
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	9	0	6	5	0	8	64	0	76	0	79	4	8	0	0	0	0	0	5	0	0	18	340	12	1	635
07:45 AM	9	0	8	4	0	16	72	0	95	0	66	2	4	0	0	0	0	0	4	0	0	16	309	20	0	625
Total	18	0	14	9	0	24	136	0	171	0	145	6	12	0	0	0	0	0	9	0	0	34	649	32	1	1260
08:00 AM	13	0	8	0	0	9	64	0	105	0	66	9	4	0	0	0	0	0	2	0	0	22	318	29	1	650
08:15 AM	14	0	10	3	0	11	73	0	127	0	72	9	5	0	0	1	0	0	5	0	0	24	365	19	0	738
08:30 AM	9	0	11	6	0	6	84	0	86	0	62	11	7	0	0	0	0	0	2	0	0	23	356	21	0	684
08:45 AM	9	0	10	5	0	3	76	0	98	0	69	7	5	0	0	1	0	0	4	0	0	32	301	14	0	634
Total	45	0	39	14	0	29	297	0	416	0	269	36	21	0	0	2	0	0	13	0	0	101	1340	83	1	2706
09:00 AM	7	0	6	3	0	3	79	0	77	0	63	5	7	0	0	0	0	0	5	0	0	33	298	19	1	606
09:15 AM	3	0	7	3	0	2	73	0	99	0	80	6	14	0	0	0	0	0	3	0	0	18	240	7	0	555
Grand Total	73	0	66	29	0	58	585	0	763	0	557	53	54	0	0	2	0	0	30	0	0	186	2527	141	3	5127
Apprch %	43.5	0	39.3	17.3	0	4.1	41.6	0	54.3	0	83.9	8	8.1	0	0	6.2	0	0	93.8	0	0	6.5	88.4	4.9	0.1	
Total %	1.4	0	1.3	0.6	0	1.1	11.4	0	14.9	0	10.9	1	1.1	0	0	0	0	0	0.6	0	0	3.6	49.3	2.8	0.1	
Cars	68	0	48	27	0	56	560	0	717	0	487	32	38	0	0	2	0	0	0	0	0	146	2485	140	2	4808
% Cars	93.2	0	72.7	93.1	0	96.6	95.7	0	94	0	87.4	60.4	70.4	0	0	100	0	0	0	0	0	78.5	98.3	99.3	66.7	93.8
Heavy Vehicles	5	0	4	2	0	2	23	0	44	0	67	7	16	0	0	0	0	0	0	0	0	39	38	1	0	248
% Heavy Vehicles	6.8	0	6.1	6.9	0	3.4	3.9	0	5.8	0	12	13.2	29.6	0	0	0	0	0	0	0	0	21	1.5	0.7	0	4.8
Buses	0	0	14	0	0	0	2	0	2	0	3	14	0	0	0	0	0	0	30	0	0	1	4	0	1	71
% Buses	0	0	21.2	0	0	0	0.3	0	0.3	0	0.5	26.4	0	0	0	0	0	0	100	0	0	0.5	0.2	0	33.3	1.4

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 08:00 AM																															
08:00 AM	13	0	8	0	0	21	9	64	0	105	0	178	66	9	4	0	0	79	0	0	0	2	0	2	0	22	318	29	1	370	650
08:15 AM	14	0	10	3	0	27	11	73	0	127	0	211	72	9	5	0	0	86	1	0	0	5	0	6	0	24	365	19	0	408	738
08:30 AM	9	0	11	6	0	26	6	84	0	86	0	176	62	11	7	0	0	80	0	0	0	2	0	2	0	23	356	21	0	400	684
08:45 AM	9	0	10	5	0	24	3	76	0	98	0	177	69	7	5	0	0	81	1	0	0	4	0	5	0	32	301	14	0	347	634
Total Volume	45	0	39	14	0	98	29	297	0	416	0	742	269	36	21	0	0	326	2	0	0	13	0	15	0	101	1340	83	1	1525	2706
% App. Total	45.9	0	39.8	14.3	0		3.9	40	0	56.1	0		82.5	11	6.4	0	0		13.3	0	0	86.7	0		0	6.6	87.9	5.4	0.1		
PHF	.804	.000	.886	.583	.000	.907	.659	.884	.000	.819	.000	.879	.934	.818	.750	.000	.000	.948	.500	.000	.000	.650	.000	.625	.000	.789	.918	.716	.250	.934	.917
Cars	40	0	29	13	0	82	28	283	0	394	0	705	239	22	12	0	0	273	2	0	0	0	0	2	0	80	1324	82	1	1487	2549
% Cars	88.9	0	74.4	92.9	0	83.7	96.6	95.3	0	94.7	0	95.0	88.8	61.1	57.1	0	0	83.7	100	0	0	0	0	13.3	0	79.2	98.8	98.8	100	97.5	94.2
Heavy Vehicles	5	0	2	1	0	8	1	14	0	21	0	36	30	5	9	0	0	44	0	0	0	0	0	0	0	20	14	1	0	35	123
% Heavy Vehicles	11.1	0	5.1	7.1	0	8.2	3.4	4.7	0	5.0	0	4.9	11.2	13.9	42.9	0	0	13.5	0	0	0	0	0	0	0	19.8	1.0	1.2	0	2.3	4.5
Buses	0	0	8	0	0	8	0	0	0	1	0	1	0	9	0	0	0	9	0	0	0	13	0	13	0	1	2	0	0	3	34
% Buses	0	0	20.5	0	0	8.2	0	0	0	0.2	0	0.1	0	25.0	0	0	0	2.8	0	0	0	100	0	86.7	0	1.0	0.1	0	0	0.2	1.3

N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	9	0	3	5	0	8	62	0	70	0	70	3	5	0	0	0	0	0	0	0	0	13	337	12	0	597
07:45 AM	9	0	7	4	0	16	69	0	90	0	62	1	3	0	0	0	0	0	0	0	0	12	302	20	0	595
Total	18	0	10	9	0	24	131	0	160	0	132	4	8	0	0	0	0	0	0	0	0	25	639	32	0	1192
08:00 AM	11	0	6	0	0	8	64	0	96	0	60	5	2	0	0	0	0	0	0	0	0	16	317	29	1	615
08:15 AM	12	0	8	2	0	11	72	0	121	0	68	5	3	0	0	1	0	0	0	0	0	19	361	19	0	702
08:30 AM	8	0	8	6	0	6	79	0	82	0	53	7	4	0	0	0	0	0	0	0	0	17	351	20	0	641
08:45 AM	9	0	7	5	0	3	68	0	95	0	58	5	3	0	0	1	0	0	0	0	0	28	295	14	0	591
Total	40	0	29	13	0	28	283	0	394	0	239	22	12	0	0	2	0	0	0	0	0	80	1324	82	1	2549
09:00 AM	7	0	4	3	0	3	77	0	73	0	50	4	6	0	0	0	0	0	0	0	0	26	289	19	1	562
09:15 AM	3	0	5	2	0	1	69	0	90	0	66	2	12	0	0	0	0	0	0	0	0	15	233	7	0	505
Grand Total	68	0	48	27	0	56	560	0	717	0	487	32	38	0	0	2	0	0	0	0	0	146	2485	140	2	4808
Apprch %	47.6	0	33.6	18.9	0	4.2	42	0	53.8	0	87.4	5.7	6.8	0	0	100	0	0	0	0	0	5.3	89.6	5	0.1	
Total %	1.4	0	1	0.6	0	1.2	11.6	0	14.9	0	10.1	0.7	0.8	0	0	0	0	0	0	0	0	3	51.7	2.9	0	

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 07:45 AM																															
07:45 AM	9	0	7	4	0	20	16	69	0	90	0	175	62	1	3	0	0	66	0	0	0	0	0	0	0	12	302	20	0	334	595
08:00 AM	11	0	6	0	0	17	8	64	0	96	0	168	60	5	2	0	0	67	0	0	0	0	0	0	0	16	317	29	1	363	615
08:15 AM	12	0	8	2	0	22	11	72	0	121	0	204	68	5	3	0	0	76	1	0	0	0	0	1	0	19	361	19	0	399	702
08:30 AM	8	0	8	6	0	22	6	79	0	82	0	167	53	7	4	0	0	64	0	0	0	0	0	0	0	17	351	20	0	388	641
Total Volume	40	0	29	12	0	81	41	284	0	389	0	714	243	18	12	0	0	273	1	0	0	0	0	1	0	64	1331	88	1	1484	2553
% App. Total	49.4	0	35.8	14.8	0		5.7	39.8	0	54.5	0		89	6.6	4.4	0	0		100	0	0	0	0		0	4.3	89.7	5.9	0.1		
PHF	.833	.000	.906	.500	.000	.920	.641	.899	.000	.804	.000	.875	.893	.643	.750	.000	.000	.898	.250	.000	.000	.000	.000	.250	.000	.842	.922	.759	.250	.930	.909

N/S: East Street/ Cambridge Street
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Groups Printed- Heavy Vehicles

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	1	0	0	0	1	0	5	0	7	0	3	0	0	0	0	0	0	0	0	5	3	0	0	25
07:45 AM	0	0	0	0	0	0	3	0	5	0	3	0	1	0	0	0	0	0	0	0	0	4	7	0	0	23
Total	0	0	1	0	0	0	4	0	10	0	10	0	4	0	0	0	0	0	0	0	0	9	10	0	0	48
08:00 AM	2	0	0	0	0	1	0	0	8	0	6	1	2	0	0	0	0	0	0	0	0	5	1	0	0	26
08:15 AM	2	0	0	1	0	0	1	0	6	0	4	2	2	0	0	0	0	0	0	0	0	5	4	0	0	27
08:30 AM	1	0	1	0	0	0	5	0	4	0	9	2	3	0	0	0	0	0	0	0	0	6	4	1	0	36
08:45 AM	0	0	1	0	0	0	8	0	3	0	11	0	2	0	0	0	0	0	0	0	0	4	5	0	0	34
Total	5	0	2	1	0	1	14	0	21	0	30	5	9	0	0	0	0	0	0	0	0	20	14	1	0	123
09:00 AM	0	0	1	0	0	0	2	0	4	0	13	0	1	0	0	0	0	0	0	0	0	7	9	0	0	37
09:15 AM	0	0	0	1	0	1	3	0	9	0	14	2	2	0	0	0	0	0	0	0	0	3	5	0	0	40
Grand Total	5	0	4	2	0	2	23	0	44	0	67	7	16	0	0	0	0	0	0	0	0	39	38	1	0	248
Apprch %	45.5	0	36.4	18.2	0	2.9	33.3	0	63.8	0	74.4	7.8	17.8	0	0	0	0	0	0	0	0	50	48.7	1.3	0	
Total %	2	0	1.6	0.8	0	0.8	9.3	0	17.7	0	27	2.8	6.5	0	0	0	0	0	0	0	0	15.7	15.3	0.4	0	

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Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 08:30 AM																															
08:30 AM	1	0	1	0	0	2	0	5	0	4	0	9	9	2	3	0	0	14	0	0	0	0	0	0	0	6	4	1	0	11	36
08:45 AM	0	0	1	0	0	1	0	8	0	3	0	11	11	0	2	0	0	13	0	0	0	0	0	0	0	4	5	0	0	9	34
09:00 AM	0	0	1	0	0	1	0	2	0	4	0	6	13	0	1	0	0	14	0	0	0	0	0	0	0	7	9	0	0	16	37
09:15 AM	0	0	0	1	0	1	1	3	0	9	0	13	14	2	2	0	0	18	0	0	0	0	0	0	0	3	5	0	0	8	40
Total Volume	1	0	3	1	0	5	1	18	0	20	0	39	47	4	8	0	0	59	0	0	0	0	0	0	0	20	23	1	0	44	147
% App. Total	20	0	60	20	0		2.6	46.2	0	51.3	0		79.7	6.8	13.6	0	0		0	0	0	0	0		0	45.5	52.3	2.3	0		
PHF	.250	.000	.750	.250	.000	.625	.250	.563	.000	.556	.000	.750	.839	.500	.667	.000	.000	.819	.000	.000	.000	.000	.000	.000	.000	.714	.639	.250	.000	.688	.919

N/S: East Street/ Cambridge Street
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Groups Printed- Buses

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Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	2	0	0	0	1	0	1	0	2	1	0	0	0	0	0	0	5	0	0	0	0	0	1	13
07:45 AM	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4	0	0	0	0	0	0	7
Total	0	0	3	0	0	0	1	0	1	0	3	2	0	0	0	0	0	0	9	0	0	0	0	0	1	20
08:00 AM	0	0	2	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	2	0	0	1	0	0	0	9
08:15 AM	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	0	0	0	0	0	0	9
08:30 AM	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	1	0	0	7
08:45 AM	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0	1	0	0	9
Total	0	0	8	0	0	0	0	0	1	0	0	9	0	0	0	0	0	0	13	0	0	1	2	0	0	34
09:00 AM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	0	0	0	7
09:15 AM	0	0	2	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0	2	0	0	10
Grand Total	0	0	14	0	0	0	2	0	2	0	3	14	0	0	0	0	0	0	30	0	0	1	4	0	1	71
Apprch %	0	0	100	0	0	0	50	0	50	0	17.6	82.4	0	0	0	0	0	0	100	0	0	16.7	66.7	0	16.7	
Total %	0	0	19.7	0	0	0	2.8	0	2.8	0	4.2	19.7	0	0	0	0	0	0	42.3	0	0	1.4	5.6	0	1.4	

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Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 07:30 AM																															
07:30 AM	0	0	2	0	0	2	0	1	0	1	0	2	2	1	0	0	0	3	0	0	0	5	0	5	0	0	0	0	1	1	13
07:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	4	0	4	0	0	0	0	0	0	7
08:00 AM	0	0	2	0	0	2	0	0	0	1	0	1	0	3	0	0	0	3	0	0	0	2	0	2	0	1	0	0	0	1	9
08:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	5	0	5	0	0	0	0	0	0	9
Total Volume	0	0	7	0	0	7	0	1	0	2	0	3	3	7	0	0	0	10	0	0	0	16	0	16	0	1	0	0	1	2	38
% App. Total	0	0	100	0	0		0	33.3	0	66.7	0		30	70	0	0	0		0	0	0	100	0		0	50	0	0	50		
PHF	.000	.000	.875	.000	.000	.875	.000	.250	.000	.500	.000	.375	.375	.583	.000	.000	.000	.833	.000	.000	.000	.800	.000	.800	.000	.250	.000	.000	.250	.500	.731

N/S: East Street/ Cambridge Street
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Email: datarequests@pdillc.com

File Name : 133347 D
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Peds and Bicycles

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Bear Left	Left	Peds SB	Peds NB	Right	Thru	Left	Hard Left	Peds WB	Peds EB	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	0	3	0	0	0	0	0	2	0	9	4	0	0	0	0	0	0	0	0	0	0	0	2	0	3	11	34
07:45 AM	1	0	0	0	2	2	0	0	0	0	2	0	8	4	0	0	0	0	0	0	0	0	0	0	0	1	0	10	13	43
Total	1	0	0	0	5	2	0	0	0	0	4	0	17	8	0	0	0	0	0	0	0	0	0	0	0	3	0	13	24	77
08:00 AM	0	0	0	0	3	2	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	10	3	0	18	45
08:15 AM	0	0	2	0	6	0	0	1	0	1	2	0	15	3	0	0	0	0	0	0	0	0	0	0	0	3	2	13	8	56
08:30 AM	0	0	2	0	5	5	0	0	0	1	1	0	20	4	0	0	0	0	0	0	1	0	0	0	0	1	2	16	25	83
08:45 AM	0	0	2	0	2	1	1	1	0	0	1	0	17	6	0	0	0	0	0	0	0	0	0	0	2	3	4	20	11	71
Total	0	0	6	0	16	8	1	2	0	2	4	0	59	15	0	0	0	0	0	0	1	0	0	0	2	17	11	49	62	255
09:00 AM	0	0	0	0	2	2	0	0	0	0	0	0	12	4	0	0	0	0	1	0	0	0	0	0	0	6	1	17	9	54
09:15 AM	0	0	0	0	6	1	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	6	1	13	6	42
Grand Total	1	0	6	0	29	13	1	2	0	2	8	0	95	29	0	0	0	0	1	0	1	0	0	0	2	32	13	92	101	428
Apprch %	2	0	12.2	0	59.2	26.5	7.7	15.4	0	15.4	61.5	0	76.6	23.4	0	0	0	0	50	0	50	0	0	0	0.8	13.3	5.4	38.3	42.1	
Total %	0.2	0	1.4	0	6.8	3	0.2	0.5	0	0.5	1.9	0	22.2	6.8	0	0	0	0	0.2	0	0.2	0	0	0	0.5	7.5	3	21.5	23.6	

	East Street From North							Monsenior O'Brien Highway (Rt 28) From East							Cambridge Street From South							MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West							
Start Time	Right	Bear Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Bear Left	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Hard Left	Peds WB	Peds EB	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																			
Peak Hour for Entire Intersection Begins at 08:15 AM																																			
08:15 AM	0	0	2	0	6	0	8	0	1	0	1	2	0	4	15	3	0	0	0	0	18	0	0	0	0	0	0	0	0	3	2	13	8	26	56
08:30 AM	0	0	2	0	5	5	12	0	0	0	1	1	0	2	20	4	0	0	0	0	24	0	0	1	0	0	1	0	0	1	2	16	25	44	83
08:45 AM	0	0	2	0	2	1	5	1	1	0	0	1	0	3	17	6	0	0	0	0	23	0	0	0	0	0	0	0	2	3	4	20	11	40	71
09:00 AM	0	0	0	0	2	2	4	0	0	0	0	0	0	0	12	4	0	0	0	0	16	1	0	0	0	0	1	0	0	6	1	17	9	33	54
Total Volume	0	0	6	0	15	8	29	1	2	0	2	4	0	9	64	17	0	0	0	0	81	1	0	1	0	0	2	0	2	13	9	66	53	143	264
% App. Total	0	0	20.7	0	51.7	27.6		11.1	22.2	0	22.2	44.4	0		79	21	0	0	0	0		50	0	50	0	0		0	1.4	9.1	6.3	46.2	37.1		
PHF	.000	.000	.750	.000	.625	.400	.604	.250	.500	.000	.500	.500	.000	.563	.800	.708	.000	.000	.000	.000	.844	.250	.000	.250	.000	.000	.500	.000	.250	.542	.563	.825	.530	.813	.795

N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
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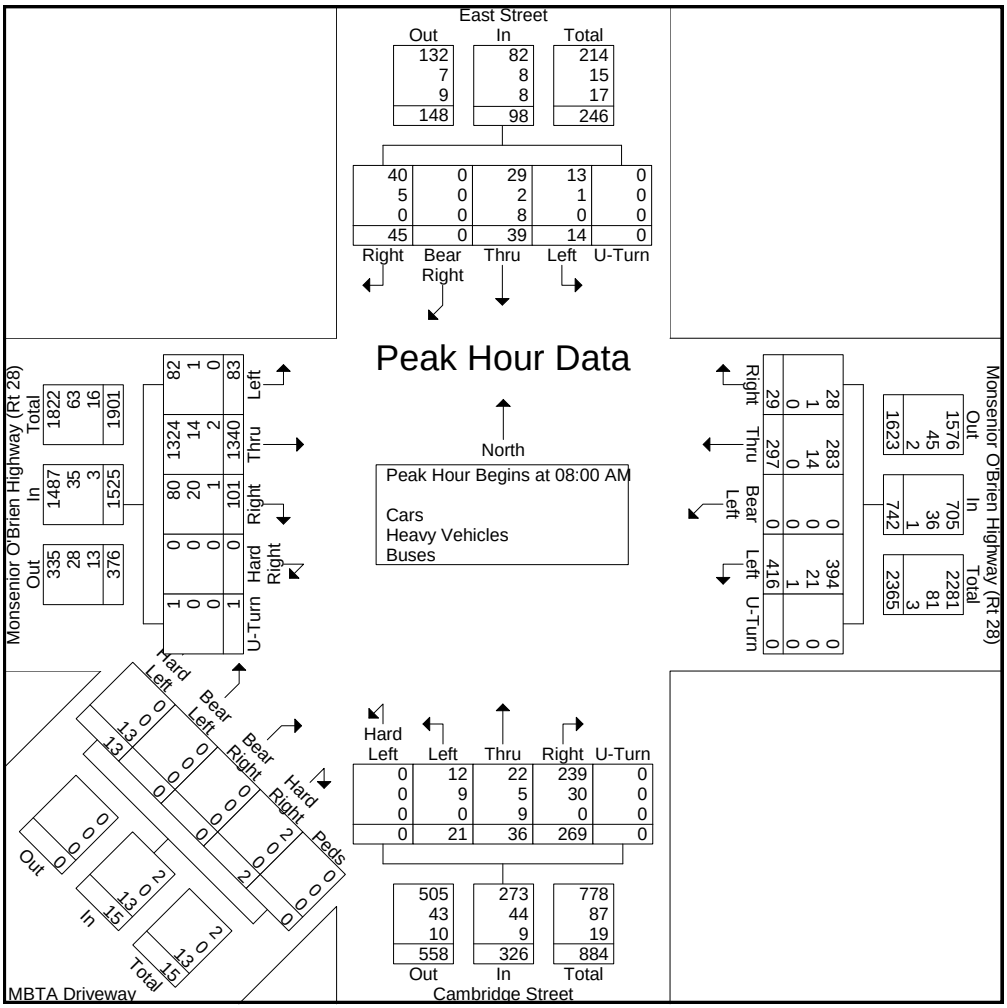
	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 08:00 AM																															
08:00 AM	13	0	8	0	0	21	9	64	0	105	0	178	66	9	4	0	0	79	0	0	0	2	0	2	0	22	318	29	1	370	650
08:15 AM	14	0	10	3	0	27	11	73	0	127	0	211	72	9	5	0	0	86	1	0	0	5	0	6	0	24	365	19	0	408	738
08:30 AM	9	0	11	6	0	26	6	84	0	86	0	176	62	11	7	0	0	80	0	0	0	2	0	2	0	23	356	21	0	400	684
08:45 AM	9	0	10	5	0	24	3	76	0	98	0	177	69	7	5	0	0	81	1	0	0	4	0	5	0	32	301	14	0	347	634
Total Volume	45	0	39	14	0	98	29	297	0	416	0	742	269	36	21	0	0	326	2	0	0	13	0	15	0	101	1340	83	1	1525	2706
% App. Total	45.9	0	39.8	14.3	0		3.9	40	0	56.1	0		82.5	11	6.4	0	0		13.3	0	0	86.7	0		0	6.6	87.9	5.4	0.1		
PHF	.804	.000	.886	.583	.000	.907	.659	.884	.000	.819	.000	.879	.934	.818	.750	.000	.000	.948	.500	.000	.000	.650	.000	.625	.000	.789	.918	.716	.250	.934	.917
Cars	40	0	29	13	0	82	28	283	0	394	0	705	239	22	12	0	0	273	2	0	0	0	0	2	0	80	1324	82	1	1487	2549
% Cars	88.9	0	74.4	92.9	0	83.7	96.6	95.3	0	94.7	0	95.0	88.8	61.1	57.1	0	0	83.7	100	0	0	0	0	13.3	0	79.2	98.8	98.8	100	97.5	94.2
Heavy Vehicles	5	0	2	1	0	8	1	14	0	21	0	36	30	5	9	0	0	44	0	0	0	0	0	0	0	20	14	1	0	35	123
% Heavy Vehicles	11.1	0	5.1	7.1	0	8.2	3.4	4.7	0	5.0	0	4.9	11.2	13.9	42.9	0	0	13.5	0	0	0	0	0	0	0	19.8	1.0	1.2	0	2.3	4.5
Buses	0	0	8	0	0	8	0	0	0	1	0	1	0	9	0	0	0	9	0	0	0	13	0	13	0	1	2	0	0	3	34
% Buses	0	0	20.5	0	0	8.2	0	0	0	0.2	0	0.1	0	25.0	0	0	0	2.8	0	0	0	100	0	86.7	0	1.0	0.1	0	0	0.2	1.3



N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars - Heavy Vehicles - Buses

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	15	0	7	0	0	1	186	0	42	0	134	8	41	0	0	1	0	0	7	0	0	16	172	16	2	648
04:45 PM	17	0	8	0	0	0	192	0	60	0	138	15	38	0	0	0	0	1	4	0	0	8	177	9	0	667
Total	32	0	15	0	0	1	378	0	102	0	272	23	79	0	0	1	0	1	11	0	0	24	349	25	2	1315
05:00 PM	12	0	7	0	0	1	215	0	44	0	121	9	46	0	0	0	0	0	6	0	0	13	189	23	0	686
05:15 PM	17	0	12	0	0	1	187	0	55	0	133	12	37	0	0	0	0	0	3	0	0	25	187	16	0	685
05:30 PM	32	0	8	5	0	0	182	0	36	0	100	16	41	0	0	1	0	0	2	0	0	31	188	23	5	670
05:45 PM	18	0	19	6	0	0	155	0	47	0	113	18	39	0	0	0	0	0	2	0	0	18	181	17	2	635
Total	79	0	46	11	0	2	739	0	182	0	467	55	163	0	0	1	0	0	13	0	0	87	745	79	7	2676
06:00 PM	13	0	18	4	0	5	167	0	52	0	110	12	22	0	0	0	0	0	3	0	0	19	175	20	4	624
06:15 PM	15	0	19	7	0	2	163	0	57	0	99	15	16	0	0	0	0	0	4	0	0	8	171	14	5	595
Grand Total	139	0	98	22	0	10	1447	0	393	0	948	105	280	0	0	2	0	1	31	0	0	138	1440	138	18	5210
Apprch %	53.7	0	37.8	8.5	0	0.5	78.2	0	21.2	0	71.1	7.9	21	0	0	5.9	0	2.9	91.2	0	0	8	83	8	1	
Total %	2.7	0	1.9	0.4	0	0.2	27.8	0	7.5	0	18.2	2	5.4	0	0	0	0	0	0.6	0	0	2.6	27.6	2.6	0.3	
Cars	136	0	82	21	0	10	1427	0	386	0	926	90	273	0	0	2	0	1	5	0	0	137	1421	138	9	5064
% Cars	97.8	0	83.7	95.5	0	100	98.6	0	98.2	0	97.7	85.7	97.5	0	0	100	0	100	16.1	0	0	99.3	98.7	100	50	97.2
Heavy Vehicles	2	0	1	0	0	0	13	0	7	0	20	3	6	0	0	0	0	0	0	0	0	1	14	0	0	67
% Heavy Vehicles	1.4	0	1	0	0	0	0.9	0	1.8	0	2.1	2.9	2.1	0	0	0	0	0	0	0	0	0.7	1	0	0	1.3
Buses	1	0	15	1	0	0	7	0	0	0	2	12	1	0	0	0	0	0	26	0	0	0	5	0	9	79
% Buses	0.7	0	15.3	4.5	0	0	0.5	0	0	0	0.2	11.4	0.4	0	0	0	0	0	83.9	0	0	0	0.3	0	50	1.5

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 04:45 PM																															
04:45 PM	17	0	8	0	0	25	0	192	0	60	0	252	138	15	38	0	0	191	0	0	1	4	0	5	0	8	177	9	0	194	667
05:00 PM	12	0	7	0	0	19	1	215	0	44	0	260	121	9	46	0	0	176	0	0	0	6	0	6	0	13	189	23	0	225	686
05:15 PM	17	0	12	0	0	29	1	187	0	55	0	243	133	12	37	0	0	182	0	0	0	3	0	3	0	25	187	16	0	228	685
05:30 PM	32	0	8	5	0	45	0	182	0	36	0	218	100	16	41	0	0	157	1	0	0	2	0	3	0	31	188	23	5	247	670
Total Volume	78	0	35	5	0	118	2	776	0	195	0	973	492	52	162	0	0	706	1	0	1	15	0	17	0	77	741	71	5	894	2708
% App. Total	66.1	0	29.7	4.2	0		0.2	79.8	0	20	0		69.7	7.4	22.9	0	0		5.9	0	5.9	88.2	0		0	8.6	82.9	7.9	0.6		
PHF	.609	.000	.729	.250	.000	.656	.500	.902	.000	.813	.000	.936	.891	.813	.880	.000	.000	.924	.250	.000	.250	.625	.000	.708	.000	.621	.980	.772	.250	.905	.987
Cars	76	0	28	4	0	108	2	764	0	192	0	958	475	46	157	0	0	678	1	0	1	4	0	6	0	77	732	71	4	884	2634
% Cars	97.4	0	80.0	80.0	0	91.5	100	98.5	0	98.5	0	98.5	96.5	88.5	96.9	0	0	96.0	100	0	100	26.7	0	35.3	0	100	98.8	100	80.0	98.9	97.3
Heavy Vehicles	1	0	0	0	0	1	0	7	0	3	0	10	16	0	4	0	0	20	0	0	0	0	0	0	0	0	6	0	0	6	37
% Heavy Vehicles	1.3	0	0	0	0	0.8	0	0.9	0	1.5	0	1.0	3.3	0	2.5	0	0	2.8	0	0	0	0	0	0	0	0	0.8	0	0	0.7	1.4
Buses	1	0	7	1	0	9	0	5	0	0	0	5	1	6	1	0	0	8	0	0	0	11	0	11	0	0	3	0	1	4	37
% Buses	1.3	0	20.0	20.0	0	7.6	0	0.6	0	0	0	0.5	0.2	11.5	0.6	0	0	1.1	0	0	0	73.3	0	64.7	0	0	0.4	0	20.0	0.4	1.4

N/S: East Street/ Cambridge Street
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Groups Printed- Cars

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	14	0	4	0	0	1	184	0	42	0	133	6	40	0	0	1	0	0	1	0	0	16	170	16	2	630
04:45 PM	17	0	6	0	0	0	190	0	60	0	135	14	37	0	0	0	0	1	2	0	0	8	176	9	0	655
Total	31	0	10	0	0	1	374	0	102	0	268	20	77	0	0	1	0	1	3	0	0	24	346	25	2	1285
05:00 PM	12	0	6	0	0	1	212	0	42	0	115	7	43	0	0	0	0	0	2	0	0	13	185	23	0	661
05:15 PM	16	0	10	0	0	1	184	0	55	0	130	11	37	0	0	0	0	0	0	0	0	25	184	16	0	669
05:30 PM	31	0	6	4	0	0	178	0	35	0	95	14	40	0	0	1	0	0	0	0	0	31	187	23	4	649
05:45 PM	18	0	17	6	0	0	152	0	46	0	111	15	38	0	0	0	0	0	0	0	0	18	179	17	0	617
Total	77	0	39	10	0	2	726	0	178	0	451	47	158	0	0	1	0	0	2	0	0	87	735	79	4	2596
06:00 PM	13	0	16	4	0	5	165	0	50	0	109	9	22	0	0	0	0	0	0	0	0	18	171	20	1	603
06:15 PM	15	0	17	7	0	2	162	0	56	0	98	14	16	0	0	0	0	0	0	0	0	8	169	14	2	580
Grand Total	136	0	82	21	0	10	1427	0	386	0	926	90	273	0	0	2	0	1	5	0	0	137	1421	138	9	5064
Apprch %	56.9	0	34.3	8.8	0	0.5	78.3	0	21.2	0	71.8	7	21.2	0	0	25	0	12.5	62.5	0	0	8	83.3	8.1	0.5	
Total %	2.7	0	1.6	0.4	0	0.2	28.2	0	7.6	0	18.3	1.8	5.4	0	0	0	0	0	0.1	0	0	2.7	28.1	2.7	0.2	

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 04:45 PM																															
04:45 PM	17	0	6	0	0	23	0	190	0	60	0	250	135	14	37	0	0	186	0	0	1	2	0	3	0	8	176	9	0	193	655
05:00 PM	12	0	6	0	0	18	1	212	0	42	0	255	115	7	43	0	0	165	0	0	0	2	0	2	0	13	185	23	0	221	661
05:15 PM	16	0	10	0	0	26	1	184	0	55	0	240	130	11	37	0	0	178	0	0	0	0	0	0	0	25	184	16	0	225	669
05:30 PM	31	0	6	4	0	41	0	178	0	35	0	213	95	14	40	0	0	149	1	0	0	0	0	1	0	31	187	23	4	245	649
Total Volume	76	0	28	4	0	108	2	764	0	192	0	958	475	46	157	0	0	678	1	0	1	4	0	6	0	77	732	71	4	884	2634
% App. Total	70.4	0	25.9	3.7	0		0.2	79.7	0	20	0		70.1	6.8	23.2	0	0		16.7	0	16.7	66.7	0		0	8.7	82.8	8	0.5		
PHF	.613	.000	.700	.250	.000	.659	.500	.901	.000	.800	.000	.939	.880	.821	.913	.000	.000	.911	.250	.000	.250	.500	.000	.500	.000	.621	.979	.772	.250	.902	.984

N/S: East Street/ Cambridge Street
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Groups Printed- Heavy Vehicles

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	1	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	7
04:45 PM	0	0	0	0	0	0	1	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0	5
Total	1	0	1	0	0	0	3	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	2	0	0	12
05:00 PM	0	0	0	0	0	0	2	0	2	0	6	0	2	0	0	0	0	0	0	0	0	0	4	0	0	16
05:15 PM	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
05:30 PM	1	0	0	0	0	0	2	0	1	0	5	0	1	0	0	0	0	0	0	0	0	0	1	0	0	11
05:45 PM	0	0	0	0	0	0	1	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0	2	0	0	8
Total	1	0	0	0	0	0	7	0	4	0	16	1	4	0	0	0	0	0	0	0	0	0	7	0	0	40
06:00 PM	0	0	0	0	0	0	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	1	4	0	0	11
06:15 PM	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4
Grand Total	2	0	1	0	0	0	13	0	7	0	20	3	6	0	0	0	0	0	0	0	0	1	14	0	0	67
Apprch %	66.7	0	33.3	0	0	0	65	0	35	0	69	10.3	20.7	0	0	0	0	0	0	0	0	6.7	93.3	0	0	
Total %	3	0	1.5	0	0	0	19.4	0	10.4	0	29.9	4.5	9	0	0	0	0	0	0	0	0	1.5	20.9	0	0	

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 05:00 PM																															
05:00 PM	0	0	0	0	0	0	0	2	0	2	0	4	6	0	2	0	0	8	0	0	0	0	0	0	0	0	4	0	0	4	16
05:15 PM	0	0	0	0	0	0	0	2	0	0	0	2	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
05:30 PM	1	0	0	0	0	1	0	2	0	1	0	3	5	0	1	0	0	6	0	0	0	0	0	0	0	0	1	0	0	1	11
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	2	1	1	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	8
Total Volume	1	0	0	0	0	1	0	7	0	4	0	11	16	1	4	0	0	21	0	0	0	0	0	0	0	0	7	0	0	7	40
% App. Total	100	0	0	0	0		0	63.6	0	36.4	0		76.2	4.8	19	0	0		0	0	0	0	0		0	0	100	0	0		
PHF	.250	.000	.000	.000	.000	.250	.000	.875	.000	.500	.000	.688	.667	.250	.500	.000	.000	.656	.000	.000	.000	.000	.000	.000	.000	.000	.438	.000	.000	.438	.625

N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 DD
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Buses

	East Street From North					Monsenior O'Brien Highway (Rt 28) From East					Cambridge Street From South					MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West					
Start Time	Right	Bear Right	Thru	Left	U-Turn	Right	Thru	Bear Left	Left	U-Turn	Right	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	6	0	0	0	1	0	0	11
04:45 PM	0	0	2	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	7
Total	0	0	4	0	0	0	1	0	0	0	2	2	0	0	0	0	0	0	8	0	0	0	1	0	0	18
05:00 PM	0	0	1	0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	4	0	0	0	0	0	0	9
05:15 PM	1	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	3	0	0	11
05:30 PM	0	0	2	1	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	1	10
05:45 PM	0	0	2	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	2	10
Total	1	0	7	1	0	0	6	0	0	0	0	7	1	0	0	0	0	0	11	0	0	0	3	0	3	40
06:00 PM	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	3	10
06:15 PM	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	1	0	3	11
Grand Total	1	0	15	1	0	0	7	0	0	0	2	12	1	0	0	0	0	0	26	0	0	0	5	0	9	79
Apprch %	5.9	0	88.2	5.9	0	0	100	0	0	0	13.3	80	6.7	0	0	0	0	0	100	0	0	0	35.7	0	64.3	
Total %	1.3	0	19	1.3	0	0	8.9	0	0	0	2.5	15.2	1.3	0	0	0	0	0	32.9	0	0	0	6.3	0	11.4	

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 05:15 PM																															
05:15 PM	1	0	2	0	0	3	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	3	0	3	0	0	3	0	0	3	11
05:30 PM	0	0	2	1	0	3	0	2	0	0	0	2	0	2	0	0	0	2	0	0	0	2	0	2	0	0	0	0	1	1	10
05:45 PM	0	0	2	0	0	2	0	2	0	0	0	2	0	2	0	0	0	2	0	0	0	2	0	2	0	0	0	0	2	2	10
06:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	3	0	3	0	0	0	0	3	3	10
Total Volume	1	0	8	1	0	10	0	5	0	0	0	5	0	7	0	0	0	7	0	0	0	10	0	10	0	0	3	0	6	9	41
% App. Total	10	0	80	10	0		0	100	0	0	0		0	100	0	0	0		0	0	0	100	0		0	0	33.3	0	66.7		
PHF	.250	.000	1.00	.250	.000	.833	.000	.625	.000	.000	.000	.625	.000	.875	.000	.000	.000	.875	.000	.000	.000	.833	.000	.833	.000	.000	.250	.000	.500	.750	.932

N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 DD
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Groups Printed- Peds and Bicycles

	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest					Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Bear Left	Left	Peds SB	Peds NB	Right	Thru	Left	Hard Left	Peds WB	Peds EB	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	2	0	4	8	0	1	0	3	0	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	14	12	51
04:45 PM	0	0	2	0	3	6	0	5	0	1	0	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9	6	39
Total	0	0	4	0	7	14	0	6	0	4	0	5	4	2	0	0	1	0	0	0	0	0	0	0	0	0	2	23	18	90
05:00 PM	0	0	2	0	6	14	0	3	0	5	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	4	59
05:15 PM	1	0	3	0	2	3	0	4	0	16	1	7	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	11	11	64
05:30 PM	0	0	6	0	5	6	1	1	0	2	4	3	4	3	0	0	0	0	0	0	0	0	0	0	1	0	0	27	12	75
05:45 PM	3	0	6	0	3	7	0	2	0	10	0	1	4	0	0	0	0	0	0	0	0	0	0	0	1	1	0	18	9	65
Total	4	0	17	0	16	30	1	10	0	33	5	15	15	3	0	0	0	0	0	0	0	0	0	0	3	1	0	74	36	263
06:00 PM	1	0	6	0	3	5	0	4	0	8	0	4	5	3	0	0	0	0	0	0	0	0	0	0	0	0	1	24	12	76
06:15 PM	2	0	6	0	6	4	0	4	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	46
Grand Total	7	0	33	0	32	53	1	24	0	47	6	24	27	8	0	0	1	0	0	0	0	0	0	0	3	1	3	130	75	475
Apprch %	5.6	0	26.4	0	25.6	42.4	1	23.5	0	46.1	5.9	23.5	75	22.2	0	0	2.8	0	0	0	0	0	0	0	1.4	0.5	1.4	61.3	35.4	
Total %	1.5	0	6.9	0	6.7	11.2	0.2	5.1	0	9.9	1.3	5.1	5.7	1.7	0	0	0.2	0	0	0	0	0	0	0	0.6	0.2	0.6	27.4	15.8	

	East Street From North							Monsenior O'Brien Highway (Rt 28) From East							Cambridge Street From South							MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West							
Start Time	Right	Bear Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Bear Left	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Hard Left	Peds WB	Peds EB	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																			
Peak Hour for Entire Intersection Begins at 05:15 PM																																			
05:15 PM	1	0	3	0	2	3	9	0	4	0	16	1	7	28	4	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	11	11	23	64
05:30 PM	0	0	6	0	5	6	17	1	1	0	2	4	3	11	4	3	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	27	12	40	75
05:45 PM	3	0	6	0	3	7	19	0	2	0	10	0	1	13	4	0	0	0	0	0	4	0	0	0	0	0	0	0	1	1	0	18	9	29	65
06:00 PM	1	0	6	0	3	5	15	0	4	0	8	0	4	16	5	3	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1	24	12	37	76
Total Volume	5	0	21	0	13	21	60	1	11	0	36	5	15	68	17	6	0	0	0	0	23	0	0	0	0	0	0	0	3	1	1	80	44	129	280
% App. Total	8.3	0	35	0	21.7	35		1.5	16.2	0	52.9	7.4	22.1		73.9	26.1	0	0	0	0		0	0	0	0	0		0	2.3	0.8	0.8	62	34.1		
PHF	.417	.000	.875	.000	.650	.750	.789	.250	.688	.000	.563	.313	.536	.607	.850	.500	.000	.000	.000	.000	.719	.000	.000	.000	.000	.000	.000	.000	.750	.250	.250	.741	.917	.806	.921

N/S: East Street/ Cambridge Street
E/W/SW: O'Brien Hwy (Rt 28)/ MBTA Drive
City, State: Cambridge, MA
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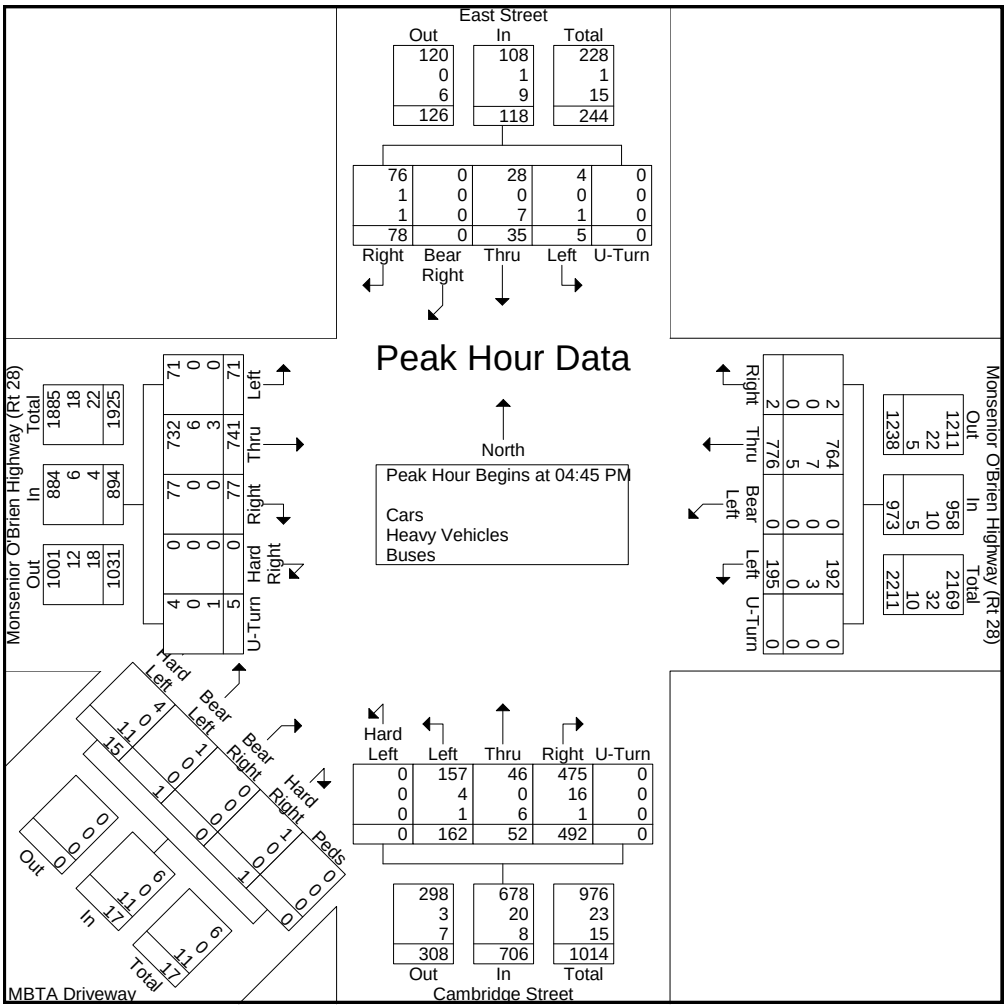
	East Street From North						Monsenior O'Brien Highway (Rt 28) From East						Cambridge Street From South						MBTA Driveway From Southwest						Monsenior O'Brien Highway (Rt 28) From West						
Start Time	Right	Bear Right	Thru	Left	U-Turn	App. Total	Right	Thru	Bear Left	Left	U-Turn	App. Total	Right	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 04:45 PM																															
04:45 PM	17	0	8	0	0	25	0	192	0	60	0	252	138	15	38	0	0	191	0	0	1	4	0	5	0	8	177	9	0	194	667
05:00 PM	12	0	7	0	0	19	1	215	0	44	0	260	121	9	46	0	0	176	0	0	0	6	0	6	0	13	189	23	0	225	686
05:15 PM	17	0	12	0	0	29	1	187	0	55	0	243	133	12	37	0	0	182	0	0	0	3	0	3	0	25	187	16	0	228	685
05:30 PM	32	0	8	5	0	45	0	182	0	36	0	218	100	16	41	0	0	157	1	0	0	2	0	3	0	31	188	23	5	247	670
Total Volume	78	0	35	5	0	118	2	776	0	195	0	973	492	52	162	0	0	706	1	0	1	15	0	17	0	77	741	71	5	894	2708
% App. Total	66.1	0	29.7	4.2	0		0.2	79.8	0	20	0		69.7	7.4	22.9	0	0		5.9	0	5.9	88.2	0		0	8.6	82.9	7.9	0.6		
PHF	.609	.000	.729	.250	.000	.656	.500	.902	.000	.813	.000	.936	.891	.813	.880	.000	.000	.924	.250	.000	.250	.625	.000	.708	.000	.621	.980	.772	.250	.905	.987
Cars	76	0	28	4	0	108	2	764	0	192	0	958	475	46	157	0	0	678	1	0	1	4	0	6	0	77	732	71	4	884	2634
% Cars	97.4	0	80.0	80.0	0	91.5	100	98.5	0	98.5	0	98.5	96.5	88.5	96.9	0	0	96.0	100	0	100	26.7	0	35.3	0	100	98.8	100	80.0	98.9	97.3
Heavy Vehicles	1	0	0	0	0	1	0	7	0	3	0	10	16	0	4	0	0	20	0	0	0	0	0	0	0	0	6	0	0	6	37
% Heavy Vehicles	1.3	0	0	0	0	0.8	0	0.9	0	1.5	0	1.0	3.3	0	2.5	0	0	2.8	0	0	0	0	0	0	0	0	0.8	0	0	0.7	1.4
Buses	1	0	7	1	0	9	0	5	0	0	0	5	1	6	1	0	0	8	0	0	0	11	0	11	0	0	3	0	1	4	37
% Buses	1.3	0	20.0	20.0	0	7.6	0	0.6	0	0	0	0.5	0.2	11.5	0.6	0	0	1.1	0	0	0	73.3	0	64.7	0	0	0.4	0	20.0	0.4	1.4



N/S: Gilmore Bridge/ Land Boulevard
E/W:Monsenior O'Brien Highway (Route 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
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File Name : 133347 E
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	24	173	83	0	70	124	48	0	40	61	14	0	128	268	33	1	1067
07:45 AM	27	186	86	0	71	118	57	0	42	90	17	0	127	231	34	1	1087
Total	51	359	169	0	141	242	105	0	82	151	31	0	255	499	67	2	2154
08:00 AM	38	166	74	0	70	132	48	0	32	66	30	0	125	249	23	0	1053
08:15 AM	24	175	85	0	75	140	55	0	49	103	37	0	150	238	34	1	1166
08:30 AM	31	157	87	0	67	134	57	1	58	91	32	0	122	237	36	0	1110
08:45 AM	33	192	77	0	62	114	49	0	40	83	28	0	132	228	32	2	1072
Total	126	690	323	0	274	520	209	1	179	343	127	0	529	952	125	3	4401
09:00 AM	26	157	72	0	81	123	55	2	37	52	19	0	111	234	38	0	1007
09:15 AM	29	156	74	0	56	111	44	1	40	76	24	0	117	181	32	0	941
Grand Total	232	1362	638	0	552	996	413	4	338	622	201	0	1012	1866	262	5	8503
Apprch %	10.4	61	28.6	0	28.1	50.7	21	0.2	29.1	53.6	17.3	0	32.2	59.3	8.3	0.2	
Total %	2.7	16	7.5	0	6.5	11.7	4.9	0	4	7.3	2.4	0	11.9	21.9	3.1	0.1	
Cars	215	1291	618	0	539	950	385	3	304	593	188	0	996	1790	244	5	8121
% Cars	92.7	94.8	96.9	0	97.6	95.4	93.2	75	89.9	95.3	93.5	0	98.4	95.9	93.1	100	95.5
Heavy Vehicles	15	67	15	0	8	38	25	1	30	28	13	0	14	72	17	0	343
% Heavy Vehicles	6.5	4.9	2.4	0	1.4	3.8	6.1	25	8.9	4.5	6.5	0	1.4	3.9	6.5	0	4
Buses	2	4	5	0	5	8	3	0	4	1	0	0	2	4	1	0	39
% Buses	0.9	0.3	0.8	0	0.9	0.8	0.7	0	1.2	0.2	0	0	0.2	0.2	0.4	0	0.5

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	27	186	86	0	299	71	118	57	0	246	42	90	17	0	149	127	231	34	1	393	1087
08:00 AM	38	166	74	0	278	70	132	48	0	250	32	66	30	0	128	125	249	23	0	397	1053
08:15 AM	24	175	85	0	284	75	140	55	0	270	49	103	37	0	189	150	238	34	1	423	1166
08:30 AM	31	157	87	0	275	67	134	57	1	259	58	91	32	0	181	122	237	36	0	395	1110
Total Volume	120	684	332	0	1136	283	524	217	1	1025	181	350	116	0	647	524	955	127	2	1608	4416
% App. Total	10.6	60.2	29.2	0		27.6	51.1	21.2	0.1		28	54.1	17.9	0		32.6	59.4	7.9	0.1		
PHF	.789	.919	.954	.000	.950	.943	.936	.952	.250	.949	.780	.850	.784	.000	.856	.873	.959	.882	.500	.950	.947
Cars	111	645	320	0	1076	276	504	203	0	983	163	331	110	0	604	514	929	124	2	1569	4232
% Cars	92.5	94.3	96.4	0	94.7	97.5	96.2	93.5	0	95.9	90.1	94.6	94.8	0	93.4	98.1	97.3	97.6	100	97.6	95.8
Heavy Vehicles	9	37	10	0	56	4	17	14	1	36	16	18	6	0	40	9	25	3	0	37	169
% Heavy Vehicles	7.5	5.4	3.0	0	4.9	1.4	3.2	6.5	100	3.5	8.8	5.1	5.2	0	6.2	1.7	2.6	2.4	0	2.3	3.8
Buses	0	2	2	0	4	3	3	0	0	6	2	1	0	0	3	1	1	0	0	2	15
% Buses	0	0.3	0.6	0	0.4	1.1	0.6	0	0	0.6	1.1	0.3	0	0	0.5	0.2	0.1	0	0	0.1	0.3

N/S: Gilmore Bridge/ Land Boulevard
E/W:Monsenior O'Brien Highway (Route 28)
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	21	165	83	0	70	119	41	0	33	60	14	0	127	259	33	1	1026
07:45 AM	25	174	84	0	69	113	55	0	39	87	16	0	121	224	34	1	1042
Total	46	339	167	0	139	232	96	0	72	147	30	0	248	483	67	2	2068
08:00 AM	35	155	71	0	69	126	44	0	31	63	26	0	125	242	23	0	1010
08:15 AM	23	169	79	0	73	136	51	0	43	100	37	0	147	235	32	1	1126
08:30 AM	28	147	86	0	65	129	53	0	50	81	31	0	121	228	35	0	1054
08:45 AM	31	186	76	0	60	110	47	0	37	78	24	0	131	215	28	2	1025
Total	117	657	312	0	267	501	195	0	161	322	118	0	524	920	118	3	4215
09:00 AM	26	144	70	0	79	118	53	2	34	51	18	0	109	221	32	0	957
09:15 AM	26	151	69	0	54	99	41	1	37	73	22	0	115	166	27	0	881
Grand Total	215	1291	618	0	539	950	385	3	304	593	188	0	996	1790	244	5	8121
Apprch %	10.1	60.8	29.1	0	28.7	50.6	20.5	0.2	28	54.7	17.3	0	32.8	59	8	0.2	
Total %	2.6	15.9	7.6	0	6.6	11.7	4.7	0	3.7	7.3	2.3	0	12.3	22	3	0.1	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	25	174	84	0	283	69	113	55	0	237	39	87	16	0	142	121	224	34	1	380	1042
08:00 AM	35	155	71	0	261	69	126	44	0	239	31	63	26	0	120	125	242	23	0	390	1010
08:15 AM	23	169	79	0	271	73	136	51	0	260	43	100	37	0	180	147	235	32	1	415	1126
08:30 AM	28	147	86	0	261	65	129	53	0	247	50	81	31	0	162	121	228	35	0	384	1054
Total Volume	111	645	320	0	1076	276	504	203	0	983	163	331	110	0	604	514	929	124	2	1569	4232
% App. Total	10.3	59.9	29.7	0		28.1	51.3	20.7	0		27	54.8	18.2	0		32.8	59.2	7.9	0.1		
PHF	.793	.927	.930	.000	.951	.945	.926	.923	.000	.945	.815	.828	.743	.000	.839	.874	.960	.886	.500	.945	.940

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Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	2	8	0	0	0	4	5	0	7	1	0	0	0	9	0	0	36
07:45 AM	2	11	1	0	1	5	2	0	3	3	1	0	5	7	0	0	41
Total	4	19	1	0	1	9	7	0	10	4	1	0	5	16	0	0	77
08:00 AM	3	11	2	0	0	4	4	0	1	2	4	0	0	7	0	0	38
08:15 AM	1	6	6	0	2	4	4	0	5	3	0	0	3	3	2	0	39
08:30 AM	3	9	1	0	1	4	4	1	7	10	1	0	1	8	1	0	51
08:45 AM	2	5	1	0	2	4	1	0	3	5	4	0	1	12	3	0	43
Total	9	31	10	0	5	16	13	1	16	20	9	0	5	30	6	0	171
09:00 AM	0	13	2	0	1	4	2	0	2	1	1	0	2	13	6	0	47
09:15 AM	2	4	2	0	1	9	3	0	2	3	2	0	2	13	5	0	48
Grand Total	15	67	15	0	8	38	25	1	30	28	13	0	14	72	17	0	343
Apprch %	15.5	69.1	15.5	0	11.1	52.8	34.7	1.4	42.3	39.4	18.3	0	13.6	69.9	16.5	0	
Total %	4.4	19.5	4.4	0	2.3	11.1	7.3	0.3	8.7	8.2	3.8	0	4.1	21	5	0	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	3	9	1	0	13	1	4	4	1	10	7	10	1	0	18	1	8	1	0	10	51
08:45 AM	2	5	1	0	8	2	4	1	0	7	3	5	4	0	12	1	12	3	0	16	43
09:00 AM	0	13	2	0	15	1	4	2	0	7	2	1	1	0	4	2	13	6	0	21	47
09:15 AM	2	4	2	0	8	1	9	3	0	13	2	3	2	0	7	2	13	5	0	20	48
Total Volume	7	31	6	0	44	5	21	10	1	37	14	19	8	0	41	6	46	15	0	67	189
% App. Total	15.9	70.5	13.6	0		13.5	56.8	27	2.7		34.1	46.3	19.5	0		9	68.7	22.4	0		
PHF	.583	.596	.750	.000	.733	.625	.583	.625	.250	.712	.500	.475	.500	.000	.569	.750	.885	.625	.000	.798	.926

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Groups Printed- Buses

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	1	2	0	0	0	0	0	1	0	0	0	5
07:45 AM	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	4
Total	1	1	1	0	1	1	2	0	0	0	0	0	2	0	0	0	9
08:00 AM	0	0	1	0	1	2	0	0	0	1	0	0	0	0	0	0	5
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	5
08:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	4
Total	0	2	1	0	2	3	1	0	2	1	0	0	0	2	1	0	15
09:00 AM	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	3
09:15 AM	1	1	3	0	1	3	0	0	1	0	0	0	0	2	0	0	12
Grand Total	2	4	5	0	5	8	3	0	4	1	0	0	2	4	1	0	39
Apprch %	18.2	36.4	45.5	0	31.2	50	18.8	0	80	20	0	0	28.6	57.1	14.3	0	
Total %	5.1	10.3	12.8	0	12.8	20.5	7.7	0	10.3	2.6	0	0	5.1	10.3	2.6	0	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	1	0	0	1	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1	5
08:45 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	1	0	2	4
09:00 AM	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	0	0	0	0	0	3
09:15 AM	1	1	3	0	5	1	3	0	0	4	1	0	0	0	1	0	2	0	0	2	12
Total Volume	1	3	3	0	7	3	5	1	0	9	3	0	0	0	3	0	4	1	0	5	24
% App. Total	14.3	42.9	42.9	0		33.3	55.6	11.1	0		100	0	0	0		0	80	20	0		
PHF	.250	.750	.250	.000	.350	.750	.417	.250	.000	.563	.750	.000	.000	.000	.750	.000	.500	.250	.000	.625	.500

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Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	4	0	0	0	0	1	0	2	0	0	0	0	11	4	0	4	0	3	20	49
07:45 AM	0	2	1	0	0	1	1	0	0	2	0	0	0	12	13	0	8	0	4	25	69
Total	0	6	1	0	0	1	2	0	2	2	0	0	0	23	17	0	12	0	7	45	118
08:00 AM	0	3	2	0	0	1	0	0	3	1	0	0	0	12	3	0	8	1	1	19	54
08:15 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	27	3	0	1	0	0	29	65
08:30 AM	1	3	2	0	0	0	1	0	0	3	0	0	0	21	5	1	21	0	1	37	96
08:45 AM	0	2	1	0	0	0	1	0	2	2	1	1	0	15	5	1	21	0	1	31	84
Total	1	11	7	0	0	1	2	0	5	6	1	1	0	75	16	2	51	1	3	116	299
09:00 AM	0	2	0	0	0	0	0	2	0	2	1	1	0	9	5	0	18	0	6	21	67
09:15 AM	0	1	1	0	0	0	0	0	2	4	0	1	0	6	6	0	10	0	1	15	47
Grand Total	1	20	9	0	0	2	4	2	9	14	2	3	0	113	44	2	91	1	17	197	531
Apprch %	3.3	66.7	30	0	0	6.5	12.9	6.5	29	45.2	1.2	1.9	0	69.8	27.2	0.6	29.5	0.3	5.5	64	
Total %	0.2	3.8	1.7	0	0	0.4	0.8	0.4	1.7	2.6	0.4	0.6	0	21.3	8.3	0.4	17.1	0.2	3.2	37.1	

	Gilmore Bridge From North						Monsenior O'Brien Hwy (Rt 28) From East						Land Boulevard From South						Monsenior O'Brien Hwy (Rt 28) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	3	2	0	0	5	0	0	0	0	0	0	0	0	0	27	3	30	0	1	0	0	29	30	65
08:30 AM	1	3	2	0	0	6	0	1	0	0	3	4	0	0	0	21	5	26	1	21	0	1	37	60	96
08:45 AM	0	2	1	0	0	3	0	1	0	2	2	5	1	1	0	15	5	22	1	21	0	1	31	54	84
09:00 AM	0	2	0	0	0	2	0	0	2	0	2	4	1	1	0	9	5	16	0	18	0	6	21	45	67
Total Volume	1	10	5	0	0	16	0	2	2	2	7	13	2	2	0	72	18	94	2	61	0	8	118	189	312
% App. Total	6.2	62.5	31.2	0	0		0	15.4	15.4	15.4	53.8		2.1	2.1	0	76.6	19.1		1.1	32.3	0	4.2	62.4		
PHF	.250	.833	.625	.000	.000	.667	.000	.500	.250	.250	.583	.650	.500	.500	.000	.667	.900	.783	.500	.726	.000	.333	.797	.788	.813

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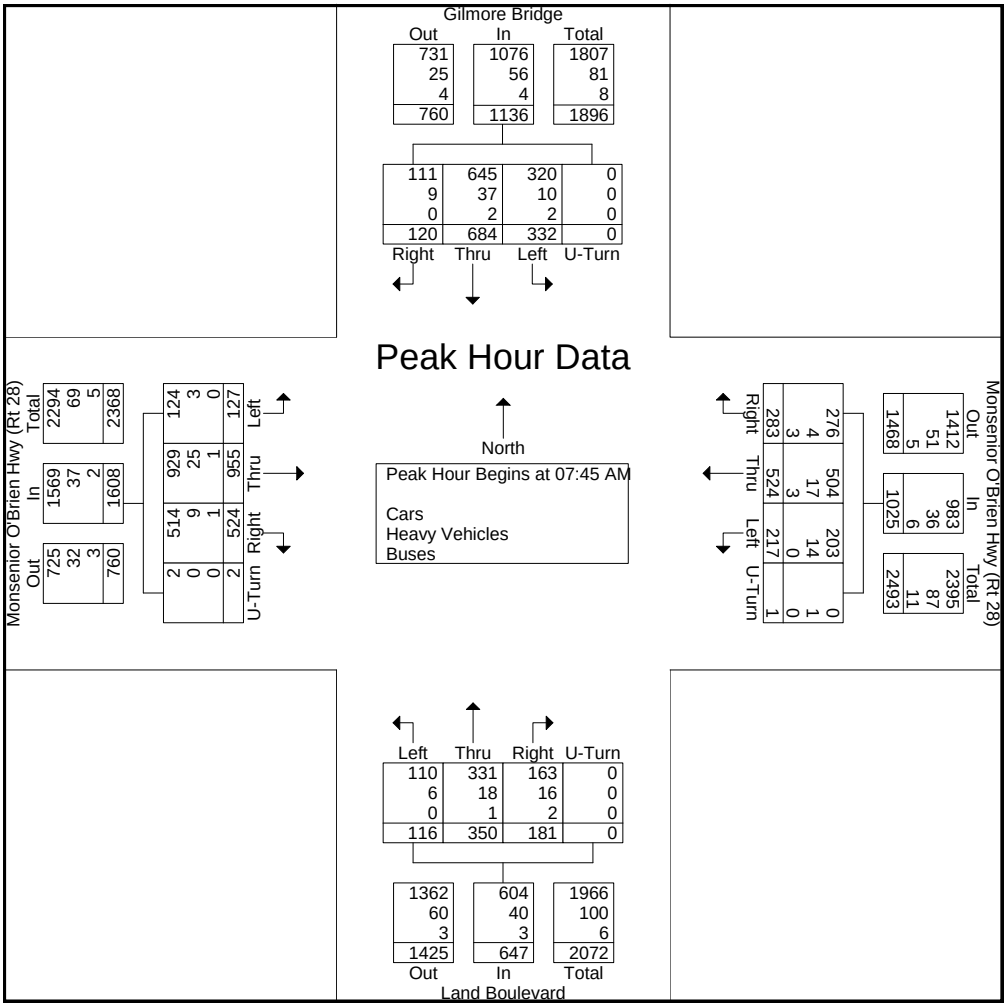
	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	27	186	86	0	299	71	118	57	0	246	42	90	17	0	149	127	231	34	1	393	1087
08:00 AM	38	166	74	0	278	70	132	48	0	250	32	66	30	0	128	125	249	23	0	397	1053
08:15 AM	24	175	85	0	284	75	140	55	0	270	49	103	37	0	189	150	238	34	1	423	1166
08:30 AM	31	157	87	0	275	67	134	57	1	259	58	91	32	0	181	122	237	36	0	395	1110
Total Volume	120	684	332	0	1136	283	524	217	1	1025	181	350	116	0	647	524	955	127	2	1608	4416
% App. Total	10.6	60.2	29.2	0		27.6	51.1	21.2	0.1		28	54.1	17.9	0		32.6	59.4	7.9	0.1		
PHF	.789	.919	.954	.000	.950	.943	.936	.952	.250	.949	.780	.850	.784	.000	.856	.873	.959	.882	.500	.950	.947
Cars	111	645	320	0	1076	276	504	203	0	983	163	331	110	0	604	514	929	124	2	1569	4232
% Cars	92.5	94.3	96.4	0	94.7	97.5	96.2	93.5	0	95.9	90.1	94.6	94.8	0	93.4	98.1	97.3	97.6	100	97.6	95.8
Heavy Vehicles	9	37	10	0	56	4	17	14	1	36	16	18	6	0	40	9	25	3	0	37	169
% Heavy Vehicles	7.5	5.4	3.0	0	4.9	1.4	3.2	6.5	100	3.5	8.8	5.1	5.2	0	6.2	1.7	2.6	2.4	0	2.3	3.8
Buses	0	2	2	0	4	3	3	0	0	6	2	1	0	0	3	1	1	0	0	2	15
% Buses	0	0.3	0.6	0	0.4	1.1	0.6	0	0	0.6	1.1	0.3	0	0	0.5	0.2	0.1	0	0	0.1	0.3



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Groups Printed- Cars - Heavy Vehicles - Buses

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	26	105	55	0	73	124	43	1	73	243	70	0	53	140	86	0	1092
04:45 PM	25	89	40	0	91	111	47	3	60	205	88	0	55	158	101	3	1076
Total	51	194	95	0	164	235	90	4	133	448	158	0	108	298	187	3	2168
05:00 PM	23	100	58	0	67	135	51	1	92	243	106	0	52	127	80	1	1136
05:15 PM	20	87	41	0	100	144	58	1	52	187	71	0	79	114	90	0	1044
05:30 PM	24	106	35	0	71	109	22	2	71	242	93	3	73	118	74	0	1043
05:45 PM	24	91	34	0	79	142	46	3	52	211	47	0	102	127	96	0	1054
Total	91	384	168	0	317	530	177	7	267	883	317	3	306	486	340	1	4277
06:00 PM	23	100	46	0	75	137	43	2	97	260	82	0	83	140	89	2	1179
06:15 PM	31	86	47	0	95	140	67	3	96	233	65	0	53	160	76	0	1152
Grand Total	196	764	356	0	651	1042	377	16	593	1824	622	3	550	1084	692	6	8776
Apprch %	14.9	58.1	27.1	0	31.2	50	18.1	0.8	19.5	60	20.4	0.1	23.6	46.5	29.7	0.3	
Total %	2.2	8.7	4.1	0	7.4	11.9	4.3	0.2	6.8	20.8	7.1	0	6.3	12.4	7.9	0.1	
Cars	194	754	352	0	634	1020	375	16	587	1802	617	3	544	1059	678	6	8641
% Cars	99	98.7	98.9	0	97.4	97.9	99.5	100	99	98.8	99.2	100	98.9	97.7	98	100	98.5
Heavy Vehicles	2	8	1	0	6	14	2	0	6	20	5	0	6	15	14	0	99
% Heavy Vehicles	1	1	0.3	0	0.9	1.3	0.5	0	1	1.1	0.8	0	1.1	1.4	2	0	1.1
Buses	0	2	3	0	11	8	0	0	0	2	0	0	0	10	0	0	36
% Buses	0	0.3	0.8	0	1.7	0.8	0	0	0	0.1	0	0	0	0.9	0	0	0.4

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	24	106	35	0	165	71	109	22	2	204	71	242	93	3	409	73	118	74	0	265	1043
05:45 PM	24	91	34	0	149	79	142	46	3	270	52	211	47	0	310	102	127	96	0	325	1054
06:00 PM	23	100	46	0	169	75	137	43	2	257	97	260	82	0	439	83	140	89	2	314	1179
06:15 PM	31	86	47	0	164	95	140	67	3	305	96	233	65	0	394	53	160	76	0	289	1152
Total Volume	102	383	162	0	647	320	528	178	10	1036	316	946	287	3	1552	311	545	335	2	1193	4428
% App. Total	15.8	59.2	25	0		30.9	51	17.2	1		20.4	61	18.5	0.2		26.1	45.7	28.1	0.2		
PHF	.823	.903	.862	.000	.957	.842	.930	.664	.833	.849	.814	.910	.772	.250	.884	.762	.852	.872	.250	.918	.939
Cars	101	378	161	0	640	311	516	177	10	1014	311	942	285	3	1541	307	533	330	2	1172	4367
% Cars	99.0	98.7	99.4	0	98.9	97.2	97.7	99.4	100	97.9	98.4	99.6	99.3	100	99.3	98.7	97.8	98.5	100	98.2	98.6
Heavy Vehicles	1	3	1	0	5	2	7	1	0	10	5	4	2	0	11	4	9	5	0	18	44
% Heavy Vehicles	1.0	0.8	0.6	0	0.8	0.6	1.3	0.6	0	1.0	1.6	0.4	0.7	0	0.7	1.3	1.7	1.5	0	1.5	1.0
Buses	0	2	0	0	2	7	5	0	0	12	0	0	0	0	0	0	3	0	0	3	17
% Buses	0	0.5	0	0	0.3	2.2	0.9	0	0	1.2	0	0	0	0	0	0	0.6	0	0	0.3	0.4

N/S: Gilmore Bridge/ Land Boulevard
E/W:Monsenior O'Brien Highway (Route 28)
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	26	104	53	0	72	123	43	1	73	239	69	0	53	136	85	0	1077
04:45 PM	25	88	39	0	90	109	47	3	60	199	87	0	53	156	101	3	1060
Total	51	192	92	0	162	232	90	4	133	438	156	0	106	292	186	3	2137
05:00 PM	22	100	58	0	64	132	50	1	91	237	105	0	52	126	74	1	1113
05:15 PM	20	84	41	0	97	140	58	1	52	185	71	0	79	108	88	0	1024
05:30 PM	24	106	35	0	70	105	22	2	71	240	91	3	72	116	73	0	1030
05:45 PM	24	87	34	0	78	137	46	3	50	211	47	0	101	124	93	0	1035
Total	90	377	168	0	309	514	176	7	264	873	314	3	304	474	328	1	4202
06:00 PM	22	99	45	0	71	135	43	2	96	259	82	0	81	137	88	2	1162
06:15 PM	31	86	47	0	92	139	66	3	94	232	65	0	53	156	76	0	1140
Grand Total	194	754	352	0	634	1020	375	16	587	1802	617	3	544	1059	678	6	8641
Apprch %	14.9	58	27.1	0	31	49.9	18.3	0.8	19.5	59.9	20.5	0.1	23.8	46.3	29.6	0.3	
Total %	2.2	8.7	4.1	0	7.3	11.8	4.3	0.2	6.8	20.9	7.1	0	6.3	12.3	7.8	0.1	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	24	106	35	0	165	70	105	22	2	199	71	240	91	3	405	72	116	73	0	261	1030
05:45 PM	24	87	34	0	145	78	137	46	3	264	50	211	47	0	308	101	124	93	0	318	1035
06:00 PM	22	99	45	0	166	71	135	43	2	251	96	259	82	0	437	81	137	88	2	308	1162
06:15 PM	31	86	47	0	164	92	139	66	3	300	94	232	65	0	391	53	156	76	0	285	1140
Total Volume	101	378	161	0	640	311	516	177	10	1014	311	942	285	3	1541	307	533	330	2	1172	4367
% App. Total	15.8	59.1	25.2	0		30.7	50.9	17.5	1		20.2	61.1	18.5	0.2		26.2	45.5	28.2	0.2		
PHF	.815	.892	.856	.000	.964	.845	.928	.670	.833	.845	.810	.909	.783	.250	.882	.760	.854	.887	.250	.921	.940

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	1	1	0	0	0	4	1	0	0	1	1	0	10
04:45 PM	0	1	0	0	0	1	0	0	0	5	1	0	2	1	0	0	11
Total	0	2	0	0	1	2	0	0	0	9	2	0	2	2	1	0	21
05:00 PM	1	0	0	0	1	3	1	0	1	5	1	0	0	1	6	0	20
05:15 PM	0	3	0	0	2	2	0	0	0	2	0	0	0	3	2	0	14
05:30 PM	0	0	0	0	1	2	0	0	0	2	2	0	1	2	1	0	11
05:45 PM	0	2	0	0	0	3	0	0	2	0	0	0	1	2	3	0	13
Total	1	5	0	0	4	10	1	0	3	9	3	0	2	8	12	0	58
06:00 PM	1	1	1	0	1	1	0	0	1	1	0	0	2	3	1	0	13
06:15 PM	0	0	0	0	0	1	1	0	2	1	0	0	0	2	0	0	7
Grand Total	2	8	1	0	6	14	2	0	6	20	5	0	6	15	14	0	99
Apprch %	18.2	72.7	9.1	0	27.3	63.6	9.1	0	19.4	64.5	16.1	0	17.1	42.9	40	0	
Total %	2	8.1	1	0	6.1	14.1	2	0	6.1	20.2	5.1	0	6.1	15.2	14.1	0	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	0	0	1	1	3	1	0	5	1	5	1	0	7	0	1	6	0	7	20
05:15 PM	0	3	0	0	3	2	2	0	0	4	0	2	0	0	2	0	3	2	0	5	14
05:30 PM	0	0	0	0	0	1	2	0	0	3	0	2	2	0	4	1	2	1	0	4	11
05:45 PM	0	2	0	0	2	0	3	0	0	3	2	0	0	0	2	1	2	3	0	6	13
Total Volume	1	5	0	0	6	4	10	1	0	15	3	9	3	0	15	2	8	12	0	22	58
% App. Total	16.7	83.3	0	0		26.7	66.7	6.7	0		20	60	20	0		9.1	36.4	54.5	0		
PHF	.250	.417	.000	.000	.500	.500	.833	.250	.000	.750	.375	.450	.375	.000	.536	.500	.667	.500	.000	.786	.725

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Groups Printed- Buses

	Gilmore Bridge From North				Monsenior O'Brien Hwy (Rt 28) From East				Land Boulevard From South				Monsenior O'Brien Hwy (Rt 28) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	5
04:45 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	5
Total	0	0	3	0	1	1	0	0	0	1	0	0	0	4	0	0	10
05:00 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	3
05:15 PM	0	0	0	0	1	2	0	0	0	0	0	0	0	3	0	0	6
05:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	6
Total	0	2	0	0	4	6	0	0	0	1	0	0	0	4	0	0	17
06:00 PM	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	4
06:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	0	5
Grand Total	0	2	3	0	11	8	0	0	0	2	0	0	0	10	0	0	36
Apprch %	0	40	60	0	57.9	42.1	0	0	0	100	0	0	0	100	0	0	
Total %	0	5.6	8.3	0	30.6	22.2	0	0	0	5.6	0	0	0	27.8	0	0	

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	5
04:45 PM	0	0	1	0	1	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	5
05:00 PM	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	3
05:15 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Total Volume	0	0	3	0	3	4	3	0	0	7	0	2	0	0	2	0	7	0	0	7	19
% App. Total	0	0	100	0		57.1	42.9	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.375	.000	.375	.500	.375	.000	.000	.583	.000	.500	.000	.000	.500	.000	.583	.000	.000	.583	.792

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Groups Printed- Peds and Bicycles

	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	1	0	0	1	0	2	4	0	0	0	0	0	0	17	26	0	1	0	14	16	82
04:45 PM	0	2	0	0	0	2	5	0	5	6	0	0	0	23	23	0	3	0	14	8	91
Total	1	2	0	1	0	4	9	0	5	6	0	0	0	40	49	0	4	0	28	24	173
05:00 PM	0	3	1	0	0	2	4	0	2	5	1	0	1	16	48	0	4	0	26	19	132
05:15 PM	0	0	0	0	0	1	15	0	1	2	0	0	0	12	36	0	1	0	28	11	107
05:30 PM	0	1	1	0	0	1	3	1	5	7	0	0	0	17	29	0	2	0	29	21	117
05:45 PM	0	2	0	0	0	0	9	0	4	4	0	0	0	20	26	0	2	0	31	13	111
Total	0	6	2	0	0	4	31	1	12	18	1	0	1	65	139	0	9	0	114	64	467
06:00 PM	0	2	0	0	0	0	5	0	3	9	0	0	0	29	21	0	1	0	25	19	114
06:15 PM	0	1	0	0	0	0	2	2	3	6	0	2	0	20	26	0	4	0	30	20	116
Grand Total	1	11	2	1	0	8	47	3	23	39	1	2	1	154	235	0	18	0	197	127	870
Apprch %	6.7	73.3	13.3	6.7	0	6.7	39.2	2.5	19.2	32.5	0.3	0.5	0.3	39.2	59.8	0	5.3	0	57.6	37.1	
Total %	0.1	1.3	0.2	0.1	0	0.9	5.4	0.3	2.6	4.5	0.1	0.2	0.1	17.7	27	0	2.1	0	22.6	14.6	

	Gilmore Bridge From North						Monsenior O'Brien Hwy (Rt 28) From East						Land Boulevard From South						Monsenior O'Brien Hwy (Rt 28) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	3	1	0	0	4	2	4	0	2	5	13	1	0	1	16	48	66	0	4	0	26	19	49	132
05:15 PM	0	0	0	0	0	0	1	15	0	1	2	19	0	0	0	12	36	48	0	1	0	28	11	40	107
05:30 PM	0	1	1	0	0	2	1	3	1	5	7	17	0	0	0	17	29	46	0	2	0	29	21	52	117
05:45 PM	0	2	0	0	0	2	0	9	0	4	4	17	0	0	0	20	26	46	0	2	0	31	13	46	111
Total Volume	0	6	2	0	0	8	4	31	1	12	18	66	1	0	1	65	139	206	0	9	0	114	64	187	467
% App. Total	0	75	25	0	0		6.1	47	1.5	18.2	27.3		0.5	0	0.5	31.6	67.5		0	4.8	0	61	34.2		
PHF	.000	.500	.500	.000	.000	.500	.500	.517	.250	.600	.643	.868	.250	.000	.250	.813	.724	.780	.000	.563	.000	.919	.762	.899	.884

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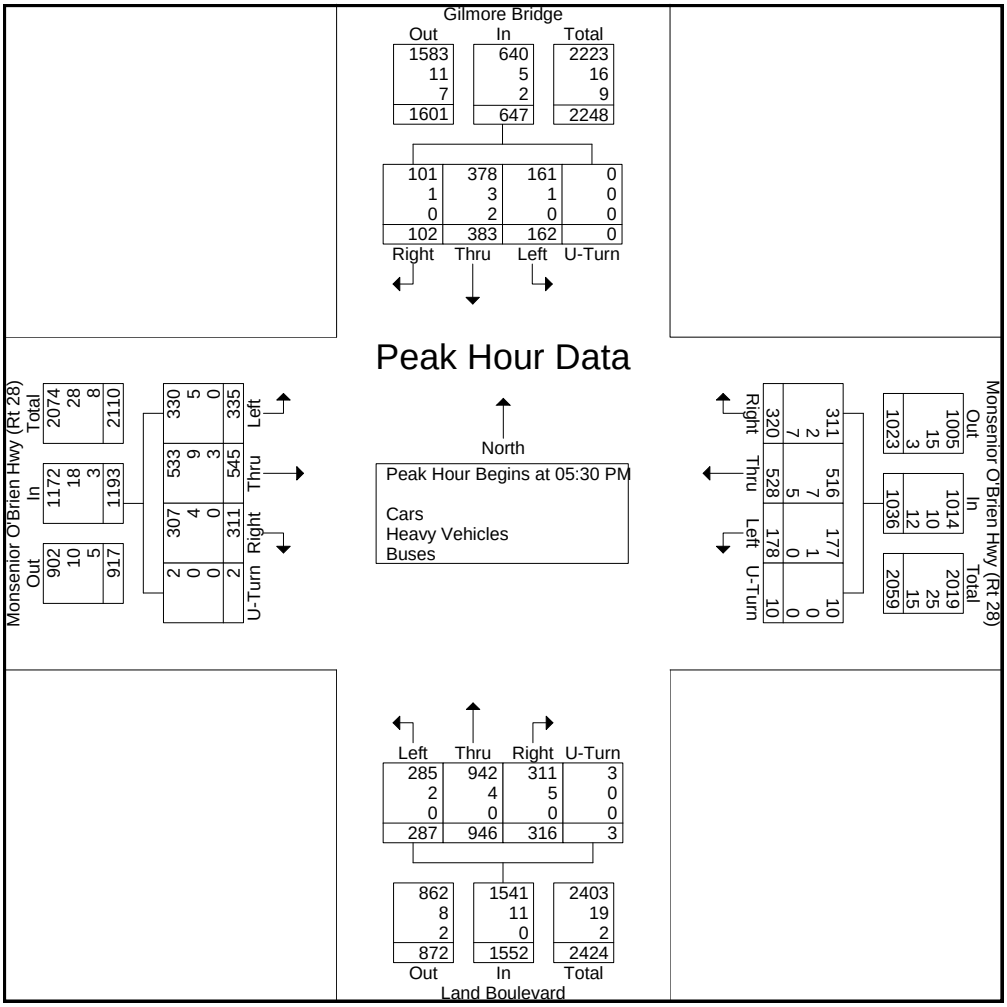
	Gilmore Bridge From North					Monsenior O'Brien Hwy (Rt 28) From East					Land Boulevard From South					Monsenior O'Brien Hwy (Rt 28) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	24	106	35	0	165	71	109	22	2	204	71	242	93	3	409	73	118	74	0	265	1043
05:45 PM	24	91	34	0	149	79	142	46	3	270	52	211	47	0	310	102	127	96	0	325	1054
06:00 PM	23	100	46	0	169	75	137	43	2	257	97	260	82	0	439	83	140	89	2	314	1179
06:15 PM	31	86	47	0	164	95	140	67	3	305	96	233	65	0	394	53	160	76	0	289	1152
Total Volume	102	383	162	0	647	320	528	178	10	1036	316	946	287	3	1552	311	545	335	2	1193	4428
% App. Total	15.8	59.2	25	0		30.9	51	17.2	1		20.4	61	18.5	0.2		26.1	45.7	28.1	0.2		
PHF	.823	.903	.862	.000	.957	.842	.930	.664	.833	.849	.814	.910	.772	.250	.884	.762	.852	.872	.250	.918	.939
Cars	101	378	161	0	640	311	516	177	10	1014	311	942	285	3	1541	307	533	330	2	1172	4367
% Cars	99.0	98.7	99.4	0	98.9	97.2	97.7	99.4	100	97.9	98.4	99.6	99.3	100	99.3	98.7	97.8	98.5	100	98.2	98.6
Heavy Vehicles	1	3	1	0	5	2	7	1	0	10	5	4	2	0	11	4	9	5	0	18	44
% Heavy Vehicles	1.0	0.8	0.6	0	0.8	0.6	1.3	0.6	0	1.0	1.6	0.4	0.7	0	0.7	1.3	1.7	1.5	0	1.5	1.0
Buses	0	2	0	0	2	7	5	0	0	12	0	0	0	0	0	0	3	0	0	3	17
% Buses	0	0.5	0	0	0.3	2.2	0.9	0	0	1.2	0	0	0	0	0	0	0.6	0	0	0.3	0.4



N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 F
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	6	46	0	0	6	12	104	0	68	0	0	0	3	7	36	0	288
07:45 AM	9	56	0	0	10	16	123	0	70	0	0	0	2	15	48	0	349
Total	15	102	0	0	16	28	227	0	138	0	0	0	5	22	84	0	637
08:00 AM	7	81	0	0	9	22	105	0	85	0	0	0	2	11	28	0	350
08:15 AM	17	67	0	0	10	31	106	0	94	0	0	0	4	16	36	0	381
08:30 AM	12	51	0	0	8	21	118	0	109	0	0	0	12	6	29	0	366
08:45 AM	9	64	0	0	10	22	109	0	118	0	0	0	6	11	39	0	388
Total	45	263	0	0	37	96	438	0	406	0	0	0	24	44	132	0	1485
09:00 AM	11	57	0	0	13	20	107	0	92	0	0	0	9	17	26	0	352
09:15 AM	11	48	0	0	13	22	86	0	93	0	0	0	7	13	25	0	318
Grand Total	82	470	0	0	79	166	858	0	729	0	0	0	45	96	267	0	2792
Apprch %	14.9	85.1	0	0	7.2	15	77.8	0	100	0	0	0	11	23.5	65.4	0	
Total %	2.9	16.8	0	0	2.8	5.9	30.7	0	26.1	0	0	0	1.6	3.4	9.6	0	
Cars	80	450	0	0	77	164	715	0	628	0	0	0	44	91	261	0	2510
% Cars	97.6	95.7	0	0	97.5	98.8	83.3	0	86.1	0	0	0	97.8	94.8	97.8	0	89.9
Heavy Vehicles	1	14	0	0	2	2	118	0	83	0	0	0	1	4	4	0	229
% Heavy Vehicles	1.2	3	0	0	2.5	1.2	13.8	0	11.4	0	0	0	2.2	4.2	1.5	0	8.2
Buses	1	6	0	0	0	0	25	0	18	0	0	0	0	1	2	0	53
% Buses	1.2	1.3	0	0	0	0	2.9	0	2.5	0	0	0	0	1	0.7	0	1.9

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	17	67	0	0	84	10	31	106	0	147	94	0	0	0	94	4	16	36	0	56	381
08:30 AM	12	51	0	0	63	8	21	118	0	147	109	0	0	0	109	12	6	29	0	47	366
08:45 AM	9	64	0	0	73	10	22	109	0	141	118	0	0	0	118	6	11	39	0	56	388
09:00 AM	11	57	0	0	68	13	20	107	0	140	92	0	0	0	92	9	17	26	0	52	352
Total Volume	49	239	0	0	288	41	94	440	0	575	413	0	0	0	413	31	50	130	0	211	1487
% App. Total	17	83	0	0		7.1	16.3	76.5	0		100	0	0	0		14.7	23.7	61.6	0		
PHF	.721	.892	.000	.000	.857	.788	.758	.932	.000	.978	.875	.000	.000	.000	.875	.646	.735	.833	.000	.942	.958
Cars	49	226	0	0	275	40	94	368	0	502	354	0	0	0	354	31	48	125	0	204	1335
% Cars	100	94.6	0	0	95.5	97.6	100	83.6	0	87.3	85.7	0	0	0	85.7	100	96.0	96.2	0	96.7	89.8
Heavy Vehicles	0	8	0	0	8	1	0	62	0	63	50	0	0	0	50	0	2	4	0	6	127
% Heavy Vehicles	0	3.3	0	0	2.8	2.4	0	14.1	0	11.0	12.1	0	0	0	12.1	0	4.0	3.1	0	2.8	8.5
Buses	0	5	0	0	5	0	0	10	0	10	9	0	0	0	9	0	0	1	0	1	25
% Buses	0	2.1	0	0	1.7	0	0	2.3	0	1.7	2.2	0	0	0	2.2	0	0	0.8	0	0.5	1.7

N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
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File Name : 133347 F
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	5	44	0	0	6	12	88	0	60	0	0	0	2	7	36	0	260
07:45 AM	9	54	0	0	9	15	103	0	59	0	0	0	2	12	48	0	311
Total	14	98	0	0	15	27	191	0	119	0	0	0	4	19	84	0	571
08:00 AM	7	78	0	0	9	22	84	0	72	0	0	0	2	11	27	0	312
08:15 AM	17	65	0	0	10	31	88	0	82	0	0	0	4	16	36	0	349
08:30 AM	12	49	0	0	8	21	94	0	90	0	0	0	12	6	29	0	321
08:45 AM	9	60	0	0	9	22	92	0	106	0	0	0	6	10	36	0	350
Total	45	252	0	0	36	96	358	0	350	0	0	0	24	43	128	0	1332
09:00 AM	11	52	0	0	13	20	94	0	76	0	0	0	9	16	24	0	315
09:15 AM	10	48	0	0	13	21	72	0	83	0	0	0	7	13	25	0	292
Grand Total	80	450	0	0	77	164	715	0	628	0	0	0	44	91	261	0	2510
Apprch %	15.1	84.9	0	0	8.1	17.2	74.8	0	100	0	0	0	11.1	23	65.9	0	
Total %	3.2	17.9	0	0	3.1	6.5	28.5	0	25	0	0	0	1.8	3.6	10.4	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	17	65	0	0	82	10	31	88	0	129	82	0	0	0	82	4	16	36	0	56	349
08:30 AM	12	49	0	0	61	8	21	94	0	123	90	0	0	0	90	12	6	29	0	47	321
08:45 AM	9	60	0	0	69	9	22	92	0	123	106	0	0	0	106	6	10	36	0	52	350
09:00 AM	11	52	0	0	63	13	20	94	0	127	76	0	0	0	76	9	16	24	0	49	315
Total Volume	49	226	0	0	275	40	94	368	0	502	354	0	0	0	354	31	48	125	0	204	1335
% App. Total	17.8	82.2	0	0		8	18.7	73.3	0		100	0	0	0		15.2	23.5	61.3	0		
PHF	.721	.869	.000	.000	.838	.769	.758	.979	.000	.973	.835	.000	.000	.000	.835	.646	.750	.868	.000	.911	.954

N/S: Fulkerson St/ Galileo Galilei Way
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City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	0	0	0	0	12	0	5	0	0	0	1	0	0	0	19
07:45 AM	0	2	0	0	1	1	15	0	9	0	0	0	0	2	0	0	30
Total	0	3	0	0	1	1	27	0	14	0	0	0	1	2	0	0	49
08:00 AM	0	3	0	0	0	0	18	0	11	0	0	0	0	0	0	0	32
08:15 AM	0	0	0	0	0	0	16	0	9	0	0	0	0	0	0	0	25
08:30 AM	0	2	0	0	0	0	21	0	17	0	0	0	0	0	0	0	40
08:45 AM	0	3	0	0	1	0	14	0	11	0	0	0	0	1	2	0	32
Total	0	8	0	0	1	0	69	0	48	0	0	0	0	1	2	0	129
09:00 AM	0	3	0	0	0	0	11	0	13	0	0	0	0	1	2	0	30
09:15 AM	1	0	0	0	0	1	11	0	8	0	0	0	0	0	0	0	21
Grand Total	1	14	0	0	2	2	118	0	83	0	0	0	1	4	4	0	229
Apprch %	6.7	93.3	0	0	1.6	1.6	96.7	0	100	0	0	0	11.1	44.4	44.4	0	
Total %	0.4	6.1	0	0	0.9	0.9	51.5	0	36.2	0	0	0	0.4	1.7	1.7	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	3	0	0	3	0	0	18	0	18	11	0	0	0	11	0	0	0	0	0	32
08:15 AM	0	0	0	0	0	0	0	16	0	16	9	0	0	0	9	0	0	0	0	0	25
08:30 AM	0	2	0	0	2	0	0	21	0	21	17	0	0	0	17	0	0	0	0	0	40
08:45 AM	0	3	0	0	3	1	0	14	0	15	11	0	0	0	11	0	1	2	0	3	32
Total Volume	0	8	0	0	8	1	0	69	0	70	48	0	0	0	48	0	1	2	0	3	129
% App. Total	0	100	0	0		1.4	0	98.6	0		100	0	0	0		0	33.3	66.7	0		
PHF	.000	.667	.000	.000	.667	.250	.000	.821	.000	.833	.706	.000	.000	.000	.706	.000	.250	.250	.000	.250	.806

N/S: Fulkerson St/ Galileo Galilei Way
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	1	0	0	0	0	4	0	3	0	0	0	0	0	0	0	9
07:45 AM	0	0	0	0	0	0	5	0	2	0	0	0	0	1	0	0	8
Total	1	1	0	0	0	0	9	0	5	0	0	0	0	1	0	0	17
08:00 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	1	0	6
08:15 AM	0	2	0	0	0	0	2	0	3	0	0	0	0	0	0	0	7
08:30 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
08:45 AM	0	1	0	0	0	0	3	0	1	0	0	0	0	0	1	0	6
Total	0	3	0	0	0	0	11	0	8	0	0	0	0	0	2	0	24
09:00 AM	0	2	0	0	0	0	2	0	3	0	0	0	0	0	0	0	7
09:15 AM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
Grand Total	1	6	0	0	0	0	25	0	18	0	0	0	0	1	2	0	53
Apprch %	14.3	85.7	0	0	0	0	100	0	100	0	0	0	0	33.3	66.7	0	
Total %	1.9	11.3	0	0	0	0	47.2	0	34	0	0	0	0	1.9	3.8	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	1	0	0	2	0	0	4	0	4	3	0	0	0	3	0	0	0	0	0	9
07:45 AM	0	0	0	0	0	0	0	5	0	5	2	0	0	0	2	0	1	0	0	1	8
08:00 AM	0	0	0	0	0	0	0	3	0	3	2	0	0	0	2	0	0	1	0	1	6
08:15 AM	0	2	0	0	2	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	7
Total Volume	1	3	0	0	4	0	0	14	0	14	10	0	0	0	10	0	1	1	0	2	30
% App. Total	25	75	0	0		0	0	100	0		100	0	0	0		0	50	50	0		
PHF	.250	.375	.000	.000	.500	.000	.000	.700	.000	.700	.833	.000	.000	.000	.833	.000	.250	.250	.000	.500	.833

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Groups Printed- Peds and Bicycles

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	1	0	7	6	1	0	5	1	1	0	0	0	4	0	0	1	5	1	2	35
07:45 AM	1	4	0	5	5	0	0	1	0	0	0	0	0	1	2	1	4	3	3	5	35
Total	1	5	0	12	11	1	0	6	1	1	0	0	0	5	2	1	5	8	4	7	70
08:00 AM	1	4	0	16	12	0	3	1	3	0	0	1	0	0	0	0	2	2	6	3	54
08:15 AM	0	8	0	8	18	1	0	2	1	0	4	1	0	0	3	1	2	5	3	7	64
08:30 AM	1	3	0	15	10	0	0	2	0	0	0	0	0	1	0	2	4	3	5	4	50
08:45 AM	1	9	0	7	15	1	0	3	0	0	2	0	0	1	1	0	3	2	2	11	58
Total	3	24	0	46	55	2	3	8	4	0	6	2	0	2	4	3	11	12	16	25	226
09:00 AM	0	6	0	25	6	0	0	3	0	0	0	0	0	0	1	2	3	4	4	7	61
09:15 AM	0	10	0	9	13	0	0	3	0	0	0	0	0	1	1	1	1	4	3	7	53
Grand Total	4	45	0	92	85	3	3	20	5	1	6	2	0	8	8	7	20	28	27	46	410
Apprch %	1.8	19.9	0	40.7	37.6	9.4	9.4	62.5	15.6	3.1	25	8.3	0	33.3	33.3	5.5	15.6	21.9	21.1	35.9	
Total %	1	11	0	22.4	20.7	0.7	0.7	4.9	1.2	0.2	1.5	0.5	0	2	2	1.7	4.9	6.8	6.6	11.2	

	Fulkerson Street From North						Binney Street From East						Galileo Galilei Way From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	8	0	8	18	34	1	0	2	1	0	4	4	1	0	0	3	8	1	2	5	3	7	18	64
08:30 AM	1	3	0	15	10	29	0	0	2	0	0	2	0	0	0	1	0	1	2	4	3	5	4	18	50
08:45 AM	1	9	0	7	15	32	1	0	3	0	0	4	2	0	0	1	1	4	0	3	2	2	11	18	58
09:00 AM	0	6	0	25	6	37	0	0	3	0	0	3	0	0	0	0	1	1	2	3	4	4	7	20	61
Total Volume	2	26	0	55	49	132	2	0	10	1	0	13	6	1	0	2	5	14	5	12	14	14	29	74	233
% App. Total	1.5	19.7	0	41.7	37.1		15.4	0	76.9	7.7	0		42.9	7.1	0	14.3	35.7		6.8	16.2	18.9	18.9	39.2		
PHF	.500	.722	.000	.550	.681	.892	.500	.000	.833	.250	.000	.813	.375	.250	.000	.500	.417	.438	.625	.750	.700	.700	.659	.925	.910

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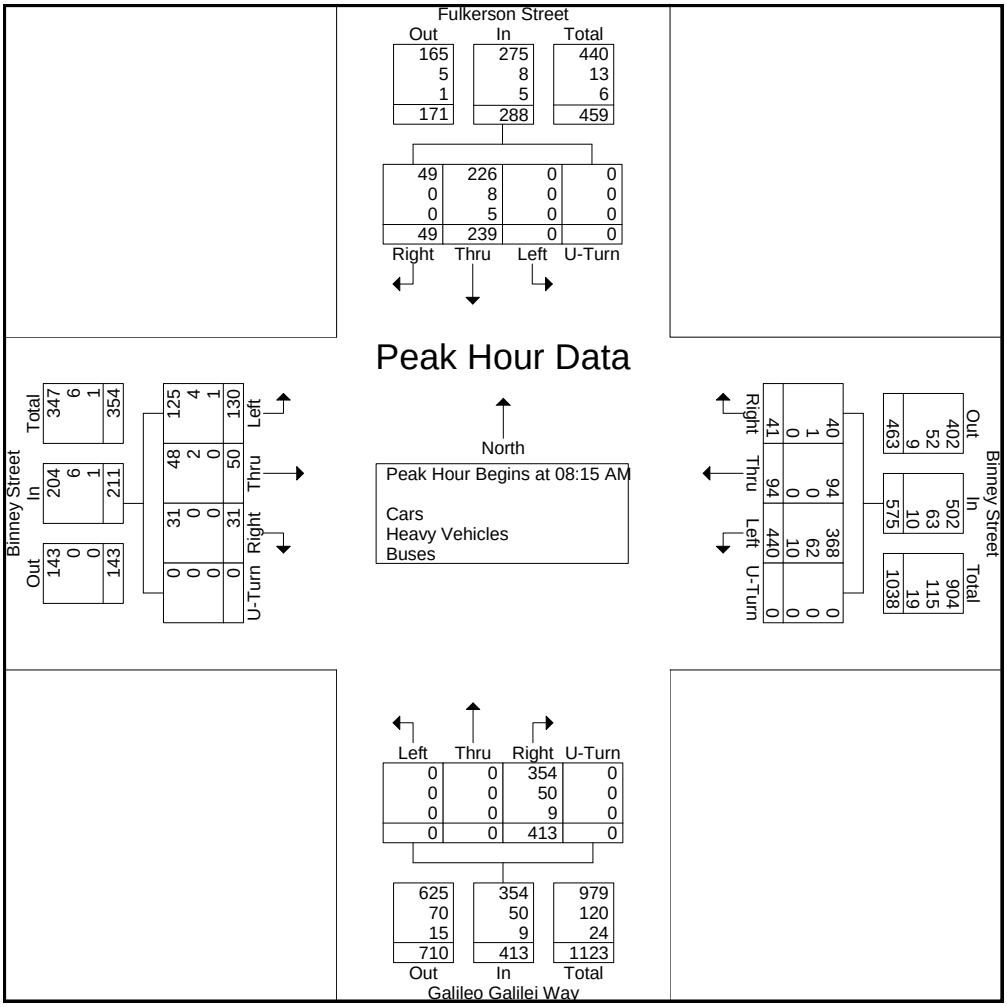
	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	17	67	0	0	84	10	31	106	0	147	94	0	0	0	94	4	16	36	0	56	381
08:30 AM	12	51	0	0	63	8	21	118	0	147	109	0	0	0	109	12	6	29	0	47	366
08:45 AM	9	64	0	0	73	10	22	109	0	141	118	0	0	0	118	6	11	39	0	56	388
09:00 AM	11	57	0	0	68	13	20	107	0	140	92	0	0	0	92	9	17	26	0	52	352
Total Volume	49	239	0	0	288	41	94	440	0	575	413	0	0	0	413	31	50	130	0	211	1487
% App. Total	17	83	0	0		7.1	16.3	76.5	0		100	0	0	0		14.7	23.7	61.6	0		
PHF	.721	.892	.000	.000	.857	.788	.758	.932	.000	.978	.875	.000	.000	.000	.875	.646	.735	.833	.000	.942	.958
Cars	49	226	0	0	275	40	94	368	0	502	354	0	0	0	354	31	48	125	0	204	1335
% Cars	100	94.6	0	0	95.5	97.6	100	83.6	0	87.3	85.7	0	0	0	85.7	100	96.0	96.2	0	96.7	89.8
Heavy Vehicles	0	8	0	0	8	1	0	62	0	63	50	0	0	0	50	0	2	4	0	6	127
% Heavy Vehicles	0	3.3	0	0	2.8	2.4	0	14.1	0	11.0	12.1	0	0	0	12.1	0	4.0	3.1	0	2.8	8.5
Buses	0	5	0	0	5	0	0	10	0	10	9	0	0	0	9	0	0	1	0	1	25
% Buses	0	2.1	0	0	1.7	0	0	2.3	0	1.7	2.2	0	0	0	2.2	0	0	0.8	0	0.5	1.7



N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 FF
Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	10	55	0	0	3	11	57	0	143	0	0	0	11	5	32	0	327
04:45 PM	12	47	1	0	4	14	75	0	135	0	0	0	14	15	28	0	345
Total	22	102	1	0	7	25	132	0	278	0	0	0	25	20	60	0	672
05:00 PM	16	49	0	0	9	14	67	0	145	1	0	0	10	23	28	0	362
05:15 PM	12	47	0	0	7	14	88	0	166	0	0	0	22	25	49	0	430
05:30 PM	13	47	0	0	4	16	72	0	132	0	0	0	13	20	34	0	351
05:45 PM	7	37	0	0	2	14	68	0	141	0	0	0	15	15	30	0	329
Total	48	180	0	0	22	58	295	0	584	1	0	0	60	83	141	0	1472
06:00 PM	5	37	0	0	1	17	72	0	121	0	0	0	12	13	22	0	300
06:15 PM	3	34	0	0	3	13	64	0	127	0	0	0	14	19	24	0	301
Grand Total	78	353	1	0	33	113	563	0	1110	1	0	0	111	135	247	0	2745
Apprch %	18.1	81.7	0.2	0	4.7	15.9	79.4	0	99.9	0.1	0	0	22.5	27.4	50.1	0	
Total %	2.8	12.9	0	0	1.2	4.1	20.5	0	40.4	0	0	0	4	4.9	9	0	
Cars	78	346	1	0	33	111	524	0	1055	1	0	0	110	134	242	0	2635
% Cars	100	98	100	0	100	98.2	93.1	0	95	100	0	0	99.1	99.3	98	0	96
Heavy Vehicles	0	6	0	0	0	2	13	0	33	0	0	0	1	1	4	0	60
% Heavy Vehicles	0	1.7	0	0	0	1.8	2.3	0	3	0	0	0	0.9	0.7	1.6	0	2.2
Buses	0	1	0	0	0	0	26	0	22	0	0	0	0	0	1	0	50
% Buses	0	0.3	0	0	0	0	4.6	0	2	0	0	0	0	0	0.4	0	1.8

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	47	1	0	60	4	14	75	0	93	135	0	0	0	135	14	15	28	0	57	345
05:00 PM	16	49	0	0	65	9	14	67	0	90	145	1	0	0	146	10	23	28	0	61	362
05:15 PM	12	47	0	0	59	7	14	88	0	109	166	0	0	0	166	22	25	49	0	96	430
05:30 PM	13	47	0	0	60	4	16	72	0	92	132	0	0	0	132	13	20	34	0	67	351
Total Volume	53	190	1	0	244	24	58	302	0	384	578	1	0	0	579	59	83	139	0	281	1488
% App. Total	21.7	77.9	0.4	0		6.2	15.1	78.6	0		99.8	0.2	0	0		21	29.5	49.5	0		
PHF	.828	.969	.250	.000	.938	.667	.906	.858	.000	.881	.870	.250	.000	.000	.872	.670	.830	.709	.000	.732	.865
Cars	53	186	1	0	240	24	58	284	0	366	543	1	0	0	544	58	82	137	0	277	1427
% Cars	100	97.9	100	0	98.4	100	100	94.0	0	95.3	93.9	100	0	0	94.0	98.3	98.8	98.6	0	98.6	95.9
Heavy Vehicles	0	4	0	0	4	0	0	7	0	7	24	0	0	0	24	1	1	1	0	3	38
% Heavy Vehicles	0	2.1	0	0	1.6	0	0	2.3	0	1.8	4.2	0	0	0	4.1	1.7	1.2	0.7	0	1.1	2.6
Buses	0	0	0	0	0	0	0	11	0	11	11	0	0	0	11	0	0	1	0	1	23
% Buses	0	0	0	0	0	0	0	3.6	0	2.9	1.9	0	0	0	1.9	0	0	0.7	0	0.4	1.5

N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 FF
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	10	55	0	0	3	11	53	0	134	0	0	0	11	5	31	0	313
04:45 PM	12	47	1	0	4	14	67	0	123	0	0	0	13	15	28	0	324
Total	22	102	1	0	7	25	120	0	257	0	0	0	24	20	59	0	637
05:00 PM	16	48	0	0	9	14	63	0	134	1	0	0	10	23	27	0	345
05:15 PM	12	44	0	0	7	14	84	0	163	0	0	0	22	25	48	0	419
05:30 PM	13	47	0	0	4	16	70	0	123	0	0	0	13	19	34	0	339
05:45 PM	7	36	0	0	2	13	64	0	138	0	0	0	15	15	30	0	320
Total	48	175	0	0	22	57	281	0	558	1	0	0	60	82	139	0	1423
06:00 PM	5	37	0	0	1	17	64	0	120	0	0	0	12	13	20	0	289
06:15 PM	3	32	0	0	3	12	59	0	120	0	0	0	14	19	24	0	286
Grand Total	78	346	1	0	33	111	524	0	1055	1	0	0	110	134	242	0	2635
Apprch %	18.4	81.4	0.2	0	4.9	16.6	78.4	0	99.9	0.1	0	0	22.6	27.6	49.8	0	
Total %	3	13.1	0	0	1.3	4.2	19.9	0	40	0	0	0	4.2	5.1	9.2	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	47	1	0	60	4	14	67	0	85	123	0	0	0	123	13	15	28	0	56	324
05:00 PM	16	48	0	0	64	9	14	63	0	86	134	1	0	0	135	10	23	27	0	60	345
05:15 PM	12	44	0	0	56	7	14	84	0	105	163	0	0	0	163	22	25	48	0	95	419
05:30 PM	13	47	0	0	60	4	16	70	0	90	123	0	0	0	123	13	19	34	0	66	339
Total Volume	53	186	1	0	240	24	58	284	0	366	543	1	0	0	544	58	82	137	0	277	1427
% App. Total	22.1	77.5	0.4	0		6.6	15.8	77.6	0		99.8	0.2	0	0		20.9	29.6	49.5	0		
PHF	.828	.969	.250	.000	.938	.667	.906	.845	.000	.871	.833	.250	.000	.000	.834	.659	.820	.714	.000	.729	.851

N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	1	0	4	0	0	0	0	0	1	0	6
04:45 PM	0	0	0	0	0	0	5	0	10	0	0	0	1	0	0	0	16
Total	0	0	0	0	0	0	6	0	14	0	0	0	1	0	1	0	22
05:00 PM	0	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0	8
05:15 PM	0	3	0	0	0	0	2	0	2	0	0	0	0	0	1	0	8
05:30 PM	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	6
05:45 PM	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	4
Total	0	5	0	0	0	1	3	0	15	0	0	0	0	1	1	0	26
06:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	5
06:15 PM	0	1	0	0	0	1	1	0	4	0	0	0	0	0	0	0	7
Grand Total	0	6	0	0	0	2	13	0	33	0	0	0	1	1	4	0	60
Apprch %	0	100	0	0	0	13.3	86.7	0	100	0	0	0	16.7	16.7	66.7	0	
Total %	0	10	0	0	0	3.3	21.7	0	55	0	0	0	1.7	1.7	6.7	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	1	0	1	4	0	0	0	4	0	0	1	0	1	6
04:45 PM	0	0	0	0	0	0	0	5	0	5	10	0	0	0	10	1	0	0	0	1	16
05:00 PM	0	1	0	0	1	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	8
05:15 PM	0	3	0	0	3	0	0	2	0	2	2	0	0	0	2	0	0	1	0	1	8
Total Volume	0	4	0	0	4	0	0	8	0	8	23	0	0	0	23	1	0	2	0	3	38
% App. Total	0	100	0	0		0	0	100	0		100	0	0	0		33.3	0	66.7	0		
PHF	.000	.333	.000	.000	.333	.000	.000	.400	.000	.400	.575	.000	.000	.000	.575	.250	.000	.500	.000	.750	.594

N/S: Fulkerson St/ Galileo Galilei Way
E/W: Binney Street
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Fulkerson Street From North				Binney Street From East				Galileo Galilei Way From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	3	0	5	0	0	0	0	0	0	0	8
04:45 PM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	6	0	7	0	0	0	0	0	0	0	13
05:00 PM	0	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	9
05:15 PM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	2	0	4	0	0	0	0	0	0	0	6
05:45 PM	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	11	0	11	0	0	0	0	0	1	0	23
06:00 PM	0	0	0	0	0	0	5	0	1	0	0	0	0	0	0	0	6
06:15 PM	0	1	0	0	0	0	4	0	3	0	0	0	0	0	0	0	8
Grand Total	0	1	0	0	0	0	26	0	22	0	0	0	0	0	1	0	50
Apprch %	0	100	0	0	0	0	100	0	100	0	0	0	0	0	100	0	
Total %	0	2	0	0	0	0	52	0	44	0	0	0	0	0	2	0	

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	3	0	3	5	0	0	0	5	0	0	0	0	0	8
04:45 PM	0	0	0	0	0	0	0	3	0	3	2	0	0	0	2	0	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	4	0	4	4	0	0	0	4	0	0	1	0	1	9
05:15 PM	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	12	0	12	12	0	0	0	12	0	0	1	0	1	25
% App. Total	0	0	0	0		0	0	100	0		100	0	0	0		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.750	.000	.750	.600	.000	.000	.000	.600	.000	.000	.250	.000	.250	.694

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Groups Printed- Peds and Bicycles

	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	1	0	1	8	0	0	1	2	1	0	0	0	0	0	0	0	0	12	5	31
04:45 PM	2	3	0	3	7	1	1	0	1	2	2	0	0	1	1	0	1	0	5	8	38
Total	2	4	0	4	15	1	1	1	3	3	2	0	0	1	1	0	1	0	17	13	69
05:00 PM	0	3	0	2	13	2	1	6	3	2	0	1	0	1	0	0	0	0	11	7	52
05:15 PM	5	7	0	3	8	1	2	7	0	0	1	1	0	1	2	0	0	0	11	6	55
05:30 PM	3	6	0	6	6	1	4	10	3	3	1	0	0	0	2	0	0	2	9	6	62
05:45 PM	3	2	0	5	10	1	3	12	2	2	5	0	0	0	2	2	2	1	3	4	59
Total	11	18	0	16	37	5	10	35	8	7	7	2	0	2	6	2	2	3	34	23	228
06:00 PM	5	1	0	9	5	0	1	3	1	0	6	1	0	1	1	0	0	0	7	3	44
06:15 PM	0	1	0	6	3	1	3	4	1	4	1	1	1	2	3	1	0	1	5	3	41
Grand Total	18	24	0	35	60	7	15	43	13	14	16	4	1	6	11	3	3	4	63	42	382
Apprch %	13.1	17.5	0	25.5	43.8	7.6	16.3	46.7	14.1	15.2	42.1	10.5	2.6	15.8	28.9	2.6	2.6	3.5	54.8	36.5	
Total %	4.7	6.3	0	9.2	15.7	1.8	3.9	11.3	3.4	3.7	4.2	1	0.3	1.6	2.9	0.8	0.8	1	16.5	11	

	Fulkerson Street From North						Binney Street From East						Galileo Galilei Way From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	3	0	2	13	18	2	1	6	3	2	14	0	1	0	1	0	2	0	0	0	11	7	18	52
05:15 PM	5	7	0	3	8	23	1	2	7	0	0	10	1	1	0	1	2	5	0	0	0	11	6	17	55
05:30 PM	3	6	0	6	6	21	1	4	10	3	3	21	1	0	0	0	2	3	0	0	2	9	6	17	62
05:45 PM	3	2	0	5	10	20	1	3	12	2	2	20	5	0	0	0	2	7	2	2	1	3	4	12	59
Total Volume	11	18	0	16	37	82	5	10	35	8	7	65	7	2	0	2	6	17	2	2	3	34	23	64	228
% App. Total	13.4	22	0	19.5	45.1		7.7	15.4	53.8	12.3	10.8		41.2	11.8	0	11.8	35.3		3.1	3.1	4.7	53.1	35.9		
PHF	.550	.643	.000	.667	.712	.891	.625	.625	.729	.667	.583	.774	.350	.500	.000	.500	.750	.607	.250	.250	.375	.773	.821	.889	.919

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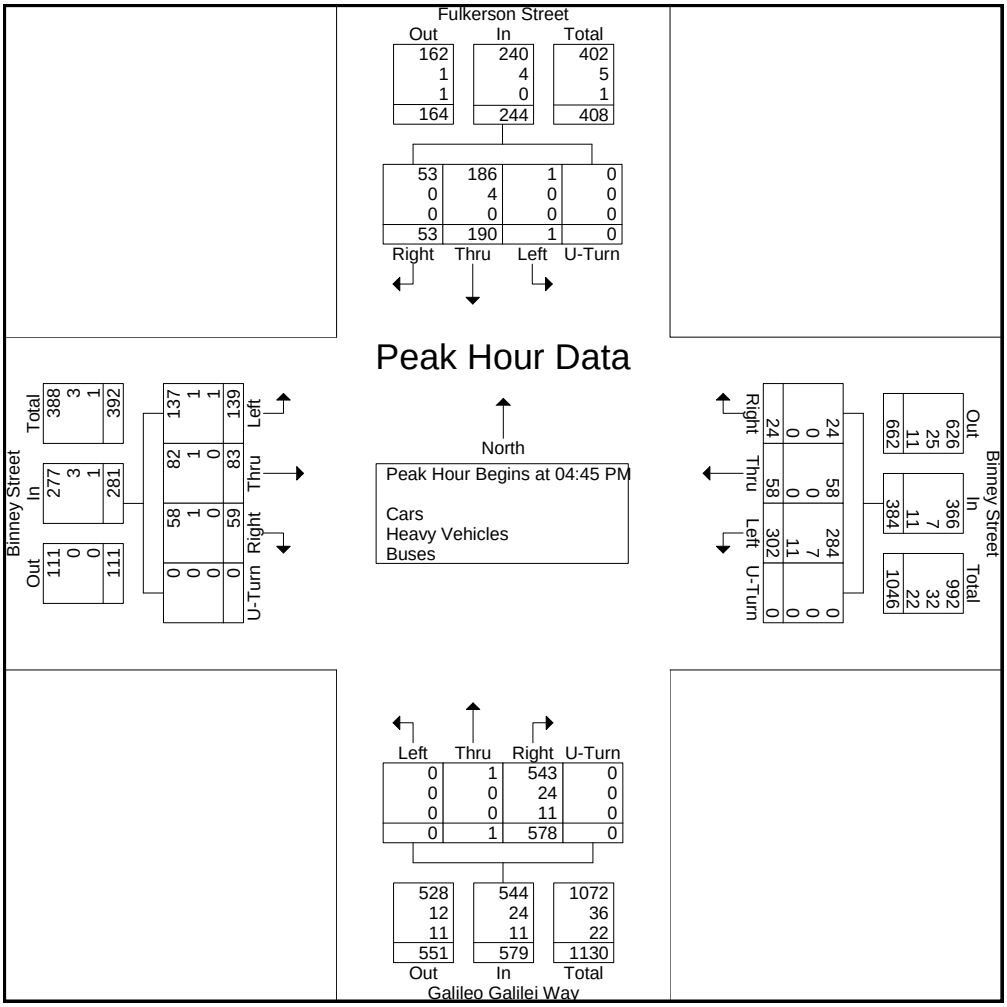
	Fulkerson Street From North					Binney Street From East					Galileo Galilei Way From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	12	47	1	0	60	4	14	75	0	93	135	0	0	0	135	14	15	28	0	57	345
05:00 PM	16	49	0	0	65	9	14	67	0	90	145	1	0	0	146	10	23	28	0	61	362
05:15 PM	12	47	0	0	59	7	14	88	0	109	166	0	0	0	166	22	25	49	0	96	430
05:30 PM	13	47	0	0	60	4	16	72	0	92	132	0	0	0	132	13	20	34	0	67	351
Total Volume	53	190	1	0	244	24	58	302	0	384	578	1	0	0	579	59	83	139	0	281	1488
% App. Total	21.7	77.9	0.4	0		6.2	15.1	78.6	0		99.8	0.2	0	0		21	29.5	49.5	0		
PHF	.828	.969	.250	.000	.938	.667	.906	.858	.000	.881	.870	.250	.000	.000	.872	.670	.830	.709	.000	.732	.865
Cars	53	186	1	0	240	24	58	284	0	366	543	1	0	0	544	58	82	137	0	277	1427
% Cars	100	97.9	100	0	98.4	100	100	94.0	0	95.3	93.9	100	0	0	94.0	98.3	98.8	98.6	0	98.6	95.9
Heavy Vehicles	0	4	0	0	4	0	0	7	0	7	24	0	0	0	24	1	1	1	0	3	38
% Heavy Vehicles	0	2.1	0	0	1.6	0	0	2.3	0	1.8	4.2	0	0	0	4.1	1.7	1.2	0.7	0	1.1	2.6
Buses	0	0	0	0	0	0	0	11	0	11	11	0	0	0	11	0	0	1	0	1	23
% Buses	0	0	0	0	0	0	0	3.6	0	2.9	1.9	0	0	0	1.9	0	0	0.7	0	0.4	1.5



N/S: 3rd Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 G
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	37	65	7	0	7	73	27	1	16	21	13	0	7	41	15	1	331
07:45 AM	41	75	7	0	14	94	38	2	17	20	25	0	11	36	17	1	398
Total	78	140	14	0	21	167	65	3	33	41	38	0	18	77	32	2	729
08:00 AM	30	79	13	0	13	68	29	1	13	32	22	0	12	36	18	0	366
08:15 AM	40	81	11	0	13	109	45	0	16	16	25	0	12	48	21	1	438
08:30 AM	26	79	13	0	11	79	31	1	21	31	14	0	13	44	26	1	390
08:45 AM	32	93	11	0	10	107	36	2	17	32	17	0	16	47	20	0	440
Total	128	332	48	0	47	363	141	4	67	111	78	0	53	175	85	2	1634
09:00 AM	33	81	11	0	16	78	30	0	17	24	16	0	18	41	23	2	390
09:15 AM	20	95	4	0	15	76	37	1	11	27	16	0	24	32	25	4	387
Grand Total	259	648	77	0	99	684	273	8	128	203	148	0	113	325	165	10	3140
Apprch %	26.3	65.9	7.8	0	9.3	64.3	25.7	0.8	26.7	42.4	30.9	0	18.4	53	26.9	1.6	
Total %	8.2	20.6	2.5	0	3.2	21.8	8.7	0.3	4.1	6.5	4.7	0	3.6	10.4	5.3	0.3	
Cars	254	631	75	0	82	548	256	8	114	193	143	0	105	242	153	10	2814
% Cars	98.1	97.4	97.4	0	82.8	80.1	93.8	100	89.1	95.1	96.6	0	92.9	74.5	92.7	100	89.6
Heavy Vehicles	4	9	2	0	15	116	13	0	11	7	4	0	8	67	12	0	268
% Heavy Vehicles	1.5	1.4	2.6	0	15.2	17	4.8	0	8.6	3.4	2.7	0	7.1	20.6	7.3	0	8.5
Buses	1	8	0	0	2	20	4	0	3	3	1	0	0	16	0	0	58
% Buses	0.4	1.2	0	0	2	2.9	1.5	0	2.3	1.5	0.7	0	0	4.9	0	0	1.8

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	40	81	11	0	132	13	109	45	0	167	16	16	25	0	57	12	48	21	1	82	438
08:30 AM	26	79	13	0	118	11	79	31	1	122	21	31	14	0	66	13	44	26	1	84	390
08:45 AM	32	93	11	0	136	10	107	36	2	155	17	32	17	0	66	16	47	20	0	83	440
09:00 AM	33	81	11	0	125	16	78	30	0	124	17	24	16	0	57	18	41	23	2	84	390
Total Volume	131	334	46	0	511	50	373	142	3	568	71	103	72	0	246	59	180	90	4	333	1658
% App. Total	25.6	65.4	9	0		8.8	65.7	25	0.5		28.9	41.9	29.3	0		17.7	54.1	27	1.2		
PHF	.819	.898	.885	.000	.939	.781	.856	.789	.375	.850	.845	.805	.720	.000	.932	.819	.938	.865	.500	.991	.942
Cars	127	326	45	0	498	41	303	135	3	482	63	97	72	0	232	57	129	85	4	275	1487
% Cars	96.9	97.6	97.8	0	97.5	82.0	81.2	95.1	100	84.9	88.7	94.2	100	0	94.3	96.6	71.7	94.4	100	82.6	89.7
Heavy Vehicles	3	6	1	0	10	9	63	3	0	75	7	4	0	0	11	2	43	5	0	50	146
% Heavy Vehicles	2.3	1.8	2.2	0	2.0	18.0	16.9	2.1	0	13.2	9.9	3.9	0	0	4.5	3.4	23.9	5.6	0	15.0	8.8
Buses	1	2	0	0	3	0	7	4	0	11	1	2	0	0	3	0	8	0	0	8	25
% Buses	0.8	0.6	0	0	0.6	0	1.9	2.8	0	1.9	1.4	1.9	0	0	1.2	0	4.4	0	0	2.4	1.5

N/S: 3rd Street
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City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
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Page No : 1

Groups Printed- Cars

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	37	64	6	0	4	60	24	1	15	19	11	0	7	33	15	1	297
07:45 AM	41	71	7	0	14	72	36	2	17	19	24	0	8	26	15	1	353
Total	78	135	13	0	18	132	60	3	32	38	35	0	15	59	30	2	650
08:00 AM	29	77	13	0	10	51	28	1	11	31	21	0	11	27	15	0	325
08:15 AM	40	80	10	0	11	86	40	0	15	14	25	0	12	38	21	1	393
08:30 AM	25	77	13	0	8	64	31	1	18	29	14	0	13	30	25	1	349
08:45 AM	31	93	11	0	9	88	35	2	16	31	17	0	15	34	19	0	401
Total	125	327	47	0	38	289	134	4	60	105	77	0	51	129	80	2	1468
09:00 AM	31	76	11	0	13	65	29	0	14	23	16	0	17	27	20	2	344
09:15 AM	20	93	4	0	13	62	33	1	8	27	15	0	22	27	23	4	352
Grand Total	254	631	75	0	82	548	256	8	114	193	143	0	105	242	153	10	2814
Apprch %	26.5	65.7	7.8	0	9.2	61.3	28.6	0.9	25.3	42.9	31.8	0	20.6	47.5	30	2	
Total %	9	22.4	2.7	0	2.9	19.5	9.1	0.3	4.1	6.9	5.1	0	3.7	8.6	5.4	0.4	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	40	80	10	0	130	11	86	40	0	137	15	14	25	0	54	12	38	21	1	72	393
08:30 AM	25	77	13	0	115	8	64	31	1	104	18	29	14	0	61	13	30	25	1	69	349
08:45 AM	31	93	11	0	135	9	88	35	2	134	16	31	17	0	64	15	34	19	0	68	401
09:00 AM	31	76	11	0	118	13	65	29	0	107	14	23	16	0	53	17	27	20	2	66	344
Total Volume	127	326	45	0	498	41	303	135	3	482	63	97	72	0	232	57	129	85	4	275	1487
% App. Total	25.5	65.5	9	0		8.5	62.9	28	0.6		27.2	41.8	31	0		20.7	46.9	30.9	1.5		
PHF	.794	.876	.865	.000	.922	.788	.861	.844	.375	.880	.875	.782	.720	.000	.906	.838	.849	.850	.500	.955	.927

N/S: 3rd Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Heavy Vehicles

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	1	0	1	10	3	0	1	2	1	0	0	6	0	0	25
07:45 AM	0	2	0	0	0	19	2	0	0	1	1	0	3	7	2	0	37
Total	0	2	1	0	1	29	5	0	1	3	2	0	3	13	2	0	62
08:00 AM	1	1	0	0	3	15	1	0	2	0	1	0	1	8	3	0	36
08:15 AM	0	0	1	0	2	21	2	0	1	0	0	0	0	8	0	0	35
08:30 AM	1	2	0	0	3	14	0	0	3	2	0	0	0	12	1	0	38
08:45 AM	1	0	0	0	1	17	1	0	1	1	0	0	1	11	1	0	35
Total	3	3	1	0	9	67	4	0	7	3	1	0	2	39	5	0	144
09:00 AM	1	4	0	0	3	11	0	0	2	1	0	0	1	12	3	0	38
09:15 AM	0	0	0	0	2	9	4	0	1	0	1	0	2	3	2	0	24
Grand Total	4	9	2	0	15	116	13	0	11	7	4	0	8	67	12	0	268
Apprch %	26.7	60	13.3	0	10.4	80.6	9	0	50	31.8	18.2	0	9.2	77	13.8	0	
Total %	1.5	3.4	0.7	0	5.6	43.3	4.9	0	4.1	2.6	1.5	0	3	25	4.5	0	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	2	0	0	2	0	19	2	0	21	0	1	1	0	2	3	7	2	0	12	37
08:00 AM	1	1	0	0	2	3	15	1	0	19	2	0	1	0	3	1	8	3	0	12	36
08:15 AM	0	0	1	0	1	2	21	2	0	25	1	0	0	0	1	0	8	0	0	8	35
08:30 AM	1	2	0	0	3	3	14	0	0	17	3	2	0	0	5	0	12	1	0	13	38
Total Volume	2	5	1	0	8	8	69	5	0	82	6	3	2	0	11	4	35	6	0	45	146
% App. Total	25	62.5	12.5	0		9.8	84.1	6.1	0		54.5	27.3	18.2	0		8.9	77.8	13.3	0		
PHF	.500	.625	.250	.000	.667	.667	.821	.625	.000	.820	.500	.375	.500	.000	.550	.333	.729	.500	.000	.865	.961

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Groups Printed- Buses

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	0	0	2	3	0	0	0	0	1	0	0	2	0	0	9
07:45 AM	0	2	0	0	0	3	0	0	0	0	0	0	0	3	0	0	8
Total	0	3	0	0	2	6	0	0	0	0	1	0	0	5	0	0	17
08:00 AM	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0	0	5
08:15 AM	0	1	0	0	0	2	3	0	0	2	0	0	0	2	0	0	10
08:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
08:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
Total	0	2	0	0	0	7	3	0	0	3	0	0	0	7	0	0	22
09:00 AM	1	1	0	0	0	2	1	0	1	0	0	0	0	2	0	0	8
09:15 AM	0	2	0	0	0	5	0	0	2	0	0	0	0	2	0	0	11
Grand Total	1	8	0	0	2	20	4	0	3	3	1	0	0	16	0	0	58
Apprch %	11.1	88.9	0	0	7.7	76.9	15.4	0	42.9	42.9	14.3	0	0	100	0	0	
Total %	1.7	13.8	0	0	3.4	34.5	6.9	0	5.2	5.2	1.7	0	0	27.6	0	0	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	1	0	0	1	2	3	0	0	5	0	0	1	0	1	0	2	0	0	2	9
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	8
08:00 AM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	5
08:15 AM	0	1	0	0	1	0	2	3	0	5	0	2	0	0	2	0	2	0	0	2	10
Total Volume	0	5	0	0	5	2	10	3	0	15	0	3	1	0	4	0	8	0	0	8	32
% App. Total	0	100	0	0		13.3	66.7	20	0		0	75	25	0		0	100	0	0		
PHF	.000	.625	.000	.000	.625	.250	.833	.250	.000	.750	.000	.375	.250	.000	.500	.000	.667	.000	.000	.667	.800

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Groups Printed- Peds and Bicycles

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	1	3	0	5	4	0	3	1	7	12	0	1	2	1	2	0	3	0	2	13	60
07:45 AM	0	3	0	7	4	0	1	0	21	16	0	0	0	1	6	4	0	0	4	20	87
Total	1	6	0	12	8	0	4	1	28	28	0	1	2	2	8	4	3	0	6	33	147
08:00 AM	0	6	0	6	6	0	4	0	10	18	0	3	0	0	5	0	4	0	7	18	87
08:15 AM	1	6	0	6	8	0	1	0	23	16	0	2	0	6	3	2	2	4	11	14	105
08:30 AM	0	2	0	5	2	0	3	1	21	22	1	4	0	2	11	1	3	2	4	31	115
08:45 AM	0	3	0	2	3	0	4	1	33	20	0	3	0	2	4	2	5	1	11	51	145
Total	1	17	0	19	19	0	12	2	87	76	1	12	0	10	23	5	14	7	33	114	452
09:00 AM	1	5	0	1	3	0	2	0	26	19	0	2	0	4	8	2	3	6	12	19	113
09:15 AM	0	0	0	3	3	0	2	1	25	4	1	1	0	3	9	2	0	0	4	15	73
Grand Total	3	28	0	35	33	0	20	4	166	127	2	16	2	19	48	13	20	13	55	181	785
Apprch %	3	28.3	0	35.4	33.3	0	6.3	1.3	52.4	40.1	2.3	18.4	2.3	21.8	55.2	4.6	7.1	4.6	19.5	64.2	
Total %	0.4	3.6	0	4.5	4.2	0	2.5	0.5	21.1	16.2	0.3	2	0.3	2.4	6.1	1.7	2.5	1.7	7	23.1	

	3rd Street From North						Binney Street From East						3rd Street From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	1	6	0	6	8	21	0	1	0	23	16	40	0	2	0	6	3	11	2	2	4	11	14	33	105
08:30 AM	0	2	0	5	2	9	0	3	1	21	22	47	1	4	0	2	11	18	1	3	2	4	31	41	115
08:45 AM	0	3	0	2	3	8	0	4	1	33	20	58	0	3	0	2	4	9	2	5	1	11	51	70	145
09:00 AM	1	5	0	1	3	10	0	2	0	26	19	47	0	2	0	4	8	14	2	3	6	12	19	42	113
Total Volume	2	16	0	14	16	48	0	10	2	103	77	192	1	11	0	14	26	52	7	13	13	38	115	186	478
% App. Total	4.2	33.3	0	29.2	33.3		0	5.2	1	53.6	40.1		1.9	21.2	0	26.9	50		3.8	7	7	20.4	61.8		
PHF	.500	.667	.000	.583	.500	.571	.000	.625	.500	.780	.875	.828	.250	.688	.000	.583	.591	.722	.875	.650	.542	.792	.564	.664	.824

N/S: 3rd Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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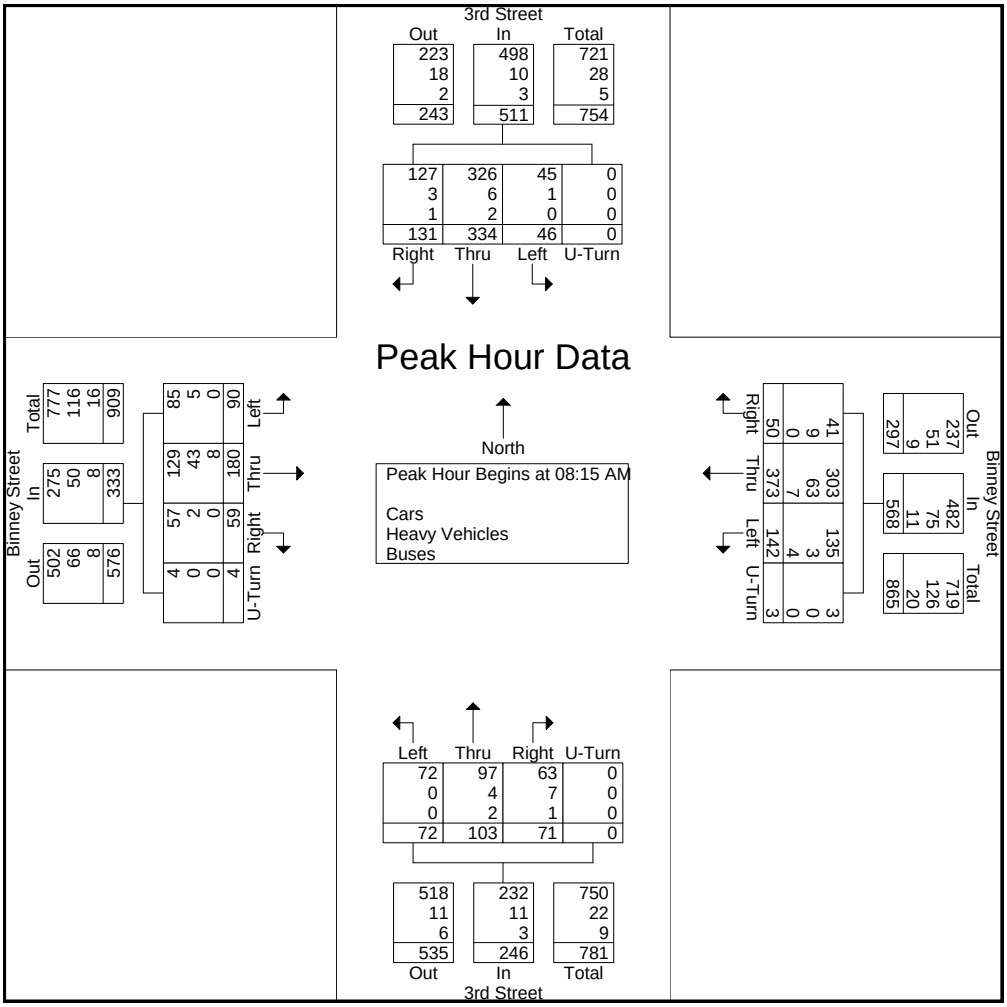
	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	40	81	11	0	132	13	109	45	0	167	16	16	25	0	57	12	48	21	1	82	438
08:30 AM	26	79	13	0	118	11	79	31	1	122	21	31	14	0	66	13	44	26	1	84	390
08:45 AM	32	93	11	0	136	10	107	36	2	155	17	32	17	0	66	16	47	20	0	83	440
09:00 AM	33	81	11	0	125	16	78	30	0	124	17	24	16	0	57	18	41	23	2	84	390
Total Volume	131	334	46	0	511	50	373	142	3	568	71	103	72	0	246	59	180	90	4	333	1658
% App. Total	25.6	65.4	9	0		8.8	65.7	25	0.5		28.9	41.9	29.3	0		17.7	54.1	27	1.2		
PHF	.819	.898	.885	.000	.939	.781	.856	.789	.375	.850	.845	.805	.720	.000	.932	.819	.938	.865	.500	.991	.942
Cars	127	326	45	0	498	41	303	135	3	482	63	97	72	0	232	57	129	85	4	275	1487
% Cars	96.9	97.6	97.8	0	97.5	82.0	81.2	95.1	100	84.9	88.7	94.2	100	0	94.3	96.6	71.7	94.4	100	82.6	89.7
Heavy Vehicles	3	6	1	0	10	9	63	3	0	75	7	4	0	0	11	2	43	5	0	50	146
% Heavy Vehicles	2.3	1.8	2.2	0	2.0	18.0	16.9	2.1	0	13.2	9.9	3.9	0	0	4.5	3.4	23.9	5.6	0	15.0	8.8
Buses	1	2	0	0	3	0	7	4	0	11	1	2	0	0	3	0	8	0	0	8	25
% Buses	0.8	0.6	0	0	0.6	0	1.9	2.8	0	1.9	1.4	1.9	0	0	1.2	0	4.4	0	0	2.4	1.5



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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	11	51	7	0	15	34	10	0	18	79	17	0	12	90	59	0	403
04:45 PM	14	55	11	0	13	60	14	1	35	66	17	0	14	102	74	0	476
Total	25	106	18	0	28	94	24	1	53	145	34	0	26	192	133	0	879
05:00 PM	23	46	7	0	5	44	18	5	27	69	16	0	28	99	64	0	451
05:15 PM	23	46	12	0	11	55	17	4	40	74	23	0	20	132	68	0	525
05:30 PM	17	52	11	0	7	53	16	0	30	60	16	0	17	115	56	2	452
05:45 PM	10	38	6	0	13	45	14	1	36	52	16	0	9	86	74	2	402
Total	73	182	36	0	36	197	65	10	133	255	71	0	74	432	262	4	1830
06:00 PM	15	48	5	0	14	52	15	0	24	68	14	0	11	74	67	1	408
06:15 PM	15	38	5	0	8	46	13	2	33	76	19	0	11	64	83	0	413
Grand Total	128	374	64	0	86	389	117	13	243	544	138	0	122	762	545	5	3530
Apprch %	22.6	66.1	11.3	0	14.2	64.3	19.3	2.1	26.3	58.8	14.9	0	8.5	53.1	38	0.3	
Total %	3.6	10.6	1.8	0	2.4	11	3.3	0.4	6.9	15.4	3.9	0	3.5	21.6	15.4	0.1	
Cars	125	371	61	0	86	356	109	13	236	542	136	0	121	713	540	5	3414
% Cars	97.7	99.2	95.3	0	100	91.5	93.2	100	97.1	99.6	98.6	0	99.2	93.6	99.1	100	96.7
Heavy Vehicles	2	3	3	0	0	12	7	0	1	2	2	0	1	33	3	0	69
% Heavy Vehicles	1.6	0.8	4.7	0	0	3.1	6	0	0.4	0.4	1.4	0	0.8	4.3	0.6	0	2
Buses	1	0	0	0	0	21	1	0	6	0	0	0	0	16	2	0	47
% Buses	0.8	0	0	0	0	5.4	0.9	0	2.5	0	0	0	0	2.1	0.4	0	1.3

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	14	55	11	0	80	13	60	14	1	88	35	66	17	0	118	14	102	74	0	190	476
05:00 PM	23	46	7	0	76	5	44	18	5	72	27	69	16	0	112	28	99	64	0	191	451
05:15 PM	23	46	12	0	81	11	55	17	4	87	40	74	23	0	137	20	132	68	0	220	525
05:30 PM	17	52	11	0	80	7	53	16	0	76	30	60	16	0	106	17	115	56	2	190	452
Total Volume	77	199	41	0	317	36	212	65	10	323	132	269	72	0	473	79	448	262	2	791	1904
% App. Total	24.3	62.8	12.9	0		11.1	65.6	20.1	3.1		27.9	56.9	15.2	0		10	56.6	33.1	0.3		
PHF	.837	.905	.854	.000	.978	.692	.883	.903	.500	.918	.825	.909	.783	.000	.863	.705	.848	.885	.250	.899	.907
Cars	75	197	39	0	311	36	196	62	10	304	128	268	72	0	468	78	415	260	2	755	1838
% Cars	97.4	99.0	95.1	0	98.1	100	92.5	95.4	100	94.1	97.0	99.6	100	0	98.9	98.7	92.6	99.2	100	95.4	96.5
Heavy Vehicles	1	2	2	0	5	0	8	3	0	11	1	1	0	0	2	1	26	2	0	29	47
% Heavy Vehicles	1.3	1.0	4.9	0	1.6	0	3.8	4.6	0	3.4	0.8	0.4	0	0	0.4	1.3	5.8	0.8	0	3.7	2.5
Buses	1	0	0	0	1	0	8	0	0	8	3	0	0	0	3	0	7	0	0	7	19
% Buses	1.3	0	0	0	0.3	0	3.8	0	0	2.5	2.3	0	0	0	0.6	0	1.6	0	0	0.9	1.0

N/S: 3rd Street
E/W: Binney Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 GG
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	10	51	7	0	15	33	9	0	17	79	17	0	12	83	58	0	391
04:45 PM	14	55	10	0	13	52	13	1	33	66	17	0	14	91	74	0	453
Total	24	106	17	0	28	85	22	1	50	145	34	0	26	174	132	0	844
05:00 PM	22	46	7	0	5	42	18	5	26	69	16	0	28	89	63	0	436
05:15 PM	22	45	11	0	11	51	16	4	40	73	23	0	20	127	67	0	510
05:30 PM	17	51	11	0	7	51	15	0	29	60	16	0	16	108	56	2	439
05:45 PM	10	38	6	0	13	42	11	1	35	52	14	0	9	83	74	2	390
Total	71	180	35	0	36	186	60	10	130	254	69	0	73	407	260	4	1775
06:00 PM	15	48	5	0	14	45	14	0	24	68	14	0	11	72	67	1	398
06:15 PM	15	37	4	0	8	40	13	2	32	75	19	0	11	60	81	0	397
Grand Total	125	371	61	0	86	356	109	13	236	542	136	0	121	713	540	5	3414
Apprch %	22.4	66.6	11	0	15.2	63.1	19.3	2.3	25.8	59.3	14.9	0	8.8	51.7	39.2	0.4	
Total %	3.7	10.9	1.8	0	2.5	10.4	3.2	0.4	6.9	15.9	4	0	3.5	20.9	15.8	0.1	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	14	55	10	0	79	13	52	13	1	79	33	66	17	0	116	14	91	74	0	179	453
05:00 PM	22	46	7	0	75	5	42	18	5	70	26	69	16	0	111	28	89	63	0	180	436
05:15 PM	22	45	11	0	78	11	51	16	4	82	40	73	23	0	136	20	127	67	0	214	510
05:30 PM	17	51	11	0	79	7	51	15	0	73	29	60	16	0	105	16	108	56	2	182	439
Total Volume	75	197	39	0	311	36	196	62	10	304	128	268	72	0	468	78	415	260	2	755	1838
% App. Total	24.1	63.3	12.5	0		11.8	64.5	20.4	3.3		27.4	57.3	15.4	0		10.3	55	34.4	0.3		
PHF	.852	.895	.886	.000	.984	.692	.942	.861	.500	.927	.800	.918	.783	.000	.860	.696	.817	.878	.250	.882	.901

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Groups Printed- Heavy Vehicles

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	6
04:45 PM	0	0	1	0	0	6	1	0	0	0	0	0	0	9	0	0	17
Total	1	0	1	0	0	6	2	0	0	0	0	0	0	13	0	0	23
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	10
05:15 PM	1	1	1	0	0	2	1	0	0	1	0	0	0	3	1	0	11
05:30 PM	0	1	0	0	0	0	1	0	1	0	0	0	1	5	0	0	9
05:45 PM	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	4
Total	1	2	1	0	0	2	4	0	1	1	2	0	1	17	2	0	34
06:00 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	4
06:15 PM	0	1	1	0	0	2	0	0	0	1	0	0	0	2	1	0	8
Grand Total	2	3	3	0	0	12	7	0	1	2	2	0	1	33	3	0	69
Apprch %	25	37.5	37.5	0	0	63.2	36.8	0	20	40	40	0	2.7	89.2	8.1	0	
Total %	2.9	4.3	4.3	0	0	17.4	10.1	0	1.4	2.9	2.9	0	1.4	47.8	4.3	0	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	1	0	1	0	6	1	0	7	0	0	0	0	0	0	9	0	0	9	17
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	10	10
05:15 PM	1	1	1	0	3	0	2	1	0	3	0	1	0	0	1	0	3	1	0	4	11
05:30 PM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	1	5	0	0	6	9
Total Volume	1	2	2	0	5	0	8	3	0	11	1	1	0	0	2	1	26	2	0	29	47
% App. Total	20	40	40	0		0	72.7	27.3	0		50	50	0	0		3.4	89.7	6.9	0		
PHF	.250	.500	.500	.000	.417	.000	.333	.750	.000	.393	.250	.250	.000	.000	.500	.250	.722	.500	.000	.725	.691

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Groups Printed- Buses

	3rd Street From North				Binney Street From East				3rd Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	3	1	0	6
04:45 PM	0	0	0	0	0	2	0	0	2	0	0	0	0	2	0	0	6
Total	0	0	0	0	0	3	0	0	3	0	0	0	0	5	1	0	12
05:00 PM	1	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	5
05:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
05:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
05:45 PM	0	0	0	0	0	3	1	0	1	0	0	0	0	3	0	0	8
Total	1	0	0	0	0	9	1	0	2	0	0	0	0	8	0	0	21
06:00 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	6
06:15 PM	0	0	0	0	0	4	0	0	1	0	0	0	0	2	1	0	8
Grand Total	1	0	0	0	0	21	1	0	6	0	0	0	0	16	2	0	47
Apprch %	100	0	0	0	0	95.5	4.5	0	100	0	0	0	0	88.9	11.1	0	
Total %	2.1	0	0	0	0	44.7	2.1	0	12.8	0	0	0	0	34	4.3	0	

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
05:45 PM	0	0	0	0	0	0	3	1	0	4	1	0	0	0	1	0	3	0	0	3	8
06:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	6
06:15 PM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	2	1	0	3	8
Total Volume	0	0	0	0	0	0	14	1	0	15	2	0	0	0	2	0	8	1	0	9	26
% App. Total	0	0	0	0		0	93.3	6.7	0		100	0	0	0		0	88.9	11.1	0		
PHF	.000	.000	.000	.000	.000	.000	.700	.250	.000	.750	.500	.000	.000	.000	.500	.000	.667	.250	.000	.750	.813

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Groups Printed- Peds and Bicycles

	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	1	0	6	4	0	2	1	31	17	1	3	1	8	2	0	0	1	19	5	102
04:45 PM	0	1	0	7	5	0	5	0	8	22	1	1	1	3	1	1	1	0	22	14	93
Total	0	2	0	13	9	0	7	1	39	39	2	4	2	11	3	1	1	1	41	19	195
05:00 PM	1	2	0	5	5	0	4	0	18	34	2	5	2	7	7	0	1	1	18	12	124
05:15 PM	0	5	0	18	10	0	4	0	27	40	0	7	0	3	0	0	5	0	18	23	160
05:30 PM	0	3	1	2	3	0	7	1	37	30	1	6	5	5	6	0	4	1	25	18	155
05:45 PM	1	6	0	3	1	0	4	0	21	33	3	7	2	2	9	1	2	1	16	18	130
Total	2	16	1	28	19	0	19	1	103	137	6	25	9	17	22	1	12	3	77	71	569
06:00 PM	0	4	0	0	4	0	4	0	22	38	2	3	0	6	3	0	6	2	23	10	127
06:15 PM	4	2	0	1	4	0	5	1	11	27	1	3	1	5	6	0	1	0	22	18	112
Grand Total	6	24	1	42	36	0	35	3	175	241	11	35	12	39	34	2	20	6	163	118	1003
Apprch %	5.5	22	0.9	38.5	33	0	7.7	0.7	38.5	53.1	8.4	26.7	9.2	29.8	26	0.6	6.5	1.9	52.8	38.2	
Total %	0.6	2.4	0.1	4.2	3.6	0	3.5	0.3	17.4	24	1.1	3.5	1.2	3.9	3.4	0.2	2	0.6	16.3	11.8	

	3rd Street From North						Binney Street From East						3rd Street From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:15 PM																									
05:15 PM	0	5	0	18	10	33	0	4	0	27	40	71	0	7	0	3	0	10	0	5	0	18	23	46	160
05:30 PM	0	3	1	2	3	9	0	7	1	37	30	75	1	6	5	5	6	23	0	4	1	25	18	48	155
05:45 PM	1	6	0	3	1	11	0	4	0	21	33	58	3	7	2	2	9	23	1	2	1	16	18	38	130
06:00 PM	0	4	0	0	4	8	0	4	0	22	38	64	2	3	0	6	3	14	0	6	2	23	10	41	127
Total Volume	1	18	1	23	18	61	0	19	1	107	141	268	6	23	7	16	18	70	1	17	4	82	69	173	572
% App. Total	1.6	29.5	1.6	37.7	29.5		0	7.1	0.4	39.9	52.6		8.6	32.9	10	22.9	25.7		0.6	9.8	2.3	47.4	39.9		
PHF	.250	.750	.250	.319	.450	.462	.000	.679	.250	.723	.881	.893	.500	.821	.350	.667	.500	.761	.250	.708	.500	.820	.750	.901	.894

N/S: 3rd Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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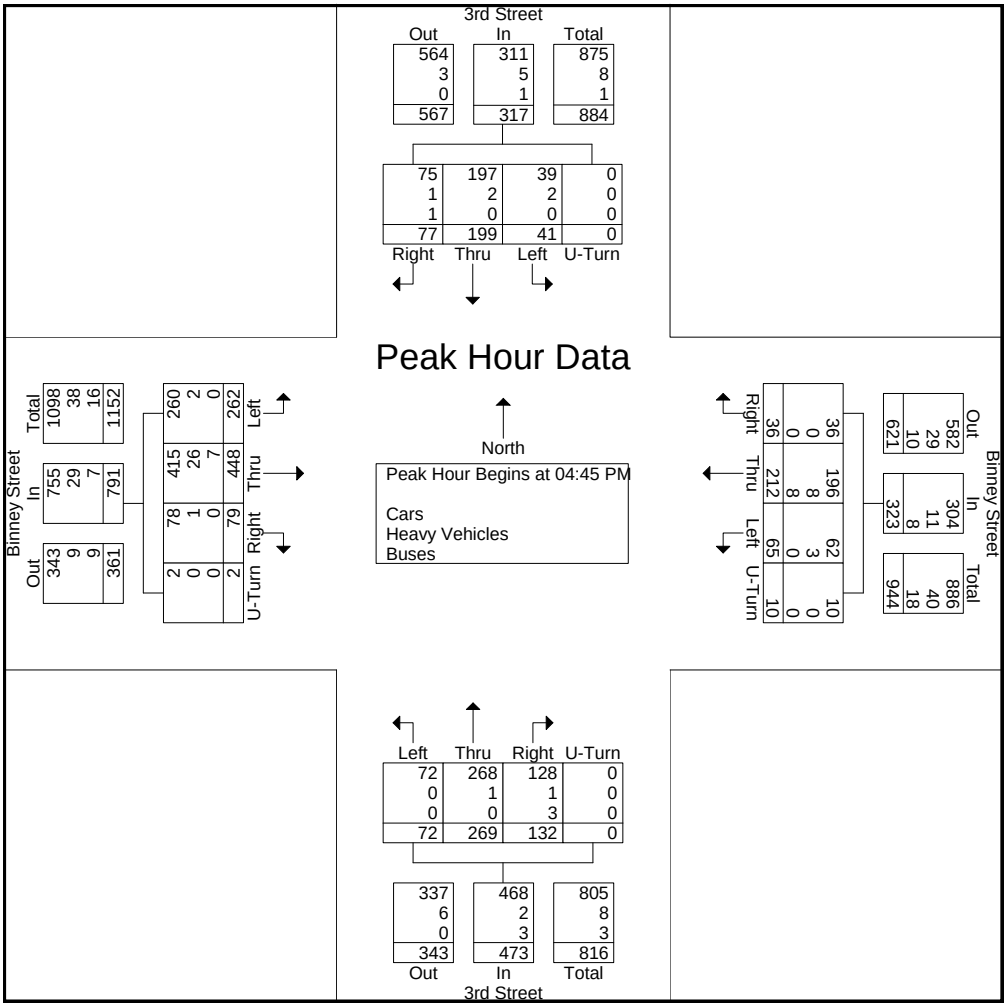
	3rd Street From North					Binney Street From East					3rd Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	14	55	11	0	80	13	60	14	1	88	35	66	17	0	118	14	102	74	0	190	476
05:00 PM	23	46	7	0	76	5	44	18	5	72	27	69	16	0	112	28	99	64	0	191	451
05:15 PM	23	46	12	0	81	11	55	17	4	87	40	74	23	0	137	20	132	68	0	220	525
05:30 PM	17	52	11	0	80	7	53	16	0	76	30	60	16	0	106	17	115	56	2	190	452
Total Volume	77	199	41	0	317	36	212	65	10	323	132	269	72	0	473	79	448	262	2	791	1904
% App. Total	24.3	62.8	12.9	0		11.1	65.6	20.1	3.1		27.9	56.9	15.2	0		10	56.6	33.1	0.3		
PHF	.837	.905	.854	.000	.978	.692	.883	.903	.500	.918	.825	.909	.783	.000	.863	.705	.848	.885	.250	.899	.907
Cars	75	197	39	0	311	36	196	62	10	304	128	268	72	0	468	78	415	260	2	755	1838
% Cars	97.4	99.0	95.1	0	98.1	100	92.5	95.4	100	94.1	97.0	99.6	100	0	98.9	98.7	92.6	99.2	100	95.4	96.5
Heavy Vehicles	1	2	2	0	5	0	8	3	0	11	1	1	0	0	2	1	26	2	0	29	47
% Heavy Vehicles	1.3	1.0	4.9	0	1.6	0	3.8	4.6	0	3.4	0.8	0.4	0	0	0.4	1.3	5.8	0.8	0	3.7	2.5
Buses	1	0	0	0	1	0	8	0	0	8	3	0	0	0	3	0	7	0	0	7	19
% Buses	1.3	0	0	0	0.3	0	3.8	0	0	2.5	2.3	0	0	0	0.6	0	1.6	0	0	0.9	1.0



N/S: 1st Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	22	28	1	0	16	83	28	0	1	2	1	0	9	36	15	1	243
07:45 AM	16	29	3	0	24	118	32	1	2	1	0	0	13	25	26	0	290
Total	38	57	4	0	40	201	60	1	3	3	1	0	22	61	41	1	533
08:00 AM	21	39	3	0	28	91	22	1	1	1	0	0	18	24	20	0	269
08:15 AM	28	37	2	0	48	119	36	2	0	0	0	0	28	37	31	0	368
08:30 AM	27	48	3	0	43	96	31	0	2	1	0	0	22	35	26	1	335
08:45 AM	32	50	1	0	42	106	39	1	1	1	0	0	19	16	43	0	351
Total	108	174	9	0	161	412	128	4	4	3	0	0	87	112	120	1	1323
09:00 AM	25	47	0	0	36	86	42	0	0	3	0	0	22	0	40	0	301
09:15 AM	26	53	0	0	25	99	46	0	0	1	0	0	21	0	43	0	314
Grand Total	197	331	13	0	262	798	276	5	7	10	1	0	152	173	244	2	2471
Apprch %	36.4	61.2	2.4	0	19.5	59.5	20.6	0.4	38.9	55.6	5.6	0	26.6	30.3	42.7	0.4	
Total %	8	13.4	0.5	0	10.6	32.3	11.2	0.2	0.3	0.4	0	0	6.2	7	9.9	0.1	
Cars	125	322	11	0	262	709	273	4	5	9	1	0	147	142	176	2	2188
% Cars	63.5	97.3	84.6	0	100	88.8	98.9	80	71.4	90	100	0	96.7	82.1	72.1	100	88.5
Heavy Vehicles	56	9	1	0	0	81	3	0	1	1	0	0	4	30	54	0	240
% Heavy Vehicles	28.4	2.7	7.7	0	0	10.2	1.1	0	14.3	10	0	0	2.6	17.3	22.1	0	9.7
Buses	16	0	1	0	0	8	0	1	1	0	0	0	1	1	14	0	43
% Buses	8.1	0	7.7	0	0	1	0	20	14.3	0	0	0	0.7	0.6	5.7	0	1.7

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	28	37	2	0	67	48	119	36	2	205	0	0	0	0	0	28	37	31	0	96	368
08:30 AM	27	48	3	0	78	43	96	31	0	170	2	1	0	0	3	22	35	26	1	84	335
08:45 AM	32	50	1	0	83	42	106	39	1	188	1	1	0	0	2	19	16	43	0	78	351
09:00 AM	25	47	0	0	72	36	86	42	0	164	0	3	0	0	3	22	0	40	0	62	301
Total Volume	112	182	6	0	300	169	407	148	3	727	3	5	0	0	8	91	88	140	1	320	1355
% App. Total	37.3	60.7	2	0		23.2	56	20.4	0.4		37.5	62.5	0	0		28.4	27.5	43.8	0.3		
PHF	.875	.910	.500	.000	.904	.880	.855	.881	.375	.887	.375	.417	.000	.000	.667	.813	.595	.814	.250	.833	.921
Cars	72	179	5	0	256	169	367	148	2	686	2	5	0	0	7	89	68	99	1	257	1206
% Cars	64.3	98.4	83.3	0	85.3	100	90.2	100	66.7	94.4	66.7	100	0	0	87.5	97.8	77.3	70.7	100	80.3	89.0
Heavy Vehicles	33	3	0	0	36	0	37	0	0	37	1	0	0	0	1	2	20	36	0	58	132
% Heavy Vehicles	29.5	1.6	0	0	12.0	0	9.1	0	0	5.1	33.3	0	0	0	12.5	2.2	22.7	25.7	0	18.1	9.7
Buses	7	0	1	0	8	0	3	0	1	4	0	0	0	0	0	0	0	5	0	5	17
% Buses	6.3	0	16.7	0	2.7	0	0.7	0	33.3	0.6	0	0	0	0	0	0	0	3.6	0	1.6	1.3

N/S: 1st Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Cars

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	13	27	0	0	16	76	28	0	0	2	1	0	9	31	11	1	215
07:45 AM	10	28	3	0	24	102	31	1	2	1	0	0	13	22	20	0	257
Total	23	55	3	0	40	178	59	1	2	3	1	0	22	53	31	1	472
08:00 AM	11	37	3	0	28	78	20	1	1	0	0	0	17	21	14	0	231
08:15 AM	15	37	1	0	48	108	36	1	0	0	0	0	27	31	24	0	328
08:30 AM	18	48	3	0	43	85	31	0	2	1	0	0	22	26	17	1	297
08:45 AM	21	48	1	0	42	99	39	1	0	1	0	0	19	11	31	0	313
Total	65	170	8	0	161	370	126	3	3	2	0	0	85	89	86	1	1169
09:00 AM	18	46	0	0	36	75	42	0	0	3	0	0	21	0	27	0	268
09:15 AM	19	51	0	0	25	86	46	0	0	1	0	0	19	0	32	0	279
Grand Total	125	322	11	0	262	709	273	4	5	9	1	0	147	142	176	2	2188
Apprch %	27.3	70.3	2.4	0	21	56.8	21.9	0.3	33.3	60	6.7	0	31.5	30.4	37.7	0.4	
Total %	5.7	14.7	0.5	0	12	32.4	12.5	0.2	0.2	0.4	0	0	6.7	6.5	8	0.1	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	15	37	1	0	53	48	108	36	1	193	0	0	0	0	0	27	31	24	0	82	328
08:30 AM	18	48	3	0	69	43	85	31	0	159	2	1	0	0	3	22	26	17	1	66	297
08:45 AM	21	48	1	0	70	42	99	39	1	181	0	1	0	0	1	19	11	31	0	61	313
09:00 AM	18	46	0	0	64	36	75	42	0	153	0	3	0	0	3	21	0	27	0	48	268
Total Volume	72	179	5	0	256	169	367	148	2	686	2	5	0	0	7	89	68	99	1	257	1206
% App. Total	28.1	69.9	2	0		24.6	53.5	21.6	0.3		28.6	71.4	0	0		34.6	26.5	38.5	0.4		
PHF	.857	.932	.417	.000	.914	.880	.850	.881	.500	.889	.250	.417	.000	.000	.583	.824	.548	.798	.250	.784	.919

N/S: 1st Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	6	1	1	0	0	5	0	0	0	0	0	0	0	4	3	0	20
07:45 AM	5	1	0	0	0	15	1	0	0	0	0	0	0	3	3	0	28
Total	11	2	1	0	0	20	1	0	0	0	0	0	0	7	6	0	48
08:00 AM	7	2	0	0	0	13	2	0	0	1	0	0	1	3	5	0	34
08:15 AM	11	0	0	0	0	9	0	0	0	0	0	0	1	6	5	0	32
08:30 AM	8	0	0	0	0	11	0	0	0	0	0	0	0	9	9	0	37
08:45 AM	9	2	0	0	0	7	0	0	1	0	0	0	0	5	10	0	34
Total	35	4	0	0	0	40	2	0	1	1	0	0	2	23	29	0	137
09:00 AM	5	1	0	0	0	10	0	0	0	0	0	0	1	0	12	0	29
09:15 AM	5	2	0	0	0	11	0	0	0	0	0	0	1	0	7	0	26
Grand Total	56	9	1	0	0	81	3	0	1	1	0	0	4	30	54	0	240
Apprch %	84.8	13.6	1.5	0	0	96.4	3.6	0	50	50	0	0	4.5	34.1	61.4	0	
Total %	23.3	3.8	0.4	0	0	33.8	1.2	0	0.4	0.4	0	0	1.7	12.5	22.5	0	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	7	2	0	0	9	0	13	2	0	15	0	1	0	0	1	1	3	5	0	9	34
08:15 AM	11	0	0	0	11	0	9	0	0	9	0	0	0	0	0	1	6	5	0	12	32
08:30 AM	8	0	0	0	8	0	11	0	0	11	0	0	0	0	0	0	9	9	0	18	37
08:45 AM	9	2	0	0	11	0	7	0	0	7	1	0	0	0	1	0	5	10	0	15	34
Total Volume	35	4	0	0	39	0	40	2	0	42	1	1	0	0	2	2	23	29	0	54	137
% App. Total	89.7	10.3	0	0		0	95.2	4.8	0		50	50	0	0		3.7	42.6	53.7	0		
PHF	.795	.500	.000	.000	.886	.000	.769	.250	.000	.700	.250	.250	.000	.000	.500	.500	.639	.725	.000	.750	.926

N/S: 1st Street
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Groups Printed- Buses

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	3	0	0	0	0	2	0	0	1	0	0	0	0	1	1	0	8
07:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	5
Total	4	0	0	0	0	3	0	0	1	0	0	0	0	1	4	0	13
08:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
08:15 AM	2	0	1	0	0	2	0	1	0	0	0	0	0	0	2	0	8
08:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
Total	8	0	1	0	0	2	0	1	0	0	0	0	0	0	5	0	17
09:00 AM	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4
09:15 AM	2	0	0	0	0	2	0	0	0	0	0	0	1	0	4	0	9
Grand Total	16	0	1	0	0	8	0	1	1	0	0	0	1	1	14	0	43
Apprch %	94.1	0	5.9	0	0	88.9	0	11.1	100	0	0	0	6.2	6.2	87.5	0	
Total %	37.2	0	2.3	0	0	18.6	0	2.3	2.3	0	0	0	2.3	2.3	32.6	0	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	3	0	0	0	3	0	2	0	0	2	1	0	0	0	1	0	1	1	0	2	8
07:45 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	5
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
08:15 AM	2	0	1	0	3	0	2	0	1	3	0	0	0	0	0	0	0	2	0	2	8
Total Volume	9	0	1	0	10	0	5	0	1	6	1	0	0	0	1	0	1	7	0	8	25
% App. Total	90	0	10	0		0	83.3	0	16.7		100	0	0	0		0	12.5	87.5	0		
PHF	.750	.000	.250	.000	.833	.000	.625	.000	.250	.500	.250	.000	.000	.000	.250	.000	.250	.583	.000	.667	.781

N/S: 1st Street
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Groups Printed- Peds and Bicycles

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	1	1	0	5	3	0	2	0	6	3	0	1	0	1	4	0	0	0	3	10	40
07:45 AM	0	1	0	3	3	0	0	0	1	1	0	2	0	1	0	0	1	0	3	7	23
Total	1	2	0	8	6	0	2	0	7	4	0	3	0	2	4	0	1	0	6	17	63
08:00 AM	0	0	0	2	7	0	4	0	3	7	0	3	0	3	1	0	1	1	3	9	44
08:15 AM	0	1	0	3	8	0	0	0	5	4	0	0	0	5	3	0	0	1	7	21	58
08:30 AM	1	1	0	7	13	0	3	1	6	2	0	0	0	3	0	0	1	1	10	15	64
08:45 AM	0	2	0	9	6	0	3	0	15	4	0	2	0	3	3	0	0	1	10	20	78
Total	1	4	0	21	34	0	10	1	29	17	0	5	0	14	7	0	2	4	30	65	244
09:00 AM	0	0	0	3	9	0	3	0	6	3	0	1	0	0	2	1	0	1	7	23	59
09:15 AM	0	2	0	9	9	1	1	0	3	6	0	0	0	1	3	0	0	0	11	12	58
Grand Total	2	8	0	41	58	1	16	1	45	30	0	9	0	17	16	1	3	5	54	117	424
Apprch %	1.8	7.3	0	37.6	53.2	1.1	17.2	1.1	48.4	32.3	0	21.4	0	40.5	38.1	0.6	1.7	2.8	30	65	
Total %	0.5	1.9	0	9.7	13.7	0.2	3.8	0.2	10.6	7.1	0	2.1	0	4	3.8	0.2	0.7	1.2	12.7	27.6	

	1st Street From North						Binney Street From East						1st Street From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	1	0	3	8	12	0	0	0	5	4	9	0	0	0	5	3	8	0	0	1	7	21	29	58
08:30 AM	1	1	0	7	13	22	0	3	1	6	2	12	0	0	0	3	0	3	0	1	1	10	15	27	64
08:45 AM	0	2	0	9	6	17	0	3	0	15	4	22	0	2	0	3	3	8	0	0	1	10	20	31	78
09:00 AM	0	0	0	3	9	12	0	3	0	6	3	12	0	1	0	0	2	3	1	0	1	7	23	32	59
Total Volume	1	4	0	22	36	63	0	9	1	32	13	55	0	3	0	11	8	22	1	1	4	34	79	119	259
% App. Total	1.6	6.3	0	34.9	57.1		0	16.4	1.8	58.2	23.6		0	13.6	0	50	36.4		0.8	0.8	3.4	28.6	66.4		
PHF	.250	.500	.000	.611	.692	.716	.000	.750	.250	.533	.813	.625	.000	.375	.000	.550	.667	.688	.250	.250	1.00	.850	.859	.930	.830

N/S: 1st Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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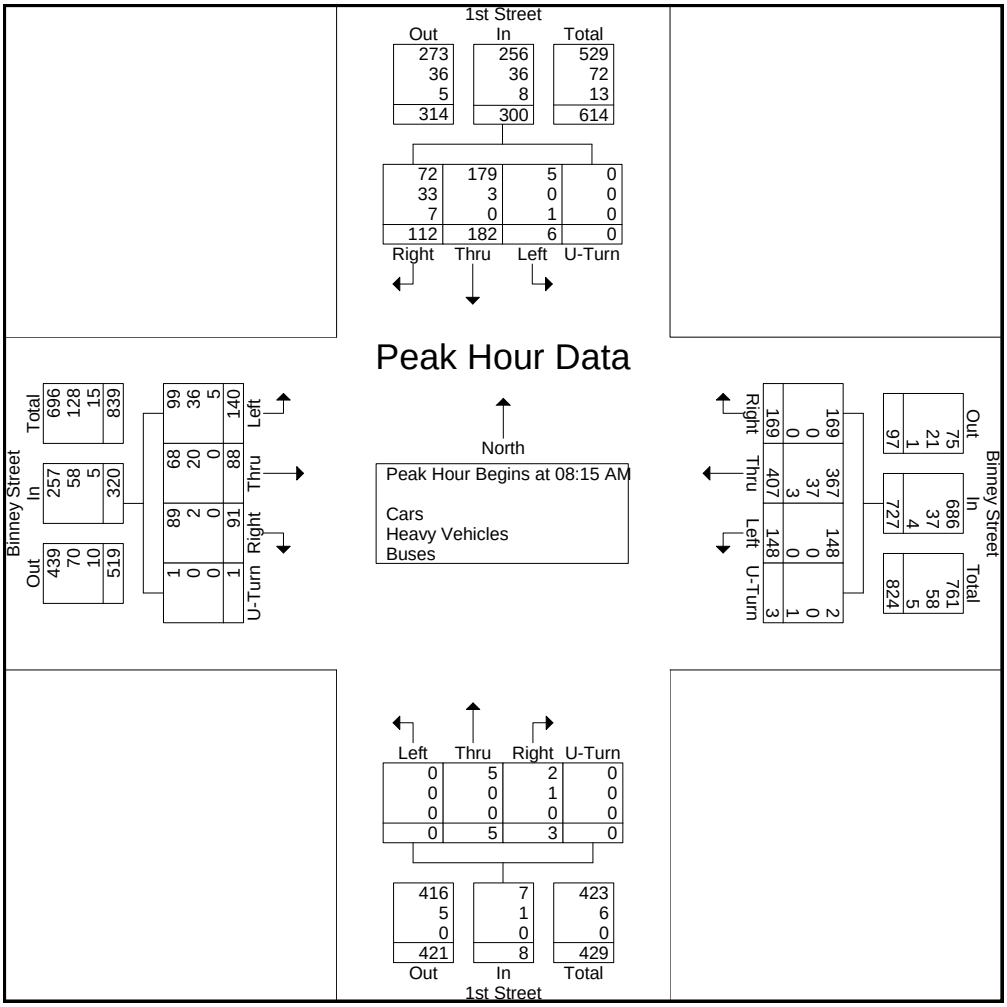
	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	28	37	2	0	67	48	119	36	2	205	0	0	0	0	0	28	37	31	0	96	368
08:30 AM	27	48	3	0	78	43	96	31	0	170	2	1	0	0	3	22	35	26	1	84	335
08:45 AM	32	50	1	0	83	42	106	39	1	188	1	1	0	0	2	19	16	43	0	78	351
09:00 AM	25	47	0	0	72	36	86	42	0	164	0	3	0	0	3	22	0	40	0	62	301
Total Volume	112	182	6	0	300	169	407	148	3	727	3	5	0	0	8	91	88	140	1	320	1355
% App. Total	37.3	60.7	2	0		23.2	56	20.4	0.4		37.5	62.5	0	0		28.4	27.5	43.8	0.3		
PHF	.875	.910	.500	.000	.904	.880	.855	.881	.375	.887	.375	.417	.000	.000	.667	.813	.595	.814	.250	.833	.921
Cars	72	179	5	0	256	169	367	148	2	686	2	5	0	0	7	89	68	99	1	257	1206
% Cars	64.3	98.4	83.3	0	85.3	100	90.2	100	66.7	94.4	66.7	100	0	0	87.5	97.8	77.3	70.7	100	80.3	89.0
Heavy Vehicles	33	3	0	0	36	0	37	0	0	37	1	0	0	0	1	2	20	36	0	58	132
% Heavy Vehicles	29.5	1.6	0	0	12.0	0	9.1	0	0	5.1	33.3	0	0	0	12.5	2.2	22.7	25.7	0	18.1	9.7
Buses	7	0	1	0	8	0	3	0	1	4	0	0	0	0	0	0	0	5	0	5	17
% Buses	6.3	0	16.7	0	2.7	0	0.7	0	33.3	0.6	0	0	0	0	0	0	0	3.6	0	1.6	1.3



N/S: 1st Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Cars - Heavy Vehicles - Buses

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	8	51	1	0	53	54	2	0	1	4	1	0	5	49	57	0	286
04:45 PM	18	56	3	0	65	60	5	0	2	3	0	0	17	50	64	0	343
Total	26	107	4	0	118	114	7	0	3	7	1	0	22	99	121	0	629
05:00 PM	18	60	0	0	56	64	13	0	3	4	0	0	11	63	56	0	348
05:15 PM	24	67	1	0	46	62	7	0	1	2	0	0	17	62	72	1	362
05:30 PM	16	77	0	0	51	55	6	0	0	2	0	0	12	53	79	0	351
05:45 PM	17	50	0	0	47	57	4	0	0	1	0	1	11	50	49	0	287
Total	75	254	1	0	200	238	30	0	4	9	0	1	51	228	256	1	1348
06:00 PM	16	57	0	0	26	56	2	0	0	2	0	0	4	54	49	0	266
06:15 PM	16	47	0	0	18	43	2	0	0	1	1	0	7	50	39	0	224
Grand Total	133	465	5	0	362	451	41	0	7	19	2	1	84	431	465	1	2467
Apprch %	22.1	77.1	0.8	0	42.4	52.8	4.8	0	24.1	65.5	6.9	3.4	8.6	43.9	47.4	0.1	
Total %	5.4	18.8	0.2	0	14.7	18.3	1.7	0	0.3	0.8	0.1	0	3.4	17.5	18.8	0	
Cars	110	465	5	0	360	432	40	0	7	18	2	1	84	411	431	1	2367
% Cars	82.7	100	100	0	99.4	95.8	97.6	0	100	94.7	100	100	100	95.4	92.7	100	95.9
Heavy Vehicles	10	0	0	0	2	10	1	0	0	0	0	0	0	19	12	0	54
% Heavy Vehicles	7.5	0	0	0	0.6	2.2	2.4	0	0	0	0	0	0	4.4	2.6	0	2.2
Buses	13	0	0	0	0	9	0	0	0	1	0	0	0	1	22	0	46
% Buses	9.8	0	0	0	0	2	0	0	0	5.3	0	0	0	0.2	4.7	0	1.9

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	18	56	3	0	77	65	60	5	0	130	2	3	0	0	5	17	50	64	0	131	343
05:00 PM	18	60	0	0	78	56	64	13	0	133	3	4	0	0	7	11	63	56	0	130	348
05:15 PM	24	67	1	0	92	46	62	7	0	115	1	2	0	0	3	17	62	72	1	152	362
05:30 PM	16	77	0	0	93	51	55	6	0	112	0	2	0	0	2	12	53	79	0	144	351
Total Volume	76	260	4	0	340	218	241	31	0	490	6	11	0	0	17	57	228	271	1	557	1404
% App. Total	22.4	76.5	1.2	0		44.5	49.2	6.3	0		35.3	64.7	0	0		10.2	40.9	48.7	0.2		
PHF	.792	.844	.333	.000	.914	.838	.941	.596	.000	.921	.500	.688	.000	.000	.607	.838	.905	.858	.250	.916	.970
Cars	63	260	4	0	327	216	234	30	0	480	6	11	0	0	17	57	217	248	1	523	1347
% Cars	82.9	100	100	0	96.2	99.1	97.1	96.8	0	98.0	100	100	0	0	100	100	95.2	91.5	100	93.9	95.9
Heavy Vehicles	6	0	0	0	6	2	5	1	0	8	0	0	0	0	0	0	11	12	0	23	37
% Heavy Vehicles	7.9	0	0	0	1.8	0.9	2.1	3.2	0	1.6	0	0	0	0	0	0	4.8	4.4	0	4.1	2.6
Buses	7	0	0	0	7	0	2	0	0	2	0	0	0	0	0	0	0	11	0	11	20
% Buses	9.2	0	0	0	2.1	0	0.8	0	0	0.4	0	0	0	0	0	0	0	4.1	0	2.0	1.4

N/S: 1st Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	6	51	1	0	53	54	2	0	1	4	1	0	5	44	54	0	276
04:45 PM	16	56	3	0	65	58	5	0	2	3	0	0	17	46	57	0	328
Total	22	107	4	0	118	112	7	0	3	7	1	0	22	90	111	0	604
05:00 PM	15	60	0	0	55	61	12	0	3	4	0	0	11	60	49	0	330
05:15 PM	20	67	1	0	46	61	7	0	1	2	0	0	17	59	69	1	351
05:30 PM	12	77	0	0	50	54	6	0	0	2	0	0	12	52	73	0	338
05:45 PM	15	50	0	0	47	52	4	0	0	1	0	1	11	50	47	0	278
Total	62	254	1	0	198	228	29	0	4	9	0	1	51	221	238	1	1297
06:00 PM	13	57	0	0	26	52	2	0	0	2	0	0	4	53	46	0	255
06:15 PM	13	47	0	0	18	40	2	0	0	0	1	0	7	47	36	0	211
Grand Total	110	465	5	0	360	432	40	0	7	18	2	1	84	411	431	1	2367
Apprch %	19	80.2	0.9	0	43.3	51.9	4.8	0	25	64.3	7.1	3.6	9.1	44.3	46.5	0.1	
Total %	4.6	19.6	0.2	0	15.2	18.3	1.7	0	0.3	0.8	0.1	0	3.5	17.4	18.2	0	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	16	56	3	0	75	65	58	5	0	128	2	3	0	0	5	17	46	57	0	120	328
05:00 PM	15	60	0	0	75	55	61	12	0	128	3	4	0	0	7	11	60	49	0	120	330
05:15 PM	20	67	1	0	88	46	61	7	0	114	1	2	0	0	3	17	59	69	1	146	351
05:30 PM	12	77	0	0	89	50	54	6	0	110	0	2	0	0	2	12	52	73	0	137	338
Total Volume	63	260	4	0	327	216	234	30	0	480	6	11	0	0	17	57	217	248	1	523	1347
% App. Total	19.3	79.5	1.2	0		45	48.8	6.2	0		35.3	64.7	0	0		10.9	41.5	47.4	0.2		
PHF	.788	.844	.333	.000	.919	.831	.959	.625	.000	.938	.500	.688	.000	.000	.607	.838	.904	.849	.250	.896	.959

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	5
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	3	0	8
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	8	3	0	13
05:00 PM	2	0	0	0	1	2	1	0	0	0	0	0	0	3	4	0	13
05:15 PM	2	0	0	0	0	1	0	0	0	0	0	0	0	3	1	0	7
05:30 PM	2	0	0	0	1	1	0	0	0	0	0	0	0	1	4	0	9
05:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	6	0	0	0	2	7	1	0	0	0	0	0	0	7	9	0	32
06:00 PM	2	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	4
06:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	5
Grand Total	10	0	0	0	2	10	1	0	0	0	0	0	0	19	12	0	54
Apprch %	100	0	0	0	15.4	76.9	7.7	0	0	0	0	0	0	61.3	38.7	0	
Total %	18.5	0	0	0	3.7	18.5	1.9	0	0	0	0	0	0	35.2	22.2	0	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	3	0	7	8
05:00 PM	2	0	0	0	2	1	2	1	0	4	0	0	0	0	0	0	3	4	0	7	13
05:15 PM	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	7
05:30 PM	2	0	0	0	2	1	1	0	0	2	0	0	0	0	0	0	1	4	0	5	9
Total Volume	6	0	0	0	6	2	5	1	0	8	0	0	0	0	0	0	11	12	0	23	37
% App. Total	100	0	0	0		25	62.5	12.5	0		0	0	0	0		0	47.8	52.2	0		
PHF	.750	.000	.000	.000	.750	.500	.625	.250	.000	.500	.000	.000	.000	.000	.000	.000	.688	.750	.000	.821	.712

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Groups Printed- Buses

	1st Street From North				Binney Street From East				1st Street From South				Binney Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	5
04:45 PM	2	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	7
Total	3	0	0	0	0	1	0	0	0	0	0	0	0	1	7	0	12
05:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	5
05:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
05:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
05:45 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	6
Total	7	0	0	0	0	3	0	0	0	0	0	0	0	0	9	0	19
06:00 PM	1	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	7
06:15 PM	2	0	0	0	0	2	0	0	0	1	0	0	0	0	3	0	8
Grand Total	13	0	0	0	0	9	0	0	0	1	0	0	0	1	22	0	46
Apprch %	100	0	0	0	0	100	0	0	0	100	0	0	0	4.3	95.7	0	
Total %	28.3	0	0	0	0	19.6	0	0	0	2.2	0	0	0	2.2	47.8	0	

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
05:45 PM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	6
06:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	3	0	3	7
06:15 PM	2	0	0	0	2	0	2	0	0	2	0	1	0	0	1	0	0	3	0	3	8
Total Volume	7	0	0	0	7	0	7	0	0	7	0	1	0	0	1	0	0	10	0	10	25
% App. Total	100	0	0	0		0	100	0	0		0	100	0	0		0	0	100	0		
PHF	.875	.000	.000	.000	.875	.000	.583	.000	.000	.583	.000	.250	.000	.000	.250	.000	.000	.833	.000	.833	.781

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Groups Printed- Peds and Bicycles

	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	6	13	0	1	0	8	7	0	2	0	3	3	0	0	0	18	11	72
04:45 PM	0	0	0	6	7	1	1	0	3	6	0	1	0	4	1	0	0	0	14	7	51
Total	0	0	0	12	20	1	2	0	11	13	0	3	0	7	4	0	0	0	32	18	123
05:00 PM	0	0	0	16	11	0	2	0	4	11	0	1	0	6	5	0	0	1	21	11	89
05:15 PM	0	0	0	9	6	0	0	0	6	4	0	3	0	4	0	0	0	0	19	8	59
05:30 PM	3	3	0	10	10	0	0	0	5	6	0	0	0	5	1	0	1	2	11	15	72
05:45 PM	6	3	0	10	7	0	2	0	2	8	0	0	0	6	4	0	2	0	22	10	82
Total	9	6	0	45	34	0	4	0	17	29	0	4	0	21	10	0	3	3	73	44	302
06:00 PM	4	2	0	8	5	0	2	0	0	10	0	0	0	8	2	0	3	3	21	7	75
06:15 PM	4	3	0	12	8	0	1	0	3	3	0	1	0	3	1	0	1	0	17	12	69
Grand Total	17	11	0	77	67	1	9	0	31	55	0	8	0	39	17	0	7	6	143	81	569
Apprch %	9.9	6.4	0	44.8	39	1	9.4	0	32.3	57.3	0	12.5	0	60.9	26.6	0	3	2.5	60.3	34.2	
Total %	3	1.9	0	13.5	11.8	0.2	1.6	0	5.4	9.7	0	1.4	0	6.9	3	0	1.2	1.1	25.1	14.2	

	1st Street From North						Binney Street From East						1st Street From South						Binney Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	0	0	16	11	27	0	2	0	4	11	17	0	1	0	6	5	12	0	0	1	21	11	33	89
05:15 PM	0	0	0	9	6	15	0	0	0	6	4	10	0	3	0	4	0	7	0	0	0	19	8	27	59
05:30 PM	3	3	0	10	10	26	0	0	0	5	6	11	0	0	0	5	1	6	0	1	2	11	15	29	72
05:45 PM	6	3	0	10	7	26	0	2	0	2	8	12	0	0	0	6	4	10	0	2	0	22	10	34	82
Total Volume	9	6	0	45	34	94	0	4	0	17	29	50	0	4	0	21	10	35	0	3	3	73	44	123	302
% App. Total	9.6	6.4	0	47.9	36.2		0	8	0	34	58		0	11.4	0	60	28.6		0	2.4	2.4	59.3	35.8		
PHF	.375	.500	.000	.703	.773	.870	.000	.500	.000	.708	.659	.735	.000	.333	.000	.875	.500	.729	.000	.375	.375	.830	.733	.904	.848

N/S: 1st Street
E/W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
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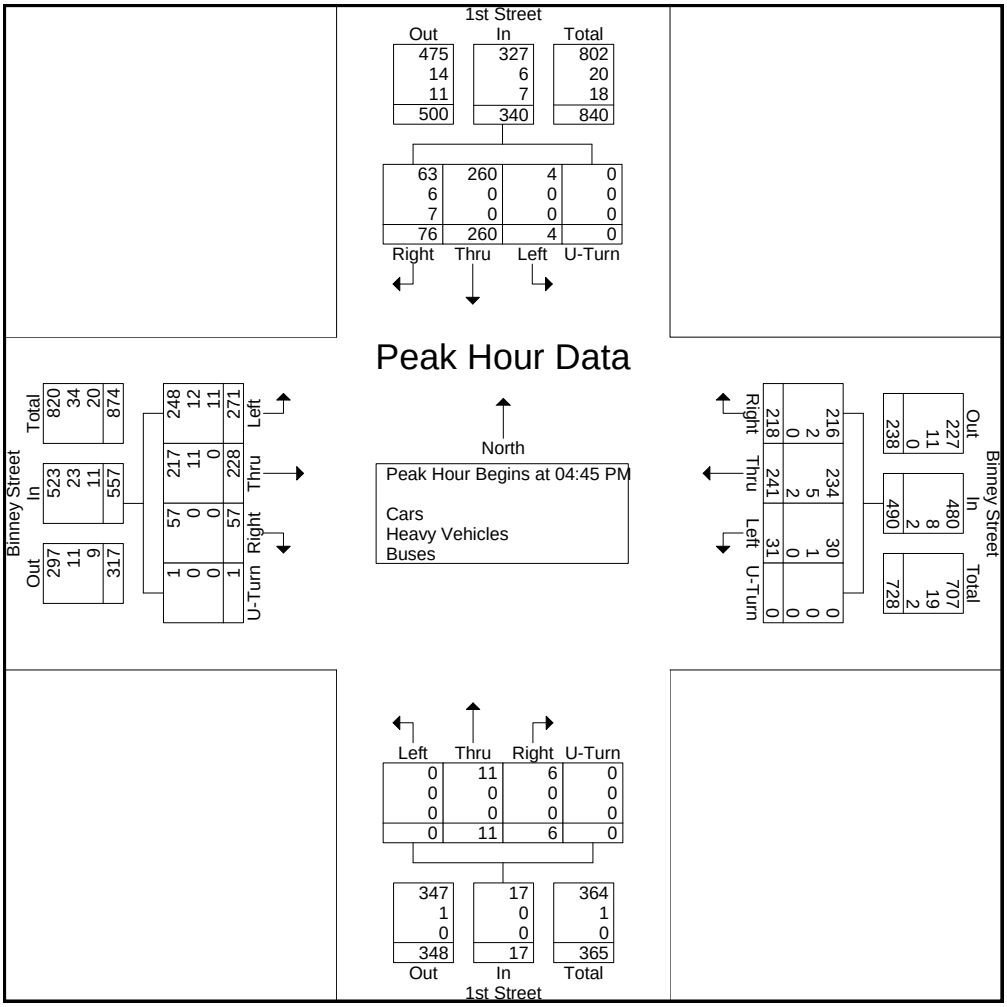
	1st Street From North					Binney Street From East					1st Street From South					Binney Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	18	56	3	0	77	65	60	5	0	130	2	3	0	0	5	17	50	64	0	131	343
05:00 PM	18	60	0	0	78	56	64	13	0	133	3	4	0	0	7	11	63	56	0	130	348
05:15 PM	24	67	1	0	92	46	62	7	0	115	1	2	0	0	3	17	62	72	1	152	362
05:30 PM	16	77	0	0	93	51	55	6	0	112	0	2	0	0	2	12	53	79	0	144	351
Total Volume	76	260	4	0	340	218	241	31	0	490	6	11	0	0	17	57	228	271	1	557	1404
% App. Total	22.4	76.5	1.2	0		44.5	49.2	6.3	0		35.3	64.7	0	0		10.2	40.9	48.7	0.2		
PHF	.792	.844	.333	.000	.914	.838	.941	.596	.000	.921	.500	.688	.000	.000	.607	.838	.905	.858	.250	.916	.970
Cars	63	260	4	0	327	216	234	30	0	480	6	11	0	0	17	57	217	248	1	523	1347
% Cars	82.9	100	100	0	96.2	99.1	97.1	96.8	0	98.0	100	100	0	0	100	100	95.2	91.5	100	93.9	95.9
Heavy Vehicles	6	0	0	0	6	2	5	1	0	8	0	0	0	0	0	0	11	12	0	23	37
% Heavy Vehicles	7.9	0	0	0	1.8	0.9	2.1	3.2	0	1.6	0	0	0	0	0	0	4.8	4.4	0	4.1	2.6
Buses	7	0	0	0	7	0	2	0	0	2	0	0	0	0	0	0	0	11	0	11	20
% Buses	9.2	0	0	0	2.1	0	0.8	0	0	0.4	0	0	0	0	0	0	0	4.1	0	2.0	1.4



N/S: Land Boulevard
W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars - Heavy Vehicles - Buses

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	82	235	0	110	44	7	0	37	0	515
07:45 AM	82	224	0	138	89	8	1	33	0	575
Total	164	459	0	248	133	15	1	70	0	1090
08:00 AM	62	251	0	162	79	10	0	30	0	594
08:15 AM	94	225	0	178	101	10	0	39	0	647
08:30 AM	77	246	0	155	97	7	1	39	0	622
08:45 AM	83	179	0	130	107	6	0	22	0	527
Total	316	901	0	625	384	33	1	130	0	2390
09:00 AM	88	149	0	139	80	3	0	0	0	459
09:15 AM	93	157	0	123	69	15	0	1	0	458
Grand Total	661	1666	0	1135	666	66	2	201	0	4397
Apprch %	28.4	71.6	0	60.8	35.7	3.5	1	99	0	
Total %	15	37.9	0	25.8	15.1	1.5	0	4.6	0	
Cars	575	1654	0	1125	664	66	2	166	0	4252
% Cars	87	99.3	0	99.1	99.7	100	100	82.6	0	96.7
Heavy Vehicles	77	12	0	9	2	0	0	34	0	134
% Heavy Vehicles	11.6	0.7	0	0.8	0.3	0	0	16.9	0	3
Buses	9	0	0	1	0	0	0	1	0	11
% Buses	1.4	0	0	0.1	0	0	0	0.5	0	0.3

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	82	224	0	306	138	89	8	235	1	33	0	34	575
08:00 AM	62	251	0	313	162	79	10	251	0	30	0	30	594
08:15 AM	94	225	0	319	178	101	10	289	0	39	0	39	647
08:30 AM	77	246	0	323	155	97	7	259	1	39	0	40	622
Total Volume	315	946	0	1261	633	366	35	1034	2	141	0	143	2438
% App. Total	25	75	0		61.2	35.4	3.4		1.4	98.6	0		
PHF	.838	.942	.000	.976	.889	.906	.875	.894	.500	.904	.000	.894	.942
Cars	266	939	0	1205	628	364	35	1027	2	118	0	120	2352
% Cars	84.4	99.3	0	95.6	99.2	99.5	100	99.3	100	83.7	0	83.9	96.5
Heavy Vehicles	46	7	0	53	4	2	0	6	0	22	0	22	81
% Heavy Vehicles	14.6	0.7	0	4.2	0.6	0.5	0	0.6	0	15.6	0	15.4	3.3
Buses	3	0	0	3	1	0	0	1	0	1	0	1	5
% Buses	1.0	0	0	0.2	0.2	0	0	0.1	0	0.7	0	0.7	0.2

N/S: Land Boulevard
W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	75	232	0	110	44	7	0	31	0	499
07:45 AM	66	223	0	137	89	8	1	30	0	554
Total	141	455	0	247	133	15	1	61	0	1053
08:00 AM	51	248	0	160	77	10	0	26	0	572
08:15 AM	82	222	0	177	101	10	0	31	0	623
08:30 AM	67	246	0	154	97	7	1	31	0	603
08:45 AM	77	178	0	127	107	6	0	17	0	512
Total	277	894	0	618	382	33	1	105	0	2310
09:00 AM	77	149	0	139	80	3	0	0	0	448
09:15 AM	80	156	0	121	69	15	0	0	0	441
Grand Total	575	1654	0	1125	664	66	2	166	0	4252
Apprch %	25.8	74.2	0	60.6	35.8	3.6	1.2	98.8	0	
Total %	13.5	38.9	0	26.5	15.6	1.6	0	3.9	0	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	66	223	0	289	137	89	8	234	1	30	0	31	554
08:00 AM	51	248	0	299	160	77	10	247	0	26	0	26	572
08:15 AM	82	222	0	304	177	101	10	288	0	31	0	31	623
08:30 AM	67	246	0	313	154	97	7	258	1	31	0	32	603
Total Volume	266	939	0	1205	628	364	35	1027	2	118	0	120	2352
% App. Total	22.1	77.9	0		61.1	35.4	3.4		1.7	98.3	0		
PHF	.811	.947	.000	.962	.887	.901	.875	.891	.500	.952	.000	.938	.944

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Groups Printed- Heavy Vehicles

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	5	3	0	0	0	0	0	6	0	14
07:45 AM	15	1	0	1	0	0	0	3	0	20
Total	20	4	0	1	0	0	0	9	0	34
08:00 AM	11	3	0	1	2	0	0	4	0	21
08:15 AM	10	3	0	1	0	0	0	7	0	21
08:30 AM	10	0	0	1	0	0	0	8	0	19
08:45 AM	6	1	0	3	0	0	0	5	0	15
Total	37	7	0	6	2	0	0	24	0	76
09:00 AM	8	0	0	0	0	0	0	0	0	8
09:15 AM	12	1	0	2	0	0	0	1	0	16
Grand Total	77	12	0	9	2	0	0	34	0	134
Apprch %	86.5	13.5	0	81.8	18.2	0	0	100	0	
Total %	57.5	9	0	6.7	1.5	0	0	25.4	0	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	15	1	0	16	1	0	0	1	0	3	0	3	20
08:00 AM	11	3	0	14	1	2	0	3	0	4	0	4	21
08:15 AM	10	3	0	13	1	0	0	1	0	7	0	7	21
08:30 AM	10	0	0	10	1	0	0	1	0	8	0	8	19
Total Volume	46	7	0	53	4	2	0	6	0	22	0	22	81
% App. Total	86.8	13.2	0		66.7	33.3	0		0	100	0		
PHF	.767	.583	.000	.828	1.00	.250	.000	.500	.000	.688	.000	.688	.964

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Groups Printed- Buses

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	2	0	0	0	0	0	0	0	0	2
07:45 AM	1	0	0	0	0	0	0	0	0	1
Total	3	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	1	0	0	0	0	0	1
08:15 AM	2	0	0	0	0	0	0	1	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	1	0	0	0	1	0	4
09:00 AM	3	0	0	0	0	0	0	0	0	3
09:15 AM	1	0	0	0	0	0	0	0	0	1
Grand Total	9	0	0	1	0	0	0	1	0	11
Apprch %	100	0	0	100	0	0	0	100	0	
Total %	81.8	0	0	9.1	0	0	0	9.1	0	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
08:15 AM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total Volume	5	0	0	5	1	0	0	1	0	1	0	1	7
% App. Total	100	0	0		100	0	0		0	100	0		
PHF	.625	.000	.000	.625	.250	.000	.000	.250	.000	.250	.000	.250	.583

N/S: Land Boulevard
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Groups Printed- Peds and Bicycles

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
07:30 AM	1	0	0	0	0	0	1	0	0	0	0	7	9
07:45 AM	0	2	0	0	0	0	0	0	0	0	2	8	12
Total	1	2	0	0	0	0	1	0	0	0	2	15	21
08:00 AM	2	1	0	0	0	0	0	0	0	1	0	10	14
08:15 AM	0	1	0	0	0	0	0	0	0	0	2	18	21
08:30 AM	3	0	0	0	0	1	0	0	0	0	10	5	19
08:45 AM	0	1	0	0	0	1	0	0	0	1	5	16	24
Total	5	3	0	0	0	2	0	0	0	2	17	49	78
09:00 AM	2	1	0	0	1	0	0	0	0	0	1	10	15
09:15 AM	1	0	0	0	2	1	0	0	0	0	1	7	12
Grand Total	9	6	0	0	3	3	1	0	0	2	21	81	126
Apprch %	60	40	0	0	42.9	42.9	14.3	0	0	1.9	20.2	77.9	
Total %	7.1	4.8	0	0	2.4	2.4	0.8	0	0	1.6	16.7	64.3	

	Land Boulevard From North					Land Boulevard From South					Binney Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:15 AM																
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	18	20	21
08:30 AM	3	0	0	0	3	0	1	0	0	1	0	0	10	5	15	19
08:45 AM	0	1	0	0	1	0	1	0	0	1	0	1	5	16	22	24
09:00 AM	2	1	0	0	3	1	0	0	0	1	0	0	1	10	11	15
Total Volume	5	3	0	0	8	1	2	0	0	3	0	1	18	49	68	79
% App. Total	62.5	37.5	0	0		33.3	66.7	0	0		0	1.5	26.5	72.1		
PHF	.417	.750	.000	.000	.667	.250	.500	.000	.000	.750	.000	.250	.450	.681	.773	.823

N/S: Land Boulevard
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City, State: Cambridge, MA
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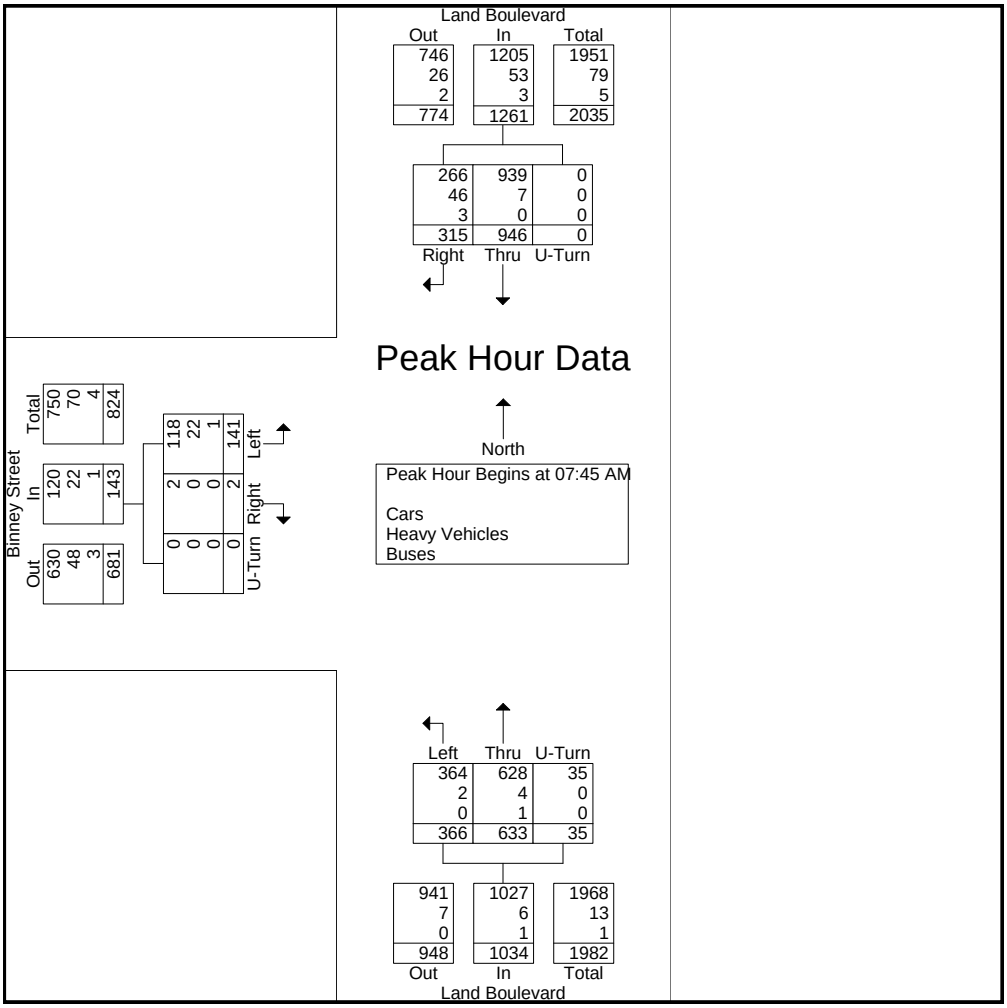
	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	82	224	0	306	138	89	8	235	1	33	0	34	575
08:00 AM	62	251	0	313	162	79	10	251	0	30	0	30	594
08:15 AM	94	225	0	319	178	101	10	289	0	39	0	39	647
08:30 AM	77	246	0	323	155	97	7	259	1	39	0	40	622
Total Volume	315	946	0	1261	633	366	35	1034	2	141	0	143	2438
% App. Total	25	75	0		61.2	35.4	3.4		1.4	98.6	0		
PHF	.838	.942	.000	.976	.889	.906	.875	.894	.500	.904	.000	.894	.942
Cars	266	939	0	1205	628	364	35	1027	2	118	0	120	2352
% Cars	84.4	99.3	0	95.6	99.2	99.5	100	99.3	100	83.7	0	83.9	96.5
Heavy Vehicles	46	7	0	53	4	2	0	6	0	22	0	22	81
% Heavy Vehicles	14.6	0.7	0	4.2	0.6	0.5	0	0.6	0	15.6	0	15.4	3.3
Buses	3	0	0	3	1	0	0	1	0	1	0	1	5
% Buses	1.0	0	0	0.2	0.2	0	0	0.1	0	0.7	0	0.7	0.2



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File Name : 133347 II
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	22	200	0	229	87	10	1	50	0	599
04:45 PM	25	152	0	291	104	4	1	59	1	637
Total	47	352	0	520	191	14	2	109	1	1236
05:00 PM	47	213	0	268	83	0	0	58	1	670
05:15 PM	30	197	0	242	86	7	1	65	0	628
05:30 PM	30	201	0	232	85	10	1	53	0	612
05:45 PM	31	204	0	186	79	3	4	54	1	562
Total	138	815	0	928	333	20	6	230	2	2472
06:00 PM	35	201	0	238	47	10	2	49	0	582
06:15 PM	33	158	0	222	31	7	2	56	0	509
Grand Total	253	1526	0	1908	602	51	12	444	3	4799
Apprch %	14.2	85.8	0	74.5	23.5	2	2.6	96.7	0.7	
Total %	5.3	31.8	0	39.8	12.5	1.1	0.3	9.3	0.1	
Cars	239	1520	0	1901	602	51	12	425	2	4752
% Cars	94.5	99.6	0	99.6	100	100	100	95.7	66.7	99
Heavy Vehicles	9	4	0	7	0	0	0	18	1	39
% Heavy Vehicles	3.6	0.3	0	0.4	0	0	0	4.1	33.3	0.8
Buses	5	2	0	0	0	0	0	1	0	8
% Buses	2	0.1	0	0	0	0	0	0.2	0	0.2

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	25	152	0	177	291	104	4	399	1	59	1	61	637
05:00 PM	47	213	0	260	268	83	0	351	0	58	1	59	670
05:15 PM	30	197	0	227	242	86	7	335	1	65	0	66	628
05:30 PM	30	201	0	231	232	85	10	327	1	53	0	54	612
Total Volume	132	763	0	895	1033	358	21	1412	3	235	2	240	2547
% App. Total	14.7	85.3	0		73.2	25.4	1.5		1.2	97.9	0.8		
PHF	.702	.896	.000	.861	.887	.861	.525	.885	.750	.904	.500	.909	.950
Cars	126	761	0	887	1031	358	21	1410	3	225	1	229	2526
% Cars	95.5	99.7	0	99.1	99.8	100	100	99.9	100	95.7	50.0	95.4	99.2
Heavy Vehicles	5	1	0	6	2	0	0	2	0	10	1	11	19
% Heavy Vehicles	3.8	0.1	0	0.7	0.2	0	0	0.1	0	4.3	50.0	4.6	0.7
Buses	1	1	0	2	0	0	0	0	0	0	0	0	2
% Buses	0.8	0.1	0	0.2	0	0	0	0	0	0	0	0	0.1

N/S: Land Boulevard
W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 II
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	22	198	0	228	87	10	1	45	0	591
04:45 PM	24	152	0	290	104	4	1	55	1	631
Total	46	350	0	518	191	14	2	100	1	1222
05:00 PM	44	211	0	267	83	0	0	56	0	661
05:15 PM	29	197	0	242	86	7	1	62	0	624
05:30 PM	29	201	0	232	85	10	1	52	0	610
05:45 PM	28	204	0	185	79	3	4	54	1	558
Total	130	813	0	926	333	20	6	224	1	2453
06:00 PM	32	199	0	237	47	10	2	48	0	575
06:15 PM	31	158	0	220	31	7	2	53	0	502
Grand Total	239	1520	0	1901	602	51	12	425	2	4752
Apprch %	13.6	86.4	0	74.4	23.6	2	2.7	96.8	0.5	
Total %	5	32	0	40	12.7	1.1	0.3	8.9	0	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	24	152	0	176	290	104	4	398	1	55	1	57	631
05:00 PM	44	211	0	255	267	83	0	350	0	56	0	56	661
05:15 PM	29	197	0	226	242	86	7	335	1	62	0	63	624
05:30 PM	29	201	0	230	232	85	10	327	1	52	0	53	610
Total Volume	126	761	0	887	1031	358	21	1410	3	225	1	229	2526
% App. Total	14.2	85.8	0		73.1	25.4	1.5		1.3	98.3	0.4		
PHF	.716	.902	.000	.870	.889	.861	.525	.886	.750	.907	.250	.909	.955

N/S: Land Boulevard
W: Binney Street
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Client: VHB/ M. Houdlette

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Groups Printed- Heavy Vehicles

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	0	1	0	1	0	0	0	4	0	6
04:45 PM	1	0	0	1	0	0	0	4	0	6
Total	1	1	0	2	0	0	0	8	0	12
05:00 PM	2	1	0	1	0	0	0	2	1	7
05:15 PM	1	0	0	0	0	0	0	3	0	4
05:30 PM	1	0	0	0	0	0	0	1	0	2
05:45 PM	2	0	0	1	0	0	0	0	0	3
Total	6	1	0	2	0	0	0	6	1	16
06:00 PM	1	2	0	1	0	0	0	1	0	5
06:15 PM	1	0	0	2	0	0	0	3	0	6
Grand Total	9	4	0	7	0	0	0	18	1	39
Apprch %	69.2	30.8	0	100	0	0	0	94.7	5.3	
Total %	23.1	10.3	0	17.9	0	0	0	46.2	2.6	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	1	0	1	1	0	0	1	0	4	0	4	6
04:45 PM	1	0	0	1	1	0	0	1	0	4	0	4	6
05:00 PM	2	1	0	3	1	0	0	1	0	2	1	3	7
05:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total Volume	4	2	0	6	3	0	0	3	0	13	1	14	23
% App. Total	66.7	33.3	0		100	0	0		0	92.9	7.1		
PHF	.500	.500	.000	.500	.750	.000	.000	.750	.000	.813	.250	.875	.821

N/S: Land Boulevard
W: Binney Street
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Client: VHB/ M. Houdlette

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Groups Printed- Buses

	Land Boulevard From North			Land Boulevard From South			Binney Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	0	0	1	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	1	0	2
05:00 PM	1	1	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	0	0	0	0	0	0	1
Total	2	1	0	0	0	0	0	0	0	3
06:00 PM	2	0	0	0	0	0	0	0	0	2
06:15 PM	1	0	0	0	0	0	0	0	0	1
Grand Total	5	2	0	0	0	0	0	1	0	8
Apprch %	71.4	28.6	0	0	0	0	0	100	0	
Total %	62.5	25	0	0	0	0	0	12.5	0	

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	1	0	1	4
% App. Total	33.3	66.7	0		0	0	0		0	100	0		
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.250	.000	.250	.500

N/S: Land Boulevard
W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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File Name : 133347 II
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Groups Printed- Peds and Bicycles

	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	19	6	25
04:45 PM	0	0	0	0	0	1	0	0	0	0	5	5	11
Total	0	0	0	0	0	1	0	0	0	0	24	11	36
05:00 PM	0	2	1	0	0	2	0	0	0	0	11	5	21
05:15 PM	0	2	0	0	0	0	0	0	0	2	22	8	34
05:30 PM	0	1	0	0	0	0	0	0	0	1	6	12	20
05:45 PM	1	0	0	0	0	0	0	1	0	1	7	13	23
Total	1	5	1	0	0	2	0	1	0	4	46	38	98
06:00 PM	1	2	0	0	0	0	0	0	0	3	12	8	26
06:15 PM	1	0	1	0	0	1	0	0	0	0	8	4	15
Grand Total	3	7	2	0	0	4	0	1	0	7	90	61	175
Apprch %	25	58.3	16.7	0	0	80	0	20	0	4.4	57	38.6	
Total %	1.7	4	1.1	0	0	2.3	0	0.6	0	4	51.4	34.9	

	Land Boulevard From North					Land Boulevard From South					Binney Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:15 PM																
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	22	8	32	34
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	6	12	19	20
05:45 PM	1	0	0	0	1	0	0	0	1	1	0	1	7	13	21	23
06:00 PM	1	2	0	0	3	0	0	0	0	0	0	3	12	8	23	26
Total Volume	2	5	0	0	7	0	0	0	1	1	0	7	47	41	95	103
% App. Total	28.6	71.4	0	0		0	0	0	100		0	7.4	49.5	43.2		
PHF	.500	.625	.000	.000	.583	.000	.000	.000	.250	.250	.000	.583	.534	.788	.742	.757

N/S: Land Boulevard
W: Binney Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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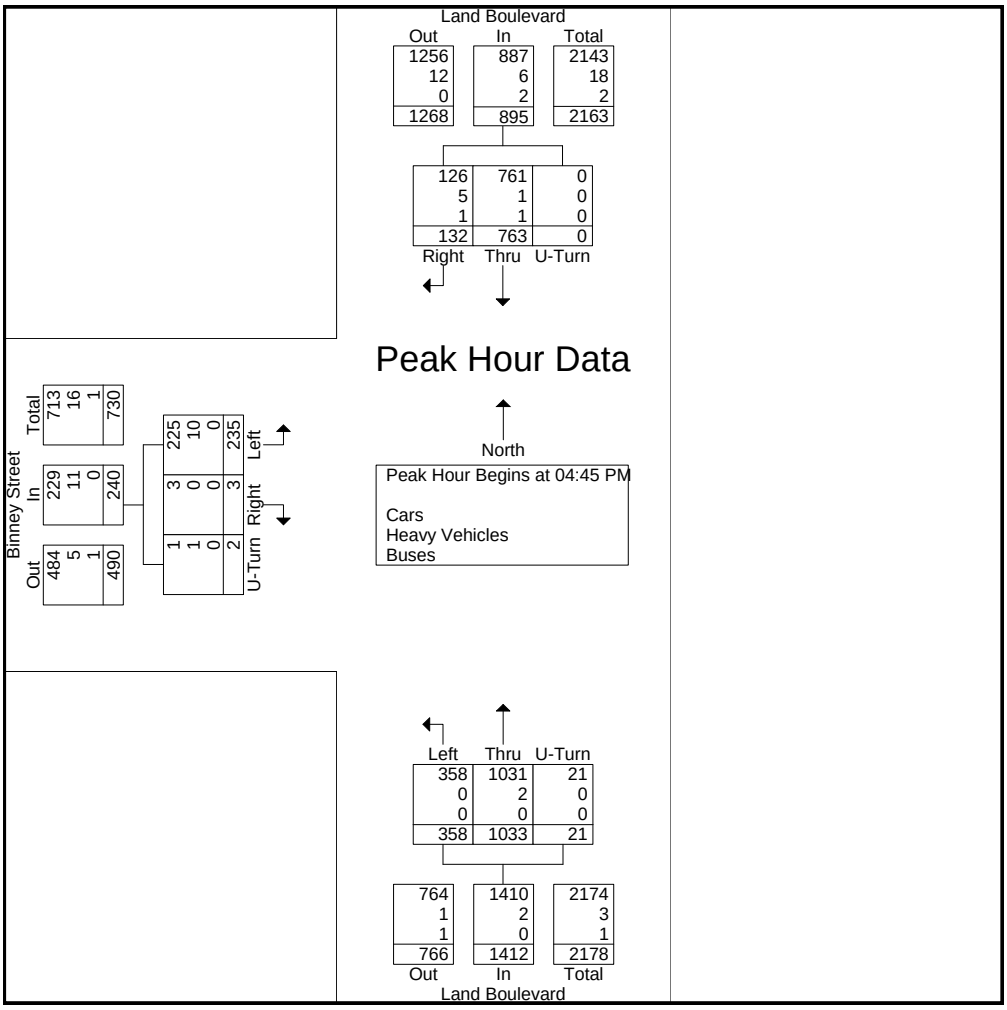
	Land Boulevard From North				Land Boulevard From South				Binney Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	25	152	0	177	291	104	4	399	1	59	1	61	637
05:00 PM	47	213	0	260	268	83	0	351	0	58	1	59	670
05:15 PM	30	197	0	227	242	86	7	335	1	65	0	66	628
05:30 PM	30	201	0	231	232	85	10	327	1	53	0	54	612
Total Volume	132	763	0	895	1033	358	21	1412	3	235	2	240	2547
% App. Total	14.7	85.3	0		73.2	25.4	1.5		1.2	97.9	0.8		
PHF	.702	.896	.000	.861	.887	.861	.525	.885	.750	.904	.500	.909	.950
Cars	126	761	0	887	1031	358	21	1410	3	225	1	229	2526
% Cars	95.5	99.7	0	99.1	99.8	100	100	99.9	100	95.7	50.0	95.4	99.2
Heavy Vehicles	5	1	0	6	2	0	0	2	0	10	1	11	19
% Heavy Vehicles	3.8	0.1	0	0.7	0.2	0	0	0.1	0	4.3	50.0	4.6	0.7
Buses	1	1	0	2	0	0	0	0	0	0	0	0	2
% Buses	0.8	0.1	0	0.2	0	0	0	0	0	0	0	0	0.1



N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
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File Name : 133347 J
Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	4	49	5	0	11	23	1	0	1	59	6	0	15	54	15	0	243
07:45 AM	7	65	4	0	18	44	1	0	3	78	9	0	22	69	13	0	333
Total	11	114	9	0	29	67	2	0	4	137	15	0	37	123	28	0	576
08:00 AM	9	61	7	0	14	36	2	0	0	66	8	0	12	64	22	0	301
08:15 AM	11	57	2	0	23	35	2	0	1	65	10	0	20	84	21	0	331
08:30 AM	9	60	10	0	12	31	3	0	3	73	11	0	20	78	12	0	322
08:45 AM	7	63	5	0	22	29	0	0	0	80	9	0	18	79	12	0	324
Total	36	241	24	0	71	131	7	0	4	284	38	0	70	305	67	0	1278
09:00 AM	7	88	4	0	20	37	3	0	4	67	5	0	16	60	13	0	324
09:15 AM	5	56	4	0	21	35	5	0	4	52	6	0	9	67	11	0	275
Grand Total	59	499	41	0	141	270	17	0	16	540	64	0	132	555	119	0	2453
Apprch %	9.8	83.3	6.8	0	32.9	63.1	4	0	2.6	87.1	10.3	0	16.4	68.9	14.8	0	
Total %	2.4	20.3	1.7	0	5.7	11	0.7	0	0.7	22	2.6	0	5.4	22.6	4.9	0	
Cars	52	483	41	0	130	231	15	0	16	517	56	0	121	520	117	0	2299
% Cars	88.1	96.8	100	0	92.2	85.6	88.2	0	100	95.7	87.5	0	91.7	93.7	98.3	0	93.7
Heavy Vehicles	4	14	0	0	11	21	2	0	0	11	8	0	10	21	1	0	103
% Heavy Vehicles	6.8	2.8	0	0	7.8	7.8	11.8	0	0	2	12.5	0	7.6	3.8	0.8	0	4.2
Buses	3	2	0	0	0	18	0	0	0	12	0	0	1	14	1	0	51
% Buses	5.1	0.4	0	0	0	6.7	0	0	0	2.2	0	0	0.8	2.5	0.8	0	2.1

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	11	57	2	0	70	23	35	2	0	60	1	65	10	0	76	20	84	21	0	125	331
08:30 AM	9	60	10	0	79	12	31	3	0	46	3	73	11	0	87	20	78	12	0	110	322
08:45 AM	7	63	5	0	75	22	29	0	0	51	0	80	9	0	89	18	79	12	0	109	324
09:00 AM	7	88	4	0	99	20	37	3	0	60	4	67	5	0	76	16	60	13	0	89	324
Total Volume	34	268	21	0	323	77	132	8	0	217	8	285	35	0	328	74	301	58	0	433	1301
% App. Total	10.5	83	6.5	0		35.5	60.8	3.7	0		2.4	86.9	10.7	0		17.1	69.5	13.4	0		
PHF	.773	.761	.525	.000	.816	.837	.892	.667	.000	.904	.500	.891	.795	.000	.921	.925	.896	.690	.000	.866	.983
Cars	28	259	21	0	308	71	112	8	0	191	8	274	29	0	311	70	279	57	0	406	1216
% Cars	82.4	96.6	100	0	95.4	92.2	84.8	100	0	88.0	100	96.1	82.9	0	94.8	94.6	92.7	98.3	0	93.8	93.5
Heavy Vehicles	3	9	0	0	12	6	10	0	0	16	0	6	6	0	12	3	13	0	0	16	56
% Heavy Vehicles	8.8	3.4	0	0	3.7	7.8	7.6	0	0	7.4	0	2.1	17.1	0	3.7	4.1	4.3	0	0	3.7	4.3
Buses	3	0	0	0	3	0	10	0	0	10	0	5	0	0	5	1	9	1	0	11	29
% Buses	8.8	0	0	0	0.9	0	7.6	0	0	4.6	0	1.8	0	0	1.5	1.4	3.0	1.7	0	2.5	2.2

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	4	48	5	0	11	20	0	0	1	55	5	0	15	51	14	0	229
07:45 AM	6	64	4	0	14	36	1	0	3	75	8	0	18	66	13	0	308
Total	10	112	9	0	25	56	1	0	4	130	13	0	33	117	27	0	537
08:00 AM	9	61	7	0	14	35	1	0	0	65	8	0	12	59	22	0	293
08:15 AM	11	55	2	0	23	27	2	0	1	63	7	0	19	80	21	0	311
08:30 AM	7	57	10	0	11	29	3	0	3	69	10	0	19	76	12	0	306
08:45 AM	5	61	5	0	19	26	0	0	0	76	7	0	17	68	11	0	295
Total	32	234	24	0	67	117	6	0	4	273	32	0	67	283	66	0	1205
09:00 AM	5	86	4	0	18	30	3	0	4	66	5	0	15	55	13	0	304
09:15 AM	5	51	4	0	20	28	5	0	4	48	6	0	6	65	11	0	253
Grand Total	52	483	41	0	130	231	15	0	16	517	56	0	121	520	117	0	2299
Apprch %	9	83.9	7.1	0	34.6	61.4	4	0	2.7	87.8	9.5	0	16	68.6	15.4	0	
Total %	2.3	21	1.8	0	5.7	10	0.7	0	0.7	22.5	2.4	0	5.3	22.6	5.1	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	6	64	4	0	74	14	36	1	0	51	3	75	8	0	86	18	66	13	0	97	308
08:00 AM	9	61	7	0	77	14	35	1	0	50	0	65	8	0	73	12	59	22	0	93	293
08:15 AM	11	55	2	0	68	23	27	2	0	52	1	63	7	0	71	19	80	21	0	120	311
08:30 AM	7	57	10	0	74	11	29	3	0	43	3	69	10	0	82	19	76	12	0	107	306
Total Volume	33	237	23	0	293	62	127	7	0	196	7	272	33	0	312	68	281	68	0	417	1218
% App. Total	11.3	80.9	7.8	0		31.6	64.8	3.6	0		2.2	87.2	10.6	0		16.3	67.4	16.3	0		
PHF	.750	.926	.575	.000	.951	.674	.882	.583	.000	.942	.583	.907	.825	.000	.907	.895	.878	.773	.000	.869	.979

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
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Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	1	1	0	0	1	1	0	0	2	1	0	7
07:45 AM	1	1	0	0	4	5	0	0	0	0	1	0	4	1	0	0	17
Total	1	1	0	0	4	6	1	0	0	1	2	0	4	3	1	0	24
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	4	0	0	6
08:15 AM	0	2	0	0	0	3	0	0	0	1	3	0	1	2	0	0	12
08:30 AM	1	3	0	0	1	1	0	0	0	1	1	0	1	0	0	0	9
08:45 AM	1	2	0	0	3	2	0	0	0	3	2	0	0	8	0	0	21
Total	2	7	0	0	4	6	1	0	0	6	6	0	2	14	0	0	48
09:00 AM	1	2	0	0	2	4	0	0	0	1	0	0	1	3	0	0	14
09:15 AM	0	4	0	0	1	5	0	0	0	3	0	0	3	1	0	0	17
Grand Total	4	14	0	0	11	21	2	0	0	11	8	0	10	21	1	0	103
Apprch %	22.2	77.8	0	0	32.4	61.8	5.9	0	0	57.9	42.1	0	31.2	65.6	3.1	0	
Total %	3.9	13.6	0	0	10.7	20.4	1.9	0	0	10.7	7.8	0	9.7	20.4	1	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	1	3	0	0	4	1	1	0	0	2	0	1	1	0	2	1	0	0	0	1	9
08:45 AM	1	2	0	0	3	3	2	0	0	5	0	3	2	0	5	0	8	0	0	8	21
09:00 AM	1	2	0	0	3	2	4	0	0	6	0	1	0	0	1	1	3	0	0	4	14
09:15 AM	0	4	0	0	4	1	5	0	0	6	0	3	0	0	3	3	1	0	0	4	17
Total Volume	3	11	0	0	14	7	12	0	0	19	0	8	3	0	11	5	12	0	0	17	61
% App. Total	21.4	78.6	0	0		36.8	63.2	0	0		0	72.7	27.3	0		29.4	70.6	0	0		
PHF	.750	.688	.000	.000	.875	.583	.600	.000	.000	.792	.000	.667	.375	.000	.550	.417	.375	.000	.000	.531	.726

N/S: Cardinal Medeiros Av/Portland St
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	0	0	0	2	0	0	0	3	0	0	0	1	0	0	7
07:45 AM	0	0	0	0	0	3	0	0	0	3	0	0	0	2	0	0	8
Total	0	1	0	0	0	5	0	0	0	6	0	0	0	3	0	0	15
08:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
08:15 AM	0	0	0	0	0	5	0	0	0	1	0	0	0	2	0	0	8
08:30 AM	1	0	0	0	0	1	0	0	0	3	0	0	0	2	0	0	7
08:45 AM	1	0	0	0	0	1	0	0	0	1	0	0	1	3	1	0	8
Total	2	0	0	0	0	8	0	0	0	5	0	0	1	8	1	0	25
09:00 AM	1	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	6
09:15 AM	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0	0	5
Grand Total	3	2	0	0	0	18	0	0	0	12	0	0	1	14	1	0	51
Apprch %	60	40	0	0	0	100	0	0	0	100	0	0	6.2	87.5	6.2	0	
Total %	5.9	3.9	0	0	0	35.3	0	0	0	23.5	0	0	2	27.5	2	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	0	2	0	0	2	8
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	3	0	0	3	0	2	0	0	2	7
08:45 AM	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	1	3	1	0	5	8
09:00 AM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6
Total Volume	3	0	0	0	3	0	10	0	0	10	0	5	0	0	5	1	9	1	0	11	29
% App. Total	100	0	0	0		0	100	0	0		0	100	0	0		9.1	81.8	9.1	0		
PHF	.750	.000	.000	.000	.750	.000	.500	.000	.000	.500	.000	.417	.000	.000	.417	.250	.750	.250	.000	.550	.906

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Groups Printed- Peds and Bicycles

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	18	1	0	1	0	8	7	1	2	0	1	6	1	42	0	2	6	96
07:45 AM	0	5	0	29	15	0	1	0	10	16	0	3	0	3	10	2	49	1	4	16	164
Total	0	5	0	47	16	0	2	0	18	23	1	5	0	4	16	3	91	1	6	22	260
08:00 AM	0	4	1	45	4	0	2	0	10	11	0	2	0	1	12	8	70	2	3	9	184
08:15 AM	1	3	2	41	17	0	1	0	17	22	0	1	0	5	17	5	86	3	6	17	244
08:30 AM	0	7	0	46	14	0	2	0	16	16	0	6	1	5	5	7	109	3	5	7	249
08:45 AM	0	6	1	54	10	0	2	0	11	11	0	3	2	1	24	12	92	0	3	24	256
Total	1	20	4	186	45	0	7	0	54	60	0	12	3	12	58	32	357	8	17	57	933
09:00 AM	0	8	3	39	11	0	2	0	9	13	0	6	0	2	9	10	73	0	3	16	204
09:15 AM	0	4	3	33	11	0	8	0	11	11	1	4	0	0	2	8	86	0	3	12	197
Grand Total	1	37	10	305	83	0	19	0	92	107	2	27	3	18	85	53	607	9	29	107	1594
Apprch %	0.2	8.5	2.3	70	19	0	8.7	0	42.2	49.1	1.5	20	2.2	13.3	63	6.6	75.4	1.1	3.6	13.3	
Total %	0.1	2.3	0.6	19.1	5.2	0	1.2	0	5.8	6.7	0.1	1.7	0.2	1.1	5.3	3.3	38.1	0.6	1.8	6.7	

	Cardinal Medeiros Avenue From North						Hampshire Street From East						Portland Street From South						Hampshire Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	1	3	2	41	17	64	0	1	0	17	22	40	0	1	0	5	17	23	5	86	3	6	17	117	244
08:30 AM	0	7	0	46	14	67	0	2	0	16	16	34	0	6	1	5	5	17	7	109	3	5	7	131	249
08:45 AM	0	6	1	54	10	71	0	2	0	11	11	24	0	3	2	1	24	30	12	92	0	3	24	131	256
09:00 AM	0	8	3	39	11	61	0	2	0	9	13	24	0	6	0	2	9	17	10	73	0	3	16	102	204
Total Volume	1	24	6	180	52	263	0	7	0	53	62	122	0	16	3	13	55	87	34	360	6	17	64	481	953
% App. Total	0.4	9.1	2.3	68.4	19.8		0	5.7	0	43.4	50.8		0	18.4	3.4	14.9	63.2		7.1	74.8	1.2	3.5	13.3		
PHF	.250	.750	.500	.833	.765	.926	.000	.875	.000	.779	.705	.763	.000	.667	.375	.650	.573	.725	.708	.826	.500	.708	.667	.918	.931

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Office: 508.481.3999 Fax: 508.545.1234
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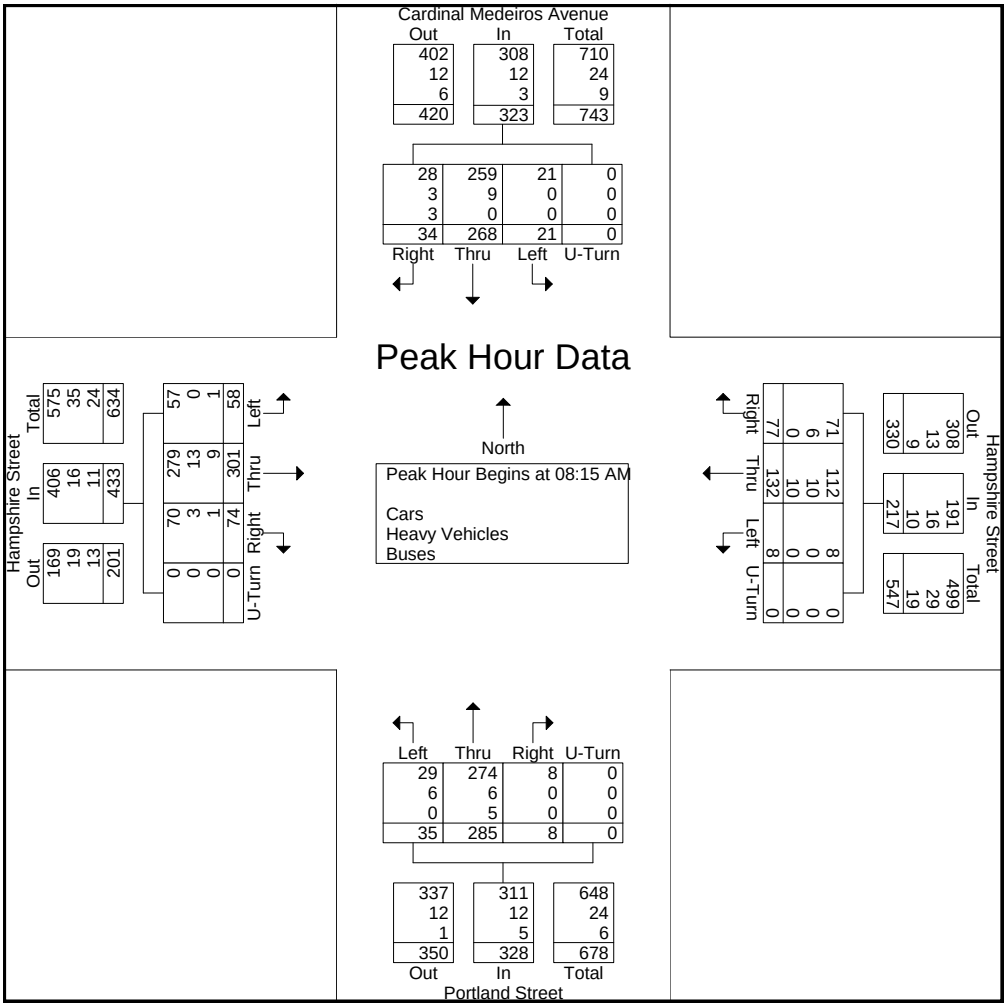
	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	11	57	2	0	70	23	35	2	0	60	1	65	10	0	76	20	84	21	0	125	331
08:30 AM	9	60	10	0	79	12	31	3	0	46	3	73	11	0	87	20	78	12	0	110	322
08:45 AM	7	63	5	0	75	22	29	0	0	51	0	80	9	0	89	18	79	12	0	109	324
09:00 AM	7	88	4	0	99	20	37	3	0	60	4	67	5	0	76	16	60	13	0	89	324
Total Volume	34	268	21	0	323	77	132	8	0	217	8	285	35	0	328	74	301	58	0	433	1301
% App. Total	10.5	83	6.5	0		35.5	60.8	3.7	0		2.4	86.9	10.7	0		17.1	69.5	13.4	0		
PHF	.773	.761	.525	.000	.816	.837	.892	.667	.000	.904	.500	.891	.795	.000	.921	.925	.896	.690	.000	.866	.983
Cars	28	259	21	0	308	71	112	8	0	191	8	274	29	0	311	70	279	57	0	406	1216
% Cars	82.4	96.6	100	0	95.4	92.2	84.8	100	0	88.0	100	96.1	82.9	0	94.8	94.6	92.7	98.3	0	93.8	93.5
Heavy Vehicles	3	9	0	0	12	6	10	0	0	16	0	6	6	0	12	3	13	0	0	16	56
% Heavy Vehicles	8.8	3.4	0	0	3.7	7.8	7.6	0	0	7.4	0	2.1	17.1	0	3.7	4.1	4.3	0	0	3.7	4.3
Buses	3	0	0	0	3	0	10	0	0	10	0	5	0	0	5	1	9	1	0	11	29
% Buses	8.8	0	0	0	0.9	0	7.6	0	0	4.6	0	1.8	0	0	1.5	1.4	3.0	1.7	0	2.5	2.2



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Groups Printed- Cars - Heavy Vehicles - Buses

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	15	57	8	0	26	70	2	0	0	93	11	0	11	44	10	0	347
04:45 PM	21	44	3	0	35	66	0	0	2	96	20	0	12	52	12	0	363
Total	36	101	11	0	61	136	2	0	2	189	31	0	23	96	22	0	710
05:00 PM	18	45	4	0	36	78	4	0	2	88	29	0	13	43	18	0	378
05:15 PM	23	54	4	0	31	69	3	0	1	88	16	0	18	58	10	0	375
05:30 PM	12	48	11	0	29	72	3	0	3	84	23	0	23	40	8	0	356
05:45 PM	18	43	9	0	29	72	0	0	3	88	15	0	17	40	8	0	342
Total	71	190	28	0	125	291	10	0	9	348	83	0	71	181	44	0	1451
06:00 PM	13	30	7	0	27	49	0	0	3	57	14	0	9	46	8	0	263
06:15 PM	14	35	1	0	26	61	2	0	1	62	13	0	9	42	10	0	276
Grand Total	134	356	47	0	239	537	14	0	15	656	141	0	112	365	84	0	2700
Apprch %	25	66.3	8.8	0	30.3	68	1.8	0	1.8	80.8	17.4	0	20	65.1	15	0	
Total %	5	13.2	1.7	0	8.9	19.9	0.5	0	0.6	24.3	5.2	0	4.1	13.5	3.1	0	
Cars	134	354	45	0	235	517	13	0	15	646	137	0	112	344	82	0	2634
% Cars	100	99.4	95.7	0	98.3	96.3	92.9	0	100	98.5	97.2	0	100	94.2	97.6	0	97.6
Heavy Vehicles	0	1	1	0	4	4	0	0	0	7	4	0	0	5	2	0	28
% Heavy Vehicles	0	0.3	2.1	0	1.7	0.7	0	0	0	1.1	2.8	0	0	1.4	2.4	0	1
Buses	0	1	1	0	0	16	1	0	0	3	0	0	0	16	0	0	38
% Buses	0	0.3	2.1	0	0	3	7.1	0	0	0.5	0	0	0	4.4	0	0	1.4

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	21	44	3	0	68	35	66	0	0	101	2	96	20	0	118	12	52	12	0	76	363
05:00 PM	18	45	4	0	67	36	78	4	0	118	2	88	29	0	119	13	43	18	0	74	378
05:15 PM	23	54	4	0	81	31	69	3	0	103	1	88	16	0	105	18	58	10	0	86	375
05:30 PM	12	48	11	0	71	29	72	3	0	104	3	84	23	0	110	23	40	8	0	71	356
Total Volume	74	191	22	0	287	131	285	10	0	426	8	356	88	0	452	66	193	48	0	307	1472
% App. Total	25.8	66.6	7.7	0		30.8	66.9	2.3	0		1.8	78.8	19.5	0		21.5	62.9	15.6	0		
PHF	.804	.884	.500	.000	.886	.910	.913	.625	.000	.903	.667	.927	.759	.000	.950	.717	.832	.667	.000	.892	.974
Cars	74	191	21	0	286	129	276	10	0	415	8	349	86	0	443	66	181	48	0	295	1439
% Cars	100	100	95.5	0	99.7	98.5	96.8	100	0	97.4	100	98.0	97.7	0	98.0	100	93.8	100	0	96.1	97.8
Heavy Vehicles	0	0	1	0	1	2	1	0	0	3	0	6	2	0	8	0	4	0	0	4	16
% Heavy Vehicles	0	0	4.5	0	0.3	1.5	0.4	0	0	0.7	0	1.7	2.3	0	1.8	0	2.1	0	0	1.3	1.1
Buses	0	0	0	0	0	0	8	0	0	8	0	1	0	0	1	0	8	0	0	8	17
% Buses	0	0	0	0	0	0	2.8	0	0	1.9	0	0.3	0	0	0.2	0	4.1	0	0	2.6	1.2

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Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	15	55	8	0	25	68	2	0	0	92	10	0	11	41	10	0	337
04:45 PM	21	44	2	0	34	64	0	0	2	93	20	0	12	49	12	0	353
Total	36	99	10	0	59	132	2	0	2	185	30	0	23	90	22	0	690
05:00 PM	18	45	4	0	35	76	4	0	2	87	28	0	13	42	18	0	372
05:15 PM	23	54	4	0	31	66	3	0	1	87	16	0	18	54	10	0	367
05:30 PM	12	48	11	0	29	70	3	0	3	82	22	0	23	36	8	0	347
05:45 PM	18	43	9	0	29	70	0	0	3	88	15	0	17	38	8	0	338
Total	71	190	28	0	124	282	10	0	9	344	81	0	71	170	44	0	1424
06:00 PM	13	30	6	0	26	47	0	0	3	56	13	0	9	43	7	0	253
06:15 PM	14	35	1	0	26	56	1	0	1	61	13	0	9	41	9	0	267
Grand Total	134	354	45	0	235	517	13	0	15	646	137	0	112	344	82	0	2634
Apprch %	25.1	66.4	8.4	0	30.7	67.6	1.7	0	1.9	81	17.2	0	20.8	63.9	15.2	0	
Total %	5.1	13.4	1.7	0	8.9	19.6	0.5	0	0.6	24.5	5.2	0	4.3	13.1	3.1	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	21	44	2	0	67	34	64	0	0	98	2	93	20	0	115	12	49	12	0	73	353
05:00 PM	18	45	4	0	67	35	76	4	0	115	2	87	28	0	117	13	42	18	0	73	372
05:15 PM	23	54	4	0	81	31	66	3	0	100	1	87	16	0	104	18	54	10	0	82	367
05:30 PM	12	48	11	0	71	29	70	3	0	102	3	82	22	0	107	23	36	8	0	67	347
Total Volume	74	191	21	0	286	129	276	10	0	415	8	349	86	0	443	66	181	48	0	295	1439
% App. Total	25.9	66.8	7.3	0		31.1	66.5	2.4	0		1.8	78.8	19.4	0		22.4	61.4	16.3	0		
PHF	.804	.884	.477	.000	.883	.921	.908	.625	.000	.902	.667	.938	.768	.000	.947	.717	.838	.667	.000	.899	.967

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 JJ
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Heavy Vehicles

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	3
04:45 PM	0	0	1	0	1	0	0	0	0	3	0	0	0	1	0	0	6
Total	0	1	1	0	2	0	0	0	0	3	1	0	0	1	0	0	9
05:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
05:30 PM	0	0	0	0	0	1	0	0	0	2	1	0	0	1	0	0	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	1	1	0	0	0	3	2	0	0	4	0	0	11
06:00 PM	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	4
06:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	4
Grand Total	0	1	1	0	4	4	0	0	0	7	4	0	0	5	2	0	28
Apprch %	0	50	50	0	50	50	0	0	0	63.6	36.4	0	0	71.4	28.6	0	
Total %	0	3.6	3.6	0	14.3	14.3	0	0	0	25	14.3	0	0	17.9	7.1	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	1	0	1	1	0	0	0	1	0	3	0	0	3	0	1	0	0	1	6
05:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	0	1	0	0	1	5
Total Volume	0	0	1	0	1	2	1	0	0	3	0	6	2	0	8	0	4	0	0	4	16
% App. Total	0	0	100	0		66.7	33.3	0	0		0	75	25	0		0	100	0	0		
PHF	.000	.000	.250	.000	.250	.500	.250	.000	.000	.750	.000	.500	.500	.000	.667	.000	.500	.000	.000	.500	.667

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 JJ
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Buses

	Cardinal Medeiros Avenue From North				Hampshire Street From East				Portland Street From South				Hampshire Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	2	0	0	0	1	0	0	0	3	0	0	7
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
Total	0	1	0	0	0	4	0	0	0	1	0	0	0	5	0	0	11
05:00 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	4
05:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	8	0	0	0	1	0	0	0	7	0	0	16
06:00 PM	0	0	1	0	0	1	0	0	0	1	0	0	0	3	0	0	6
06:15 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	5
Grand Total	0	1	1	0	0	16	1	0	0	3	0	0	0	16	0	0	38
Apprch %	0	50	50	0	0	94.1	5.9	0	0	100	0	0	0	100	0	0	
Total %	0	2.6	2.6	0	0	42.1	2.6	0	0	7.9	0	0	0	42.1	0	0	

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	3	0	0	3	7
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
05:00 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	4
05:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
Total Volume	0	1	0	0	1	0	9	0	0	9	0	2	0	0	2	0	8	0	0	8	20
% App. Total	0	100	0	0		0	100	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.750	.000	.000	.750	.000	.500	.000	.000	.500	.000	.667	.000	.000	.667	.714

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 JJ
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Peds and Bicycles

	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	3	5	11	20	3	29	1	5	18	0	6	2	0	11	0	6	0	11	13	144
04:45 PM	0	6	1	17	35	1	33	0	12	35	0	6	4	6	12	1	5	0	15	2	191
Total	0	9	6	28	55	4	62	1	17	53	0	12	6	6	23	1	11	0	26	15	335
05:00 PM	2	3	0	22	30	1	58	1	20	27	0	4	3	7	15	0	7	0	11	5	216
05:15 PM	4	5	0	10	62	7	61	2	18	21	1	6	6	11	7	0	11	0	10	15	257
05:30 PM	6	3	0	27	42	4	77	0	7	26	0	12	5	23	13	0	13	0	26	8	292
05:45 PM	3	5	0	15	52	4	57	0	12	13	0	4	2	3	7	0	15	0	6	25	223
Total	15	16	0	74	186	16	253	3	57	87	1	26	16	44	42	0	46	0	53	53	988
06:00 PM	4	2	0	13	50	0	57	0	19	9	0	4	7	8	12	0	7	0	9	8	209
06:15 PM	1	2	0	9	35	1	54	0	15	16	0	4	4	6	8	1	5	0	11	10	182
Grand Total	20	29	6	124	326	21	426	4	108	165	1	46	33	64	85	2	69	0	99	86	1714
Apprch %	4	5.7	1.2	24.6	64.6	2.9	58.8	0.6	14.9	22.8	0.4	20.1	14.4	27.9	37.1	0.8	27	0	38.7	33.6	
Total %	1.2	1.7	0.4	7.2	19	1.2	24.9	0.2	6.3	9.6	0.1	2.7	1.9	3.7	5	0.1	4	0	5.8	5	

	Cardinal Medeiros Avenue From North						Hampshire Street From East						Portland Street From South						Hampshire Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	2	3	0	22	30	57	1	58	1	20	27	107	0	4	3	7	15	29	0	7	0	11	5	23	216
05:15 PM	4	5	0	10	62	81	7	61	2	18	21	109	1	6	6	11	7	31	0	11	0	10	15	36	257
05:30 PM	6	3	0	27	42	78	4	77	0	7	26	114	0	12	5	23	13	53	0	13	0	26	8	47	292
05:45 PM	3	5	0	15	52	75	4	57	0	12	13	86	0	4	2	3	7	16	0	15	0	6	25	46	223
Total Volume	15	16	0	74	186	291	16	253	3	57	87	416	1	26	16	44	42	129	0	46	0	53	53	152	988
% App. Total	5.2	5.5	0	25.4	63.9		3.8	60.8	0.7	13.7	20.9		0.8	20.2	12.4	34.1	32.6		0	30.3	0	34.9	34.9		
PHF	.625	.800	.000	.685	.750	.898	.571	.821	.375	.713	.806	.912	.250	.542	.667	.478	.700	.608	.000	.767	.000	.510	.530	.809	.846

N/S: Cardinal Medeiros Av/Portland St
E/W: Hampshire Street
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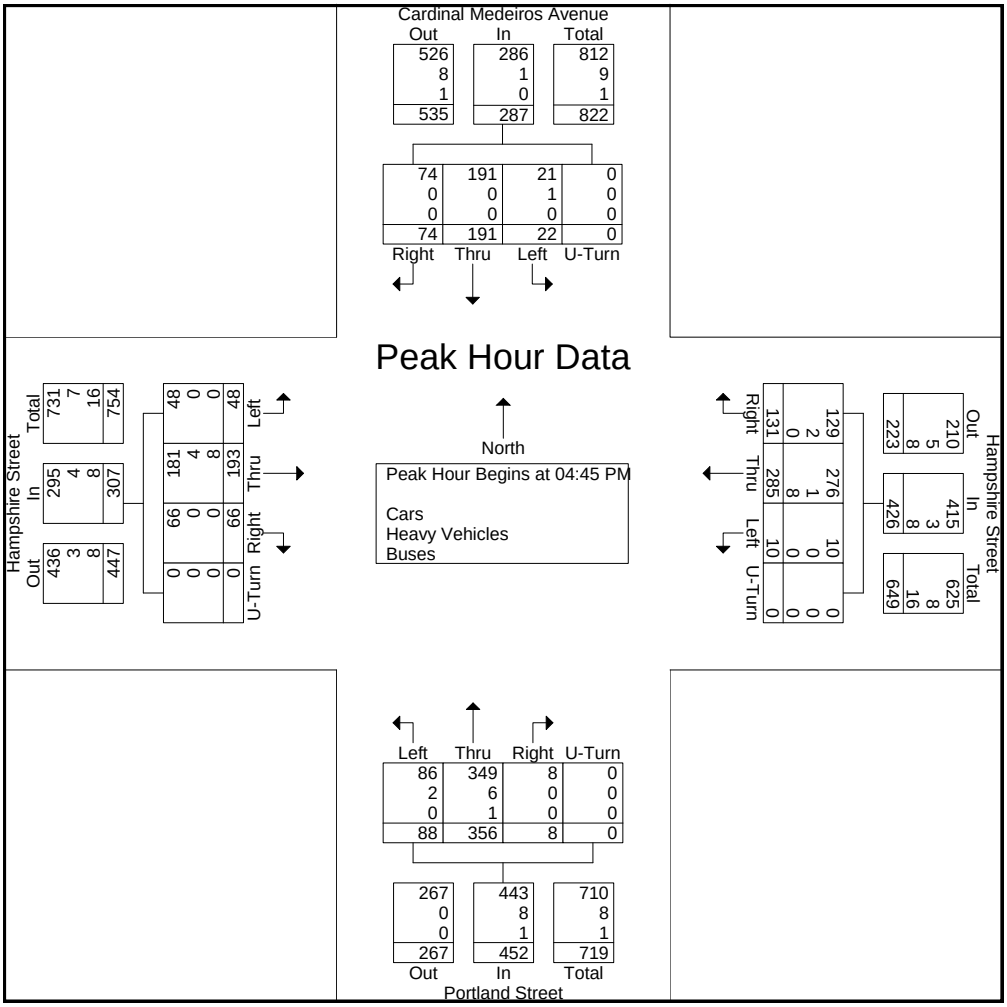
	Cardinal Medeiros Avenue From North					Hampshire Street From East					Portland Street From South					Hampshire Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	21	44	3	0	68	35	66	0	0	101	2	96	20	0	118	12	52	12	0	76	363
05:00 PM	18	45	4	0	67	36	78	4	0	118	2	88	29	0	119	13	43	18	0	74	378
05:15 PM	23	54	4	0	81	31	69	3	0	103	1	88	16	0	105	18	58	10	0	86	375
05:30 PM	12	48	11	0	71	29	72	3	0	104	3	84	23	0	110	23	40	8	0	71	356
Total Volume	74	191	22	0	287	131	285	10	0	426	8	356	88	0	452	66	193	48	0	307	1472
% App. Total	25.8	66.6	7.7	0		30.8	66.9	2.3	0		1.8	78.8	19.5	0		21.5	62.9	15.6	0		
PHF	.804	.884	.500	.000	.886	.910	.913	.625	.000	.903	.667	.927	.759	.000	.950	.717	.832	.667	.000	.892	.974
Cars	74	191	21	0	286	129	276	10	0	415	8	349	86	0	443	66	181	48	0	295	1439
% Cars	100	100	95.5	0	99.7	98.5	96.8	100	0	97.4	100	98.0	97.7	0	98.0	100	93.8	100	0	96.1	97.8
Heavy Vehicles	0	0	1	0	1	2	1	0	0	3	0	6	2	0	8	0	4	0	0	4	16
% Heavy Vehicles	0	0	4.5	0	0.3	1.5	0.4	0	0	0.7	0	1.7	2.3	0	1.8	0	2.1	0	0	1.3	1.1
Buses	0	0	0	0	0	0	8	0	0	8	0	1	0	0	1	0	8	0	0	8	17
% Buses	0	0	0	0	0	0	2.8	0	0	1.9	0	0.3	0	0	0.2	0	4.1	0	0	2.6	1.2



N/S: Portland Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 K
Site Code : TBA
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Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	8	43	11	0	0	52	11	0	10	51	13	0	6	71	15	0	291
07:45 AM	7	71	10	0	1	61	5	0	22	65	15	0	2	86	24	0	369
Total	15	114	21	0	1	113	16	0	32	116	28	0	8	157	39	0	660
08:00 AM	10	44	23	0	6	52	11	0	26	61	9	0	7	80	13	0	342
08:15 AM	14	39	21	0	1	47	9	0	29	52	9	0	11	116	22	0	370
08:30 AM	18	54	12	0	0	42	7	0	11	65	13	0	12	101	20	0	355
08:45 AM	16	43	14	0	1	52	7	0	21	68	11	1	9	100	19	0	362
Total	58	180	70	0	8	193	34	0	87	246	42	1	39	397	74	0	1429
09:00 AM	17	73	18	0	6	35	5	0	19	55	9	0	15	106	19	0	377
09:15 AM	10	47	16	0	5	45	4	0	20	41	9	1	7	73	15	0	293
Grand Total	100	414	125	0	20	386	59	0	158	458	88	2	69	733	147	0	2759
Apprch %	15.6	64.8	19.6	0	4.3	83	12.7	0	22.4	64.9	12.5	0.3	7.3	77.2	15.5	0	
Total %	3.6	15	4.5	0	0.7	14	2.1	0	5.7	16.6	3.2	0.1	2.5	26.6	5.3	0	
Cars	95	395	120	0	20	356	42	0	149	436	81	2	67	703	140	0	2606
% Cars	95	95.4	96	0	100	92.2	71.2	0	94.3	95.2	92	100	97.1	95.9	95.2	0	94.5
Heavy Vehicles	5	18	5	0	0	19	2	0	9	14	6	0	2	19	2	0	101
% Heavy Vehicles	5	4.3	4	0	0	4.9	3.4	0	5.7	3.1	6.8	0	2.9	2.6	1.4	0	3.7
Buses	0	1	0	0	0	11	15	0	0	8	1	0	0	11	5	0	52
% Buses	0	0.2	0	0	0	2.8	25.4	0	0	1.7	1.1	0	0	1.5	3.4	0	1.9

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	14	39	21	0	74	1	47	9	0	57	29	52	9	0	90	11	116	22	0	149	370
08:30 AM	18	54	12	0	84	0	42	7	0	49	11	65	13	0	89	12	101	20	0	133	355
08:45 AM	16	43	14	0	73	1	52	7	0	60	21	68	11	1	101	9	100	19	0	128	362
09:00 AM	17	73	18	0	108	6	35	5	0	46	19	55	9	0	83	15	106	19	0	140	377
Total Volume	65	209	65	0	339	8	176	28	0	212	80	240	42	1	363	47	423	80	0	550	1464
% App. Total	19.2	61.7	19.2	0		3.8	83	13.2	0		22	66.1	11.6	0.3		8.5	76.9	14.5	0		
PHF	.903	.716	.774	.000	.785	.333	.846	.778	.000	.883	.690	.882	.808	.250	.899	.783	.912	.909	.000	.923	.971
Cars	61	205	61	0	327	8	161	19	0	188	77	230	39	1	347	46	407	76	0	529	1391
% Cars	93.8	98.1	93.8	0	96.5	100	91.5	67.9	0	88.7	96.3	95.8	92.9	100	95.6	97.9	96.2	95.0	0	96.2	95.0
Heavy Vehicles	4	4	4	0	12	0	8	1	0	9	3	8	3	0	14	1	10	1	0	12	47
% Heavy Vehicles	6.2	1.9	6.2	0	3.5	0	4.5	3.6	0	4.2	3.8	3.3	7.1	0	3.9	2.1	2.4	1.3	0	2.2	3.2
Buses	0	0	0	0	0	0	7	8	0	15	0	2	0	0	2	0	6	3	0	9	26
% Buses	0	0	0	0	0	0	4.0	28.6	0	7.1	0	0.8	0	0	0.6	0	1.4	3.8	0	1.6	1.8

N/S: Portland Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	8	41	11	0	0	47	8	0	10	46	11	0	5	67	14	0	268
07:45 AM	7	67	9	0	1	57	3	0	19	61	14	0	2	83	24	0	347
Total	15	108	20	0	1	104	11	0	29	107	25	0	7	150	38	0	615
08:00 AM	10	42	23	0	6	49	9	0	25	61	8	0	7	76	12	0	328
08:15 AM	14	38	20	0	1	43	7	0	28	51	8	0	10	110	19	0	349
08:30 AM	18	52	11	0	0	36	4	0	11	62	11	0	12	98	19	0	334
08:45 AM	14	43	14	0	1	49	5	0	20	63	11	1	9	95	19	0	344
Total	56	175	68	0	8	177	25	0	84	237	38	1	38	379	69	0	1355
09:00 AM	15	72	16	0	6	33	3	0	18	54	9	0	15	104	19	0	364
09:15 AM	9	40	16	0	5	42	3	0	18	38	9	1	7	70	14	0	272
Grand Total	95	395	120	0	20	356	42	0	149	436	81	2	67	703	140	0	2606
Apprch %	15.6	64.8	19.7	0	4.8	85.2	10	0	22.3	65.3	12.1	0.3	7.4	77.3	15.4	0	
Total %	3.6	15.2	4.6	0	0.8	13.7	1.6	0	5.7	16.7	3.1	0.1	2.6	27	5.4	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	14	38	20	0	72	1	43	7	0	51	28	51	8	0	87	10	110	19	0	139	349
08:30 AM	18	52	11	0	81	0	36	4	0	40	11	62	11	0	84	12	98	19	0	129	334
08:45 AM	14	43	14	0	71	1	49	5	0	55	20	63	11	1	95	9	95	19	0	123	344
09:00 AM	15	72	16	0	103	6	33	3	0	42	18	54	9	0	81	15	104	19	0	138	364
Total Volume	61	205	61	0	327	8	161	19	0	188	77	230	39	1	347	46	407	76	0	529	1391
% App. Total	18.7	62.7	18.7	0		4.3	85.6	10.1	0		22.2	66.3	11.2	0.3		8.7	76.9	14.4	0		
PHF	.847	.712	.763	.000	.794	.333	.821	.679	.000	.855	.688	.913	.886	.250	.913	.767	.925	1.00	.000	.951	.955

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Groups Printed- Heavy Vehicles

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	0	0	0	3	0	0	0	2	1	0	1	2	0	0	10
07:45 AM	0	4	1	0	0	2	0	0	3	2	1	0	0	1	0	0	14
Total	0	5	1	0	0	5	0	0	3	4	2	0	1	3	0	0	24
08:00 AM	0	2	0	0	0	3	1	0	1	0	1	0	0	4	1	0	13
08:15 AM	0	1	1	0	0	2	0	0	1	0	1	0	1	2	1	0	10
08:30 AM	0	2	1	0	0	3	1	0	0	2	2	0	0	3	0	0	14
08:45 AM	2	0	0	0	0	3	0	0	1	5	0	0	0	4	0	0	15
Total	2	5	2	0	0	11	2	0	3	7	4	0	1	13	2	0	52
09:00 AM	2	1	2	0	0	0	0	0	1	1	0	0	0	1	0	0	8
09:15 AM	1	7	0	0	0	3	0	0	2	2	0	0	0	2	0	0	17
Grand Total	5	18	5	0	0	19	2	0	9	14	6	0	2	19	2	0	101
Apprch %	17.9	64.3	17.9	0	0	90.5	9.5	0	31	48.3	20.7	0	8.7	82.6	8.7	0	
Total %	5	17.8	5	0	0	18.8	2	0	8.9	13.9	5.9	0	2	18.8	2	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	2	1	0	3	0	3	1	0	4	0	2	2	0	4	0	3	0	0	3	14
08:45 AM	2	0	0	0	2	0	3	0	0	3	1	5	0	0	6	0	4	0	0	4	15
09:00 AM	2	1	2	0	5	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	8
09:15 AM	1	7	0	0	8	0	3	0	0	3	2	2	0	0	4	0	2	0	0	2	17
Total Volume	5	10	3	0	18	0	9	1	0	10	4	10	2	0	16	0	10	0	0	10	54
% App. Total	27.8	55.6	16.7	0		0	90	10	0		25	62.5	12.5	0		0	100	0	0		
PHF	.625	.357	.375	.000	.563	.000	.750	.250	.000	.625	.500	.500	.250	.000	.667	.000	.625	.000	.000	.625	.794

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Groups Printed- Buses

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	1	0	0	0	2	3	0	0	3	1	0	0	2	1	0	13
07:45 AM	0	0	0	0	0	2	2	0	0	2	0	0	0	2	0	0	8
Total	0	1	0	0	0	4	5	0	0	5	1	0	0	4	1	0	21
08:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	2	2	0	0	1	0	0	0	4	2	0	11
08:30 AM	0	0	0	0	0	3	2	0	0	1	0	0	0	0	1	0	7
08:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	5	7	0	0	2	0	0	0	5	3	0	22
09:00 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	1	0	0	5
09:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	4
Grand Total	0	1	0	0	0	11	15	0	0	8	1	0	0	11	5	0	52
Apprch %	0	100	0	0	0	42.3	57.7	0	0	88.9	11.1	0	0	68.8	31.2	0	
Total %	0	1.9	0	0	0	21.2	28.8	0	0	15.4	1.9	0	0	21.2	9.6	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	1	0	0	1	0	2	3	0	5	0	3	1	0	4	0	2	1	0	3	13
07:45 AM	0	0	0	0	0	0	2	2	0	4	0	2	0	0	2	0	2	0	0	2	8
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	2	2	0	4	0	1	0	0	1	0	4	2	0	6	11
Total Volume	0	1	0	0	1	0	6	8	0	14	0	6	1	0	7	0	8	3	0	11	33
% App. Total	0	100	0	0		0	42.9	57.1	0		0	85.7	14.3	0		0	72.7	27.3	0		
PHF	.000	.250	.000	.000	.250	.000	.750	.667	.000	.700	.000	.500	.250	.000	.438	.000	.500	.375	.000	.458	.635

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	4	2	8	10	0	1	0	7	5	1	1	0	9	6	0	5	3	4	9	75
07:45 AM	1	7	0	20	7	0	3	1	9	9	0	4	0	15	4	0	6	0	10	4	100
Total	1	11	2	28	17	0	4	1	16	14	1	5	0	24	10	0	11	3	14	13	175
08:00 AM	1	7	2	20	8	0	0	0	9	7	2	1	1	11	6	0	14	0	13	13	115
08:15 AM	0	7	4	15	17	0	3	0	9	14	1	4	2	14	8	0	15	0	8	13	134
08:30 AM	1	11	3	11	8	0	3	0	18	11	3	7	1	17	20	0	13	0	13	17	157
08:45 AM	0	16	4	21	15	0	0	0	14	14	4	8	0	21	21	0	14	0	11	18	181
Total	2	41	13	67	48	0	6	0	50	46	10	20	4	63	55	0	56	0	45	61	587
09:00 AM	0	10	2	13	6	0	3	1	14	7	7	8	0	12	19	1	6	0	11	15	135
09:15 AM	1	12	3	19	13	0	3	0	19	9	1	5	0	12	13	3	13	2	7	20	155
Grand Total	4	74	20	127	84	0	16	2	99	76	19	38	4	111	97	4	86	5	77	109	1052
Apprch %	1.3	23.9	6.5	41.1	27.2	0	8.3	1	51.3	39.4	7.1	14.1	1.5	41.3	36.1	1.4	30.6	1.8	27.4	38.8	
Total %	0.4	7	1.9	12.1	8	0	1.5	0.2	9.4	7.2	1.8	3.6	0.4	10.6	9.2	0.4	8.2	0.5	7.3	10.4	

	Portland Street From North						Broadway From East						Portland Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:30 AM																									
08:30 AM	1	11	3	11	8	34	0	3	0	18	11	32	3	7	1	17	20	48	0	13	0	13	17	43	157
08:45 AM	0	16	4	21	15	56	0	0	0	14	14	28	4	8	0	21	21	54	0	14	0	11	18	43	181
09:00 AM	0	10	2	13	6	31	0	3	1	14	7	25	7	8	0	12	19	46	1	6	0	11	15	33	135
09:15 AM	1	12	3	19	13	48	0	3	0	19	9	31	1	5	0	12	13	31	3	13	2	7	20	45	155
Total Volume	2	49	12	64	42	169	0	9	1	65	41	116	15	28	1	62	73	179	4	46	2	42	70	164	628
% App. Total	1.2	29	7.1	37.9	24.9		0	7.8	0.9	56	35.3		8.4	15.6	0.6	34.6	40.8		2.4	28	1.2	25.6	42.7		
PHF	.500	.766	.750	.762	.700	.754	.000	.750	.250	.855	.732	.906	.536	.875	.250	.738	.869	.829	.333	.821	.250	.808	.875	.911	.867

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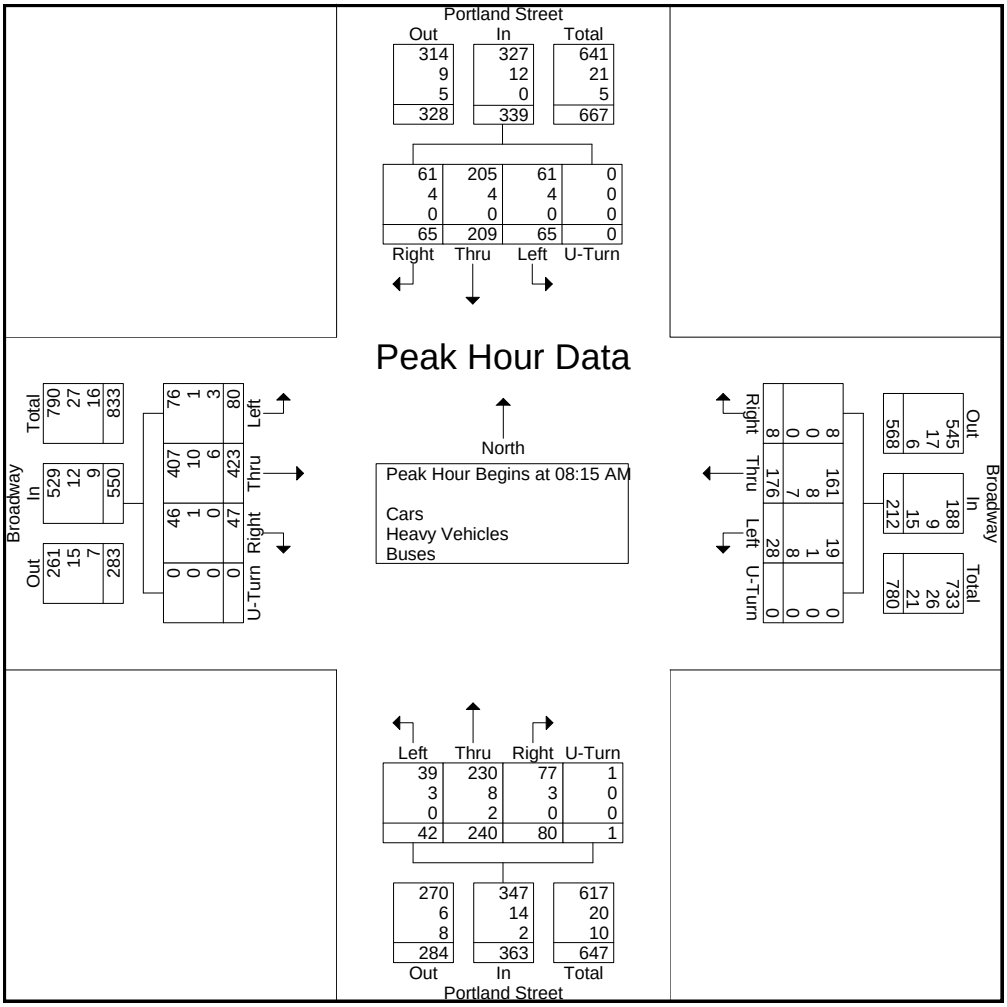
	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	14	39	21	0	74	1	47	9	0	57	29	52	9	0	90	11	116	22	0	149	370
08:30 AM	18	54	12	0	84	0	42	7	0	49	11	65	13	0	89	12	101	20	0	133	355
08:45 AM	16	43	14	0	73	1	52	7	0	60	21	68	11	1	101	9	100	19	0	128	362
09:00 AM	17	73	18	0	108	6	35	5	0	46	19	55	9	0	83	15	106	19	0	140	377
Total Volume	65	209	65	0	339	8	176	28	0	212	80	240	42	1	363	47	423	80	0	550	1464
% App. Total	19.2	61.7	19.2	0		3.8	83	13.2	0		22	66.1	11.6	0.3		8.5	76.9	14.5	0		
PHF	.903	.716	.774	.000	.785	.333	.846	.778	.000	.883	.690	.882	.808	.250	.899	.783	.912	.909	.000	.923	.971
Cars	61	205	61	0	327	8	161	19	0	188	77	230	39	1	347	46	407	76	0	529	1391
% Cars	93.8	98.1	93.8	0	96.5	100	91.5	67.9	0	88.7	96.3	95.8	92.9	100	95.6	97.9	96.2	95.0	0	96.2	95.0
Heavy Vehicles	4	4	4	0	12	0	8	1	0	9	3	8	3	0	14	1	10	1	0	12	47
% Heavy Vehicles	6.2	1.9	6.2	0	3.5	0	4.5	3.6	0	4.2	3.8	3.3	7.1	0	3.9	2.1	2.4	1.3	0	2.2	3.2
Buses	0	0	0	0	0	0	7	8	0	15	0	2	0	0	2	0	6	3	0	9	26
% Buses	0	0	0	0	0	0	4.0	28.6	0	7.1	0	0.8	0	0	0.6	0	1.4	3.8	0	1.6	1.8



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Groups Printed- Cars - Heavy Vehicles - Buses

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	10	52	4	0	3	113	9	0	16	91	14	0	3	50	9	0	374
04:45 PM	22	31	2	0	6	99	7	0	8	93	18	0	2	52	16	0	356
Total	32	83	6	0	9	212	16	0	24	184	32	0	5	102	25	0	730
05:00 PM	14	43	5	0	2	100	3	0	13	98	19	0	10	65	18	0	390
05:15 PM	20	49	2	0	4	113	6	0	17	88	16	0	2	57	13	0	387
05:30 PM	13	56	4	0	7	88	9	0	11	92	22	0	2	46	14	0	364
05:45 PM	17	43	2	0	4	90	2	0	9	84	10	0	5	50	13	0	329
Total	64	191	13	0	17	391	20	0	50	362	67	0	19	218	58	0	1470
06:00 PM	13	25	2	0	2	86	7	0	9	68	15	0	6	44	7	0	284
06:15 PM	13	30	4	0	1	78	3	0	11	66	5	0	1	58	12	0	282
Grand Total	122	329	25	0	29	767	46	0	94	680	119	0	31	422	102	0	2766
Apprch %	25.6	69.1	5.3	0	3.4	91.1	5.5	0	10.5	76.1	13.3	0	5.6	76	18.4	0	
Total %	4.4	11.9	0.9	0	1	27.7	1.7	0	3.4	24.6	4.3	0	1.1	15.3	3.7	0	
Cars	121	327	25	0	29	748	45	0	88	667	117	0	29	407	101	0	2704
% Cars	99.2	99.4	100	0	100	97.5	97.8	0	93.6	98.1	98.3	0	93.5	96.4	99	0	97.8
Heavy Vehicles	0	1	0	0	0	8	1	0	5	11	2	0	2	6	0	0	36
% Heavy Vehicles	0	0.3	0	0	0	1	2.2	0	5.3	1.6	1.7	0	6.5	1.4	0	0	1.3
Buses	1	1	0	0	0	11	0	0	1	2	0	0	0	9	1	0	26
% Buses	0.8	0.3	0	0	0	1.4	0	0	1.1	0.3	0	0	0	2.1	1	0	0.9

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	10	52	4	0	66	3	113	9	0	125	16	91	14	0	121	3	50	9	0	62	374
04:45 PM	22	31	2	0	55	6	99	7	0	112	8	93	18	0	119	2	52	16	0	70	356
05:00 PM	14	43	5	0	62	2	100	3	0	105	13	98	19	0	130	10	65	18	0	93	390
05:15 PM	20	49	2	0	71	4	113	6	0	123	17	88	16	0	121	2	57	13	0	72	387
Total Volume	66	175	13	0	254	15	425	25	0	465	54	370	67	0	491	17	224	56	0	297	1507
% App. Total	26	68.9	5.1	0		3.2	91.4	5.4	0		11	75.4	13.6	0		5.7	75.4	18.9	0		
PHF	.750	.841	.650	.000	.894	.625	.940	.694	.000	.930	.794	.944	.882	.000	.944	.425	.862	.778	.000	.798	.966
Cars	65	174	13	0	252	15	415	24	0	454	50	363	65	0	478	16	216	55	0	287	1471
% Cars	98.5	99.4	100	0	99.2	100	97.6	96.0	0	97.6	92.6	98.1	97.0	0	97.4	94.1	96.4	98.2	0	96.6	97.6
Heavy Vehicles	0	1	0	0	1	0	4	1	0	5	4	6	2	0	12	1	4	0	0	5	23
% Heavy Vehicles	0	0.6	0	0	0.4	0	0.9	4.0	0	1.1	7.4	1.6	3.0	0	2.4	5.9	1.8	0	0	1.7	1.5
Buses	1	0	0	0	1	0	6	0	0	6	0	1	0	0	1	0	4	1	0	5	13
% Buses	1.5	0	0	0	0.4	0	1.4	0	0	1.3	0	0.3	0	0	0.2	0	1.8	1.8	0	1.7	0.9

N/S: Portland Street
E/W: Broadway
City, State: Cambridge, MA
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Groups Printed- Cars

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	9	51	4	0	3	108	8	0	14	89	14	0	3	50	9	0	362
04:45 PM	22	31	2	0	6	97	7	0	6	90	16	0	1	49	16	0	343
Total	31	82	6	0	9	205	15	0	20	179	30	0	4	99	25	0	705
05:00 PM	14	43	5	0	2	98	3	0	13	97	19	0	10	63	17	0	384
05:15 PM	20	49	2	0	4	112	6	0	17	87	16	0	2	54	13	0	382
05:30 PM	13	56	4	0	7	87	9	0	11	89	22	0	2	45	14	0	359
05:45 PM	17	43	2	0	4	88	2	0	9	84	10	0	4	47	13	0	323
Total	64	191	13	0	17	385	20	0	50	357	67	0	18	209	57	0	1448
06:00 PM	13	25	2	0	2	82	7	0	7	66	15	0	6	42	7	0	274
06:15 PM	13	29	4	0	1	76	3	0	11	65	5	0	1	57	12	0	277
Grand Total	121	327	25	0	29	748	45	0	88	667	117	0	29	407	101	0	2704
Apprch %	25.6	69.1	5.3	0	3.5	91	5.5	0	10.1	76.5	13.4	0	5.4	75.8	18.8	0	
Total %	4.5	12.1	0.9	0	1.1	27.7	1.7	0	3.3	24.7	4.3	0	1.1	15.1	3.7	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	9	51	4	0	64	3	108	8	0	119	14	89	14	0	117	3	50	9	0	62	362
04:45 PM	22	31	2	0	55	6	97	7	0	110	6	90	16	0	112	1	49	16	0	66	343
05:00 PM	14	43	5	0	62	2	98	3	0	103	13	97	19	0	129	10	63	17	0	90	384
05:15 PM	20	49	2	0	71	4	112	6	0	122	17	87	16	0	120	2	54	13	0	69	382
Total Volume	65	174	13	0	252	15	415	24	0	454	50	363	65	0	478	16	216	55	0	287	1471
% App. Total	25.8	69	5.2	0		3.3	91.4	5.3	0		10.5	75.9	13.6	0		5.6	75.3	19.2	0		
PHF	.739	.853	.650	.000	.887	.625	.926	.750	.000	.930	.735	.936	.855	.000	.926	.400	.857	.809	.000	.797	.958

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Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Heavy Vehicles

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	2	1	0	2	1	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	1	0	0	2	3	2	0	1	2	0	0	11
Total	0	1	0	0	0	3	1	0	4	4	2	0	1	2	0	0	18
05:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	4
Total	0	0	0	0	0	3	0	0	0	5	0	0	1	4	0	0	13
06:00 PM	0	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0	4
06:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Grand Total	0	1	0	0	0	8	1	0	5	11	2	0	2	6	0	0	36
Apprch %	0	100	0	0	0	88.9	11.1	0	27.8	61.1	11.1	0	25	75	0	0	
Total %	0	2.8	0	0	0	22.2	2.8	0	13.9	30.6	5.6	0	5.6	16.7	0	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	1	0	0	1	0	2	1	0	3	2	1	0	0	3	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	1	0	0	1	2	3	2	0	7	1	2	0	0	3	11
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
Total Volume	0	1	0	0	1	0	4	1	0	5	4	6	2	0	12	1	4	0	0	5	23
% App. Total	0	100	0	0		0	80	20	0		33.3	50	16.7	0		20	80	0	0		
PHF	.000	.250	.000	.000	.250	.000	.500	.250	.000	.417	.500	.500	.250	.000	.429	.250	.500	.000	.000	.417	.523

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Portland Street From North				Broadway From East				Portland Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	1	0	0	0	0	4	0	0	0	1	0	0	0	1	0	0	7
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	4
05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	3	0	0	0	0	0	0	0	5	1	0	9
06:00 PM	0	0	0	0	0	2	0	0	1	1	0	0	0	2	0	0	6
06:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	4
Grand Total	1	1	0	0	0	11	0	0	1	2	0	0	0	9	1	0	26
Apprch %	50	50	0	0	0	100	0	0	33.3	66.7	0	0	0	90	10	0	
Total %	3.8	3.8	0	0	0	42.3	0	0	3.8	7.7	0	0	0	34.6	3.8	0	

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	0	0	0	1	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	4
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Total Volume	1	0	0	0	1	0	6	0	0	6	0	1	0	0	1	0	4	1	0	5	13
% App. Total	100	0	0	0		0	100	0	0		0	100	0	0		0	80	20	0		
PHF	.250	.000	.000	.000	.250	.000	.500	.000	.000	.500	.000	.250	.000	.000	.250	.000	.500	.250	.000	.417	.650

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Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Peds and Bicycles

	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	8	1	7	6	0	9	0	7	17	0	5	1	7	27	2	2	1	14	13	127
04:45 PM	0	5	1	15	10	0	14	0	5	20	0	10	1	12	16	0	3	0	22	12	146
Total	0	13	2	22	16	0	23	0	12	37	0	15	2	19	43	2	5	1	36	25	273
05:00 PM	0	4	0	11	9	0	18	1	9	20	1	7	0	27	20	0	4	0	8	21	160
05:15 PM	5	3	1	21	11	0	26	0	12	12	0	13	3	18	17	2	5	0	12	20	181
05:30 PM	2	7	0	11	10	1	26	1	5	27	0	12	4	29	19	0	3	0	19	9	185
05:45 PM	2	2	0	12	9	1	24	0	10	15	0	6	2	24	18	0	6	0	8	26	165
Total	9	16	1	55	39	2	94	2	36	74	1	38	9	98	74	2	18	0	47	76	691
06:00 PM	0	2	0	11	7	0	23	0	12	13	0	9	2	18	16	1	2	0	12	16	144
06:15 PM	1	4	0	15	9	0	20	1	8	16	0	7	0	23	16	0	5	0	16	10	151
Grand Total	10	35	3	103	71	2	160	3	68	140	1	69	13	158	149	5	30	1	111	127	1259
Apprch %	4.5	15.8	1.4	46.4	32	0.5	42.9	0.8	18.2	37.5	0.3	17.7	3.3	40.5	38.2	1.8	10.9	0.4	40.5	46.4	
Total %	0.8	2.8	0.2	8.2	5.6	0.2	12.7	0.2	5.4	11.1	0.1	5.5	1	12.5	11.8	0.4	2.4	0.1	8.8	10.1	

	Portland Street From North						Broadway From East						Portland Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	4	0	11	9	24	0	18	1	9	20	48	1	7	0	27	20	55	0	4	0	8	21	33	160
05:15 PM	5	3	1	21	11	41	0	26	0	12	12	50	0	13	3	18	17	51	2	5	0	12	20	39	181
05:30 PM	2	7	0	11	10	30	1	26	1	5	27	60	0	12	4	29	19	64	0	3	0	19	9	31	185
05:45 PM	2	2	0	12	9	25	1	24	0	10	15	50	0	6	2	24	18	50	0	6	0	8	26	40	165
Total Volume	9	16	1	55	39	120	2	94	2	36	74	208	1	38	9	98	74	220	2	18	0	47	76	143	691
% App. Total	7.5	13.3	0.8	45.8	32.5		1	45.2	1	17.3	35.6		0.5	17.3	4.1	44.5	33.6		1.4	12.6	0	32.9	53.1		
PHF	.450	.571	.250	.655	.886	.732	.500	.904	.500	.750	.685	.867	.250	.731	.563	.845	.925	.859	.250	.750	.000	.618	.731	.894	.934

N/S: Portland Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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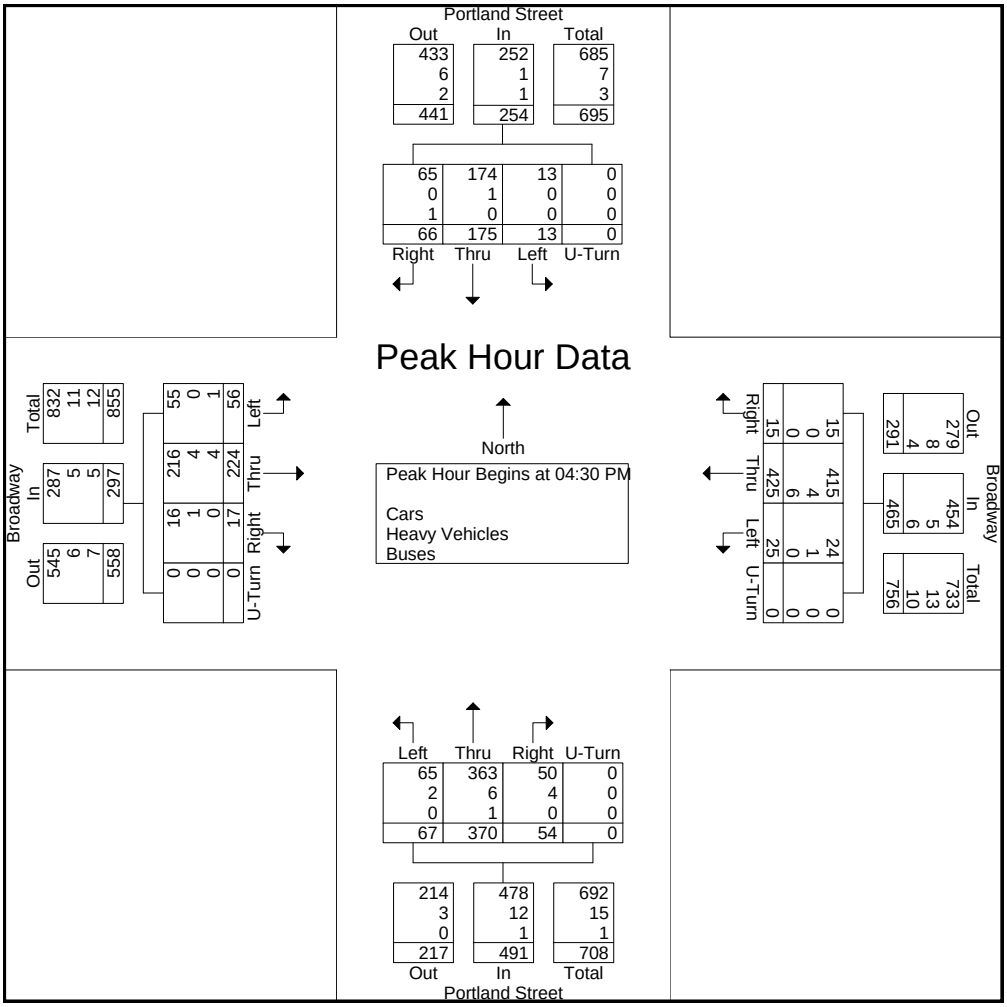
	Portland Street From North					Broadway From East					Portland Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	10	52	4	0	66	3	113	9	0	125	16	91	14	0	121	3	50	9	0	62	374
04:45 PM	22	31	2	0	55	6	99	7	0	112	8	93	18	0	119	2	52	16	0	70	356
05:00 PM	14	43	5	0	62	2	100	3	0	105	13	98	19	0	130	10	65	18	0	93	390
05:15 PM	20	49	2	0	71	4	113	6	0	123	17	88	16	0	121	2	57	13	0	72	387
Total Volume	66	175	13	0	254	15	425	25	0	465	54	370	67	0	491	17	224	56	0	297	1507
% App. Total	26	68.9	5.1	0		3.2	91.4	5.4	0		11	75.4	13.6	0		5.7	75.4	18.9	0		
PHF	.750	.841	.650	.000	.894	.625	.940	.694	.000	.930	.794	.944	.882	.000	.944	.425	.862	.778	.000	.798	.966
Cars	65	174	13	0	252	15	415	24	0	454	50	363	65	0	478	16	216	55	0	287	1471
% Cars	98.5	99.4	100	0	99.2	100	97.6	96.0	0	97.6	92.6	98.1	97.0	0	97.4	94.1	96.4	98.2	0	96.6	97.6
Heavy Vehicles	0	1	0	0	1	0	4	1	0	5	4	6	2	0	12	1	4	0	0	5	23
% Heavy Vehicles	0	0.6	0	0	0.4	0	0.9	4.0	0	1.1	7.4	1.6	3.0	0	2.4	5.9	1.8	0	0	1.7	1.5
Buses	1	0	0	0	1	0	6	0	0	6	0	1	0	0	1	0	4	1	0	5	13
% Buses	1.5	0	0	0	0.4	0	1.4	0	0	1.3	0	0.3	0	0	0.2	0	1.8	1.8	0	1.7	0.9



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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars - Heavy Vehicles - Buses

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	10	47	0	32	63	32	0	4	1	1	0	26	68	0	0	285
07:45 AM	1	15	56	0	59	66	33	1	3	2	2	0	33	78	0	0	349
Total	2	25	103	0	91	129	65	1	7	3	3	0	59	146	0	0	634
08:00 AM	1	11	56	0	48	62	34	0	2	2	2	0	34	98	0	0	350
08:15 AM	0	6	72	0	58	58	39	0	7	2	1	0	33	130	3	0	409
08:30 AM	0	15	68	0	29	49	41	0	6	3	0	0	24	104	1	0	340
08:45 AM	2	13	63	0	47	57	26	0	0	2	0	0	40	100	0	0	350
Total	3	45	259	0	182	226	140	0	15	9	3	0	131	432	4	0	1449
09:00 AM	2	11	56	0	55	40	26	0	3	2	3	0	22	102	2	0	324
09:15 AM	4	8	64	0	52	51	24	0	7	3	0	0	25	75	3	0	316
Grand Total	11	89	482	0	380	446	255	1	32	17	9	0	237	755	9	0	2723
Apprch %	1.9	15.3	82.8	0	35.1	41.2	23.6	0.1	55.2	29.3	15.5	0	23.7	75.4	0.9	0	
Total %	0.4	3.3	17.7	0	14	16.4	9.4	0	1.2	0.6	0.3	0	8.7	27.7	0.3	0	
Cars	10	89	452	0	329	397	249	1	28	14	9	0	231	720	9	0	2538
% Cars	90.9	100	93.8	0	86.6	89	97.6	100	87.5	82.4	100	0	97.5	95.4	100	0	93.2
Heavy Vehicles	1	0	15	0	32	21	6	0	4	3	0	0	6	24	0	0	112
% Heavy Vehicles	9.1	0	3.1	0	8.4	4.7	2.4	0	12.5	17.6	0	0	2.5	3.2	0	0	4.1
Buses	0	0	15	0	19	28	0	0	0	0	0	0	0	11	0	0	73
% Buses	0	0	3.1	0	5	6.3	0	0	0	0	0	0	0	1.5	0	0	2.7

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	1	11	56	0	68	48	62	34	0	144	2	2	2	0	6	34	98	0	0	132	350
08:15 AM	0	6	72	0	78	58	58	39	0	155	7	2	1	0	10	33	130	3	0	166	409
08:30 AM	0	15	68	0	83	29	49	41	0	119	6	3	0	0	9	24	104	1	0	129	340
08:45 AM	2	13	63	0	78	47	57	26	0	130	0	2	0	0	2	40	100	0	0	140	350
Total Volume	3	45	259	0	307	182	226	140	0	548	15	9	3	0	27	131	432	4	0	567	1449
% App. Total	1	14.7	84.4	0		33.2	41.2	25.5	0		55.6	33.3	11.1	0		23.1	76.2	0.7	0		
PHF	.375	.750	.899	.000	.925	.784	.911	.854	.000	.884	.536	.750	.375	.000	.675	.819	.831	.333	.000	.854	.886
Cars	3	45	241	0	289	162	198	138	0	498	15	9	3	0	27	128	413	4	0	545	1359
% Cars	100	100	93.1	0	94.1	89.0	87.6	98.6	0	90.9	100	100	100	0	100	97.7	95.6	100	0	96.1	93.8
Heavy Vehicles	0	0	11	0	11	11	14	2	0	27	0	0	0	0	0	3	14	0	0	17	55
% Heavy Vehicles	0	0	4.2	0	3.6	6.0	6.2	1.4	0	4.9	0	0	0	0	0	2.3	3.2	0	0	3.0	3.8
Buses	0	0	7	0	7	9	14	0	0	23	0	0	0	0	0	0	5	0	0	5	35
% Buses	0	0	2.7	0	2.3	4.9	6.2	0	0	4.2	0	0	0	0	0	0	1.2	0	0	0.9	2.4

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 L
Site Code : TBA
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Page No : 1

Groups Printed- Cars

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	10	44	0	27	55	30	0	2	1	1	0	26	65	0	0	262
07:45 AM	1	15	54	0	49	60	33	1	2	1	2	0	31	72	0	0	321
Total	2	25	98	0	76	115	63	1	4	2	3	0	57	137	0	0	583
08:00 AM	1	11	51	0	47	56	33	0	2	2	2	0	33	95	0	0	333
08:15 AM	0	6	67	0	50	50	39	0	7	2	1	0	33	122	3	0	380
08:30 AM	0	15	65	0	24	40	40	0	6	3	0	0	22	101	1	0	317
08:45 AM	2	13	58	0	41	52	26	0	0	2	0	0	40	95	0	0	329
Total	3	45	241	0	162	198	138	0	15	9	3	0	128	413	4	0	1359
09:00 AM	2	11	51	0	45	36	24	0	3	1	3	0	21	99	2	0	298
09:15 AM	3	8	62	0	46	48	24	0	6	2	0	0	25	71	3	0	298
Grand Total	10	89	452	0	329	397	249	1	28	14	9	0	231	720	9	0	2538
Apprch %	1.8	16.2	82	0	33.7	40.7	25.5	0.1	54.9	27.5	17.6	0	24.1	75	0.9	0	
Total %	0.4	3.5	17.8	0	13	15.6	9.8	0	1.1	0.6	0.4	0	9.1	28.4	0.4	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	11	51	0	63	47	56	33	0	136	2	2	2	0	6	33	95	0	0	128	333
08:15 AM	0	6	67	0	73	50	50	39	0	139	7	2	1	0	10	33	122	3	0	158	380
08:30 AM	0	15	65	0	80	24	40	40	0	104	6	3	0	0	9	22	101	1	0	124	317
08:45 AM	2	13	58	0	73	41	52	26	0	119	0	2	0	0	2	40	95	0	0	135	329
Total Volume	3	45	241	0	289	162	198	138	0	498	15	9	3	0	27	128	413	4	0	545	1359
% App. Total	1	15.6	83.4	0		32.5	39.8	27.7	0		55.6	33.3	11.1	0		23.5	75.8	0.7	0		
PHF	.375	.750	.899	.000	.903	.810	.884	.863	.000	.896	.536	.750	.375	.000	.675	.800	.846	.333	.000	.862	.894

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Groups Printed- Heavy Vehicles

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	1	0	3	3	2	0	2	0	0	0	0	1	0	0	12
07:45 AM	0	0	0	0	7	2	0	0	1	1	0	0	2	4	0	0	17
Total	0	0	1	0	10	5	2	0	3	1	0	0	2	5	0	0	29
08:00 AM	0	0	4	0	0	3	1	0	0	0	0	0	1	3	0	0	12
08:15 AM	0	0	3	0	3	4	0	0	0	0	0	0	0	4	0	0	14
08:30 AM	0	0	1	0	3	4	1	0	0	0	0	0	2	3	0	0	14
08:45 AM	0	0	3	0	5	3	0	0	0	0	0	0	0	4	0	0	15
Total	0	0	11	0	11	14	2	0	0	0	0	0	3	14	0	0	55
09:00 AM	0	0	2	0	7	0	2	0	0	1	0	0	1	2	0	0	15
09:15 AM	1	0	1	0	4	2	0	0	1	1	0	0	0	3	0	0	13
Grand Total	1	0	15	0	32	21	6	0	4	3	0	0	6	24	0	0	112
Apprch %	6.2	0	93.8	0	54.2	35.6	10.2	0	57.1	42.9	0	0	20	80	0	0	
Total %	0.9	0	13.4	0	28.6	18.8	5.4	0	3.6	2.7	0	0	5.4	21.4	0	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	3	0	3	3	4	0	0	7	0	0	0	0	0	0	4	0	0	4	14
08:30 AM	0	0	1	0	1	3	4	1	0	8	0	0	0	0	0	2	3	0	0	5	14
08:45 AM	0	0	3	0	3	5	3	0	0	8	0	0	0	0	0	0	4	0	0	4	15
09:00 AM	0	0	2	0	2	7	0	2	0	9	0	1	0	0	1	1	2	0	0	3	15
Total Volume	0	0	9	0	9	18	11	3	0	32	0	1	0	0	1	3	13	0	0	16	58
% App. Total	0	0	100	0		56.2	34.4	9.4	0		0	100	0	0		18.8	81.2	0	0		
PHF	.000	.000	.750	.000	.750	.643	.688	.375	.000	.889	.000	.250	.000	.000	.250	.375	.813	.000	.000	.800	.967

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Groups Printed- Buses

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	2	0	2	5	0	0	0	0	0	0	0	2	0	0	11
07:45 AM	0	0	2	0	3	4	0	0	0	0	0	0	0	2	0	0	11
Total	0	0	4	0	5	9	0	0	0	0	0	0	0	4	0	0	22
08:00 AM	0	0	1	0	1	3	0	0	0	0	0	0	0	0	0	0	5
08:15 AM	0	0	2	0	5	4	0	0	0	0	0	0	0	4	0	0	15
08:30 AM	0	0	2	0	2	5	0	0	0	0	0	0	0	0	0	0	9
08:45 AM	0	0	2	0	1	2	0	0	0	0	0	0	0	1	0	0	6
Total	0	0	7	0	9	14	0	0	0	0	0	0	0	5	0	0	35
09:00 AM	0	0	3	0	3	4	0	0	0	0	0	0	0	1	0	0	11
09:15 AM	0	0	1	0	2	1	0	0	0	0	0	0	0	1	0	0	5
Grand Total	0	0	15	0	19	28	0	0	0	0	0	0	0	11	0	0	73
Apprch %	0	0	100	0	40.4	59.6	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	20.5	0	26	38.4	0	0	0	0	0	0	0	15.1	0	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	2	0	2	2	5	0	0	7	0	0	0	0	0	0	2	0	0	2	11
07:45 AM	0	0	2	0	2	3	4	0	0	7	0	0	0	0	0	0	2	0	0	2	11
08:00 AM	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	5
08:15 AM	0	0	2	0	2	5	4	0	0	9	0	0	0	0	0	0	4	0	0	4	15
Total Volume	0	0	7	0	7	11	16	0	0	27	0	0	0	0	0	0	8	0	0	8	42
% App. Total	0	0	100	0		40.7	59.3	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.875	.000	.875	.550	.800	.000	.000	.750	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.700

N/S: Hampshire Street
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Groups Printed- Peds and Bicycles

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	4	37	2	6	3	1	0	3	10	0	0	0	8	12	0	9	1	2	7	105
07:45 AM	0	6	43	10	4	4	4	0	4	15	1	3	0	18	11	1	5	1	8	7	145
Total	0	10	80	12	10	7	5	0	7	25	1	3	0	26	23	1	14	2	10	14	250
08:00 AM	0	5	62	11	4	2	1	0	10	14	0	0	0	12	9	0	22	0	1	9	162
08:15 AM	0	5	83	11	6	3	4	1	10	20	0	0	0	14	20	4	15	0	3	9	208
08:30 AM	0	2	99	13	4	1	3	0	13	21	2	0	0	13	11	1	24	0	2	6	215
08:45 AM	0	5	98	24	2	4	0	1	15	24	0	0	0	18	26	0	24	0	9	15	265
Total	0	17	342	59	16	10	8	2	48	79	2	0	0	57	66	5	85	0	15	39	850
09:00 AM	0	8	73	12	2	5	6	1	19	10	0	0	0	10	19	0	35	0	5	6	211
09:15 AM	0	9	75	13	3	8	3	0	10	19	0	2	0	12	24	0	24	0	5	5	212
Grand Total	0	44	570	96	31	30	22	3	84	133	3	5	0	105	132	6	158	2	35	64	1523
Apprch %	0	5.9	76.9	13	4.2	11	8.1	1.1	30.9	48.9	1.2	2	0	42.9	53.9	2.3	59.6	0.8	13.2	24.2	
Total %	0	2.9	37.4	6.3	2	2	1.4	0.2	5.5	8.7	0.2	0.3	0	6.9	8.7	0.4	10.4	0.1	2.3	4.2	

	Hampshire Street From North						Broadway From East						Hampshire Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:30 AM																									
08:30 AM	0	2	99	13	4	118	1	3	0	13	21	38	2	0	0	13	11	26	1	24	0	2	6	33	215
08:45 AM	0	5	98	24	2	129	4	0	1	15	24	44	0	0	0	18	26	44	0	24	0	9	15	48	265
09:00 AM	0	8	73	12	2	95	5	6	1	19	10	41	0	0	0	10	19	29	0	35	0	5	6	46	211
09:15 AM	0	9	75	13	3	100	8	3	0	10	19	40	0	2	0	12	24	38	0	24	0	5	5	34	212
Total Volume	0	24	345	62	11	442	18	12	2	57	74	163	2	2	0	53	80	137	1	107	0	21	32	161	903
% App. Total	0	5.4	78.1	14	2.5		11	7.4	1.2	35	45.4		1.5	1.5	0	38.7	58.4		0.6	66.5	0	13	19.9		
PHF	.000	.667	.871	.646	.688	.857	.563	.500	.500	.750	.771	.926	.250	.250	.000	.736	.769	.778	.250	.764	.000	.583	.533	.839	.852

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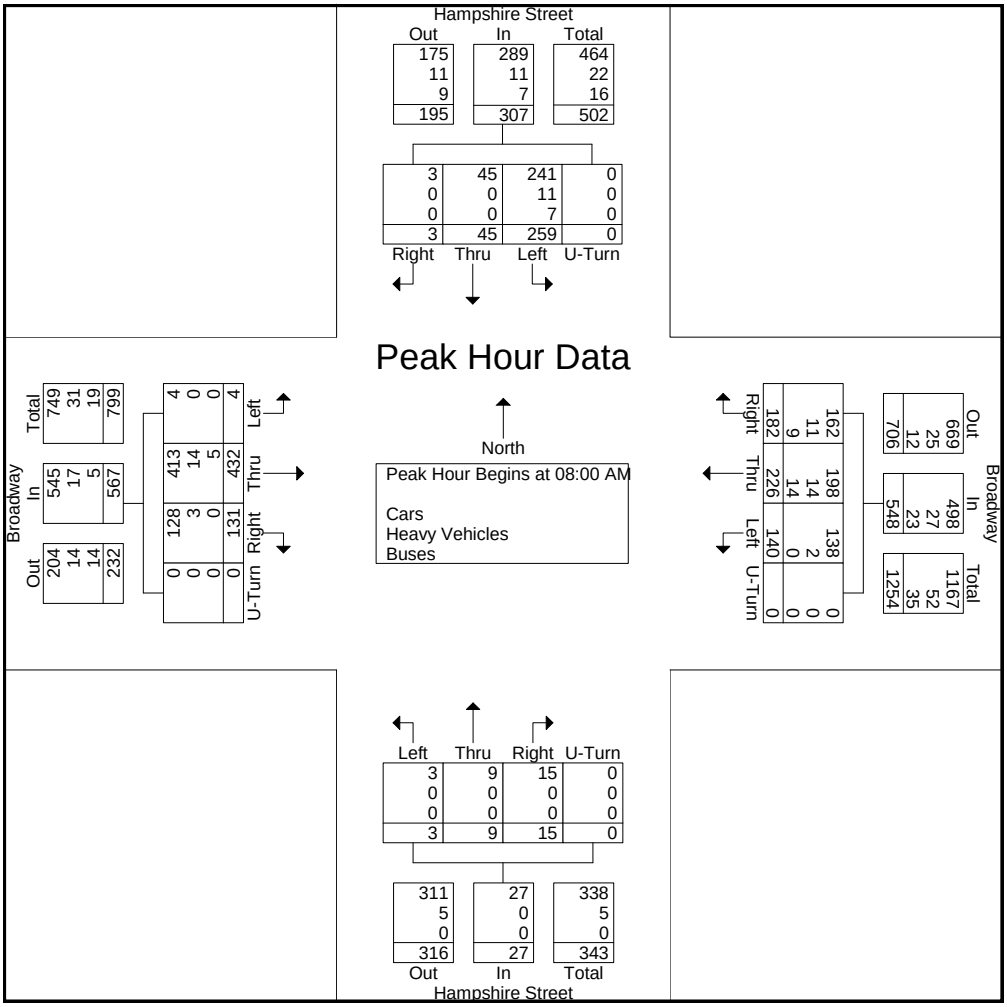
	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	11	56	0	68	48	62	34	0	144	2	2	2	0	6	34	98	0	0	132	350
08:15 AM	0	6	72	0	78	58	58	39	0	155	7	2	1	0	10	33	130	3	0	166	409
08:30 AM	0	15	68	0	83	29	49	41	0	119	6	3	0	0	9	24	104	1	0	129	340
08:45 AM	2	13	63	0	78	47	57	26	0	130	0	2	0	0	2	40	100	0	0	140	350
Total Volume	3	45	259	0	307	182	226	140	0	548	15	9	3	0	27	131	432	4	0	567	1449
% App. Total	1	14.7	84.4	0		33.2	41.2	25.5	0		55.6	33.3	11.1	0		23.1	76.2	0.7	0		
PHF	.375	.750	.899	.000	.925	.784	.911	.854	.000	.884	.536	.750	.375	.000	.675	.819	.831	.333	.000	.854	.886
Cars	3	45	241	0	289	162	198	138	0	498	15	9	3	0	27	128	413	4	0	545	1359
% Cars	100	100	93.1	0	94.1	89.0	87.6	98.6	0	90.9	100	100	100	0	100	97.7	95.6	100	0	96.1	93.8
Heavy Vehicles	0	0	11	0	11	11	14	2	0	27	0	0	0	0	0	3	14	0	0	17	55
% Heavy Vehicles	0	0	4.2	0	3.6	6.0	6.2	1.4	0	4.9	0	0	0	0	0	2.3	3.2	0	0	3.0	3.8
Buses	0	0	7	0	7	9	14	0	0	23	0	0	0	0	0	0	5	0	0	5	35
% Buses	0	0	2.7	0	2.3	4.9	6.2	0	0	4.2	0	0	0	0	0	0	1.2	0	0	0.9	2.4



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Groups Printed- Cars - Heavy Vehicles - Buses

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	5	47	0	66	99	3	0	1	25	22	0	5	66	1	0	341
04:45 PM	5	1	48	0	77	85	9	0	1	22	22	0	5	55	3	0	333
Total	6	6	95	0	143	184	12	0	2	47	44	0	10	121	4	0	674
05:00 PM	5	2	47	0	84	89	5	0	0	34	13	0	2	74	2	0	357
05:15 PM	0	3	57	0	83	107	6	0	1	17	15	0	3	59	1	0	352
05:30 PM	5	3	56	0	71	87	10	0	1	27	7	0	5	46	6	0	324
05:45 PM	1	3	46	0	74	80	8	0	0	21	15	0	5	52	2	0	307
Total	11	11	206	0	312	363	29	0	2	99	50	0	15	231	11	0	1340
06:00 PM	0	6	51	0	69	89	3	0	1	15	5	0	8	45	0	0	292
06:15 PM	1	2	38	0	73	74	4	0	0	21	10	0	6	70	0	0	299
Grand Total	18	25	390	0	597	710	48	0	5	182	109	0	39	467	15	0	2605
Apprch %	4.2	5.8	90.1	0	44.1	52.4	3.5	0	1.7	61.5	36.8	0	7.5	89.6	2.9	0	
Total %	0.7	1	15	0	22.9	27.3	1.8	0	0.2	7	4.2	0	1.5	17.9	0.6	0	
Cars	18	25	366	0	583	696	47	0	5	180	109	0	36	453	14	0	2532
% Cars	100	100	93.8	0	97.7	98	97.9	0	100	98.9	100	0	92.3	97	93.3	0	97.2
Heavy Vehicles	0	0	7	0	6	8	1	0	0	1	0	0	2	6	1	0	32
% Heavy Vehicles	0	0	1.8	0	1	1.1	2.1	0	0	0.5	0	0	5.1	1.3	6.7	0	1.2
Buses	0	0	17	0	8	6	0	0	0	1	0	0	1	8	0	0	41
% Buses	0	0	4.4	0	1.3	0.8	0	0	0	0.5	0	0	2.6	1.7	0	0	1.6

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	5	47	0	53	66	99	3	0	168	1	25	22	0	48	5	66	1	0	72	341
04:45 PM	5	1	48	0	54	77	85	9	0	171	1	22	22	0	45	5	55	3	0	63	333
05:00 PM	5	2	47	0	54	84	89	5	0	178	0	34	13	0	47	2	74	2	0	78	357
05:15 PM	0	3	57	0	60	83	107	6	0	196	1	17	15	0	33	3	59	1	0	63	352
Total Volume	11	11	199	0	221	310	380	23	0	713	3	98	72	0	173	15	254	7	0	276	1383
% App. Total	5	5	90	0		43.5	53.3	3.2	0		1.7	56.6	41.6	0		5.4	92	2.5	0		
PHF	.550	.550	.873	.000	.921	.923	.888	.639	.000	.909	.750	.721	.818	.000	.901	.750	.858	.583	.000	.885	.968
Cars	11	11	187	0	209	299	370	23	0	692	3	98	72	0	173	14	246	6	0	266	1340
% Cars	100	100	94.0	0	94.6	96.5	97.4	100	0	97.1	100	100	100	0	100	93.3	96.9	85.7	0	96.4	96.9
Heavy Vehicles	0	0	3	0	3	3	4	0	0	7	0	0	0	0	0	1	4	1	0	6	16
% Heavy Vehicles	0	0	1.5	0	1.4	1.0	1.1	0	0	1.0	0	0	0	0	0	6.7	1.6	14.3	0	2.2	1.2
Buses	0	0	9	0	9	8	6	0	0	14	0	0	0	0	0	0	4	0	0	4	27
% Buses	0	0	4.5	0	4.1	2.6	1.6	0	0	2.0	0	0	0	0	0	0	1.6	0	0	1.4	2.0

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 LL
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	5	44	0	64	92	3	0	1	25	22	0	5	65	1	0	328
04:45 PM	5	1	44	0	74	85	9	0	1	22	22	0	5	51	3	0	322
Total	6	6	88	0	138	177	12	0	2	47	44	0	10	116	4	0	650
05:00 PM	5	2	45	0	81	87	5	0	0	34	13	0	2	72	2	0	348
05:15 PM	0	3	54	0	80	106	6	0	1	17	15	0	2	58	0	0	342
05:30 PM	5	3	50	0	71	87	10	0	1	27	7	0	5	45	6	0	317
05:45 PM	1	3	44	0	74	78	8	0	0	21	15	0	5	49	2	0	300
Total	11	11	193	0	306	358	29	0	2	99	50	0	14	224	10	0	1307
06:00 PM	0	6	49	0	68	87	3	0	1	13	5	0	6	44	0	0	282
06:15 PM	1	2	36	0	71	74	3	0	0	21	10	0	6	69	0	0	293
Grand Total	18	25	366	0	583	696	47	0	5	180	109	0	36	453	14	0	2532
Apprch %	4.4	6.1	89.5	0	44	52.5	3.5	0	1.7	61.2	37.1	0	7.2	90.1	2.8	0	
Total %	0.7	1	14.5	0	23	27.5	1.9	0	0.2	7.1	4.3	0	1.4	17.9	0.6	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	5	44	0	50	64	92	3	0	159	1	25	22	0	48	5	65	1	0	71	328
04:45 PM	5	1	44	0	50	74	85	9	0	168	1	22	22	0	45	5	51	3	0	59	322
05:00 PM	5	2	45	0	52	81	87	5	0	173	0	34	13	0	47	2	72	2	0	76	348
05:15 PM	0	3	54	0	57	80	106	6	0	192	1	17	15	0	33	2	58	0	0	60	342
Total Volume	11	11	187	0	209	299	370	23	0	692	3	98	72	0	173	14	246	6	0	266	1340
% App. Total	5.3	5.3	89.5	0		43.2	53.5	3.3	0		1.7	56.6	41.6	0		5.3	92.5	2.3	0		
PHF	.550	.550	.866	.000	.917	.923	.873	.639	.000	.901	.750	.721	.818	.000	.901	.700	.854	.500	.000	.875	.963

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Groups Printed- Heavy Vehicles

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
04:45 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	3	0	0	6
Total	0	0	2	0	1	3	0	0	0	0	0	0	0	4	0	0	10
05:00 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	3
05:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	4
05:45 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	1	0	0	4
Total	0	0	5	0	2	3	0	0	0	0	0	0	1	2	1	0	14
06:00 PM	0	0	0	0	1	2	0	0	0	1	0	0	1	0	0	0	5
06:15 PM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	7	0	6	8	1	0	0	1	0	0	2	6	1	0	32
Apprch %	0	0	100	0	40	53.3	6.7	0	0	100	0	0	22.2	66.7	11.1	0	
Total %	0	0	21.9	0	18.8	25	3.1	0	0	3.1	0	0	6.2	18.8	3.1	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
04:45 PM	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	6
05:00 PM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3
Total Volume	0	0	3	0	3	3	4	0	0	7	0	0	0	0	0	1	4	1	0	6	16
% App. Total	0	0	100	0		42.9	57.1	0	0		0	0	0	0		16.7	66.7	16.7	0		
PHF	.000	.000	.375	.000	.375	.375	.333	.000	.000	.583	.000	.000	.000	.000	.000	.250	.333	.250	.000	.500	.667

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
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Email: datarequests@pdillc.com

File Name : 133347 LL
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Buses

	Hampshire Street From North				Broadway From East				Hampshire Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	3	0	2	4	0	0	0	0	0	0	0	0	0	0	9
04:45 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	5
Total	0	0	5	0	4	4	0	0	0	0	0	0	0	1	0	0	14
05:00 PM	0	0	2	0	1	1	0	0	0	0	0	0	0	2	0	0	6
05:15 PM	0	0	2	0	3	1	0	0	0	0	0	0	0	1	0	0	7
05:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	3
Total	0	0	8	0	4	2	0	0	0	0	0	0	0	5	0	0	19
06:00 PM	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	5
06:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	3
Grand Total	0	0	17	0	8	6	0	0	0	1	0	0	1	8	0	0	41
Apprch %	0	0	100	0	57.1	42.9	0	0	0	100	0	0	11.1	88.9	0	0	
Total %	0	0	41.5	0	19.5	14.6	0	0	0	2.4	0	0	2.4	19.5	0	0	

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	3	0	3	2	4	0	0	6	0	0	0	0	0	0	0	0	0	0	9
04:45 PM	0	0	2	0	2	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	5
05:00 PM	0	0	2	0	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	6
05:15 PM	0	0	2	0	2	3	1	0	0	4	0	0	0	0	0	0	1	0	0	1	7
Total Volume	0	0	9	0	9	8	6	0	0	14	0	0	0	0	0	0	4	0	0	4	27
% App. Total	0	0	100	0		57.1	42.9	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.750	.000	.750	.667	.375	.000	.000	.583	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.750

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
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Site Code : TBA
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Groups Printed- Peds and Bicycles

	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	5	4	7	29	9	0	6	5	0	1	1	0	0	0	1	0	4	2	74
04:45 PM	0	0	2	5	8	30	14	0	12	12	0	2	0	3	6	0	0	1	4	6	105
Total	0	0	7	9	15	59	23	0	18	17	0	3	1	3	6	0	1	1	8	8	179
05:00 PM	0	2	11	12	16	49	21	0	25	22	0	6	2	0	4	0	0	0	8	8	186
05:15 PM	1	2	9	8	18	67	27	0	16	40	0	4	0	4	5	0	0	0	7	10	218
05:30 PM	0	1	9	7	7	65	32	0	12	15	0	6	0	16	7	0	1	0	11	5	194
05:45 PM	0	3	15	4	12	57	22	0	12	15	0	2	0	2	3	0	0	0	8	10	165
Total	1	8	44	31	53	238	102	0	65	92	0	18	2	22	19	0	1	0	34	33	763
06:00 PM	0	0	10	11	6	53	21	0	13	11	0	2	0	23	13	0	2	0	7	7	179
06:15 PM	0	2	6	11	8	54	16	0	16	19	0	4	0	5	11	0	1	0	6	5	164
Grand Total	1	10	67	62	82	404	162	0	112	139	0	27	3	53	49	0	5	1	55	53	1285
Apprch %	0.5	4.5	30.2	27.9	36.9	49.4	19.8	0	13.7	17	0	20.5	2.3	40.2	37.1	0	4.4	0.9	48.2	46.5	
Total %	0.1	0.8	5.2	4.8	6.4	31.4	12.6	0	8.7	10.8	0	2.1	0.2	4.1	3.8	0	0.4	0.1	4.3	4.1	

	Hampshire Street From North						Broadway From East						Hampshire Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	2	11	12	16	41	49	21	0	25	22	117	0	6	2	0	4	12	0	0	0	8	8	16	186
05:15 PM	1	2	9	8	18	38	67	27	0	16	40	150	0	4	0	4	5	13	0	0	0	7	10	17	218
05:30 PM	0	1	9	7	7	24	65	32	0	12	15	124	0	6	0	16	7	29	0	1	0	11	5	17	194
05:45 PM	0	3	15	4	12	34	57	22	0	12	15	106	0	2	0	2	3	7	0	0	0	8	10	18	165
Total Volume	1	8	44	31	53	137	238	102	0	65	92	497	0	18	2	22	19	61	0	1	0	34	33	68	763
% App. Total	0.7	5.8	32.1	22.6	38.7		47.9	20.5	0	13.1	18.5		0	29.5	3.3	36.1	31.1		0	1.5	0	50	48.5		
PHF	.250	.667	.733	.646	.736	.835	.888	.797	.000	.650	.575	.828	.000	.750	.250	.344	.679	.526	.000	.250	.000	.773	.825	.944	.875

N/S: Hampshire Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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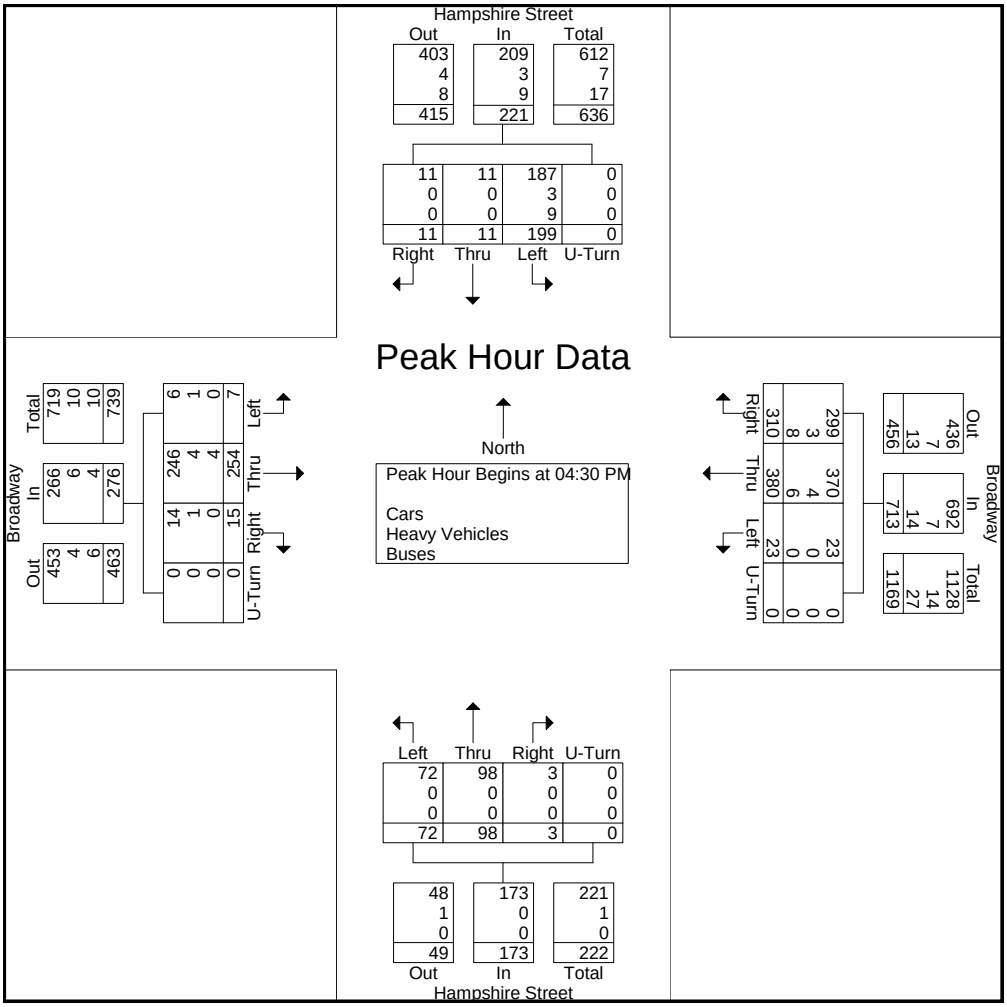
	Hampshire Street From North					Broadway From East					Hampshire Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	5	47	0	53	66	99	3	0	168	1	25	22	0	48	5	66	1	0	72	341
04:45 PM	5	1	48	0	54	77	85	9	0	171	1	22	22	0	45	5	55	3	0	63	333
05:00 PM	5	2	47	0	54	84	89	5	0	178	0	34	13	0	47	2	74	2	0	78	357
05:15 PM	0	3	57	0	60	83	107	6	0	196	1	17	15	0	33	3	59	1	0	63	352
Total Volume	11	11	199	0	221	310	380	23	0	713	3	98	72	0	173	15	254	7	0	276	1383
% App. Total	5	5	90	0		43.5	53.3	3.2	0		1.7	56.6	41.6	0		5.4	92	2.5	0		
PHF	.550	.550	.873	.000	.921	.923	.888	.639	.000	.909	.750	.721	.818	.000	.901	.750	.858	.583	.000	.885	.968
Cars	11	11	187	0	209	299	370	23	0	692	3	98	72	0	173	14	246	6	0	266	1340
% Cars	100	100	94.0	0	94.6	96.5	97.4	100	0	97.1	100	100	100	0	100	93.3	96.9	85.7	0	96.4	96.9
Heavy Vehicles	0	0	3	0	3	3	4	0	0	7	0	0	0	0	0	1	4	1	0	6	16
% Heavy Vehicles	0	0	1.5	0	1.4	1.0	1.1	0	0	1.0	0	0	0	0	0	6.7	1.6	14.3	0	2.2	1.2
Buses	0	0	9	0	9	8	6	0	0	14	0	0	0	0	0	0	4	0	0	4	27
% Buses	0	0	4.5	0	4.1	2.6	1.6	0	0	2.0	0	0	0	0	0	0	1.6	0	0	1.4	2.0



N/S: Galileo Galilei Way
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	34	78	20	0	6	67	9	1	16	31	15	1	18	71	28	0	395
07:45 AM	65	91	22	0	5	87	25	2	17	43	17	0	22	87	29	0	512
Total	99	169	42	0	11	154	34	3	33	74	32	1	40	158	57	0	907
08:00 AM	52	118	25	0	7	81	13	1	28	51	17	0	23	114	32	0	562
08:15 AM	51	104	27	0	7	85	22	1	21	52	26	1	19	146	43	0	605
08:30 AM	45	111	30	0	13	76	18	0	29	69	14	0	34	113	32	0	584
08:45 AM	42	109	24	0	8	71	24	0	34	69	18	0	20	102	41	0	562
Total	190	442	106	0	35	313	77	2	112	241	75	1	96	475	148	0	2313
09:00 AM	40	111	28	0	14	57	22	0	21	51	23	0	24	109	32	0	532
09:15 AM	40	79	21	0	17	70	22	0	22	46	17	1	21	90	31	0	477
Grand Total	369	801	197	0	77	594	155	5	188	412	147	3	181	832	268	0	4229
Apprch %	27	58.6	14.4	0	9.3	71.5	18.7	0.6	25.1	54.9	19.6	0.4	14.1	64.9	20.9	0	
Total %	8.7	18.9	4.7	0	1.8	14	3.7	0.1	4.4	9.7	3.5	0.1	4.3	19.7	6.3	0	
Cars	346	684	174	0	55	545	130	5	165	342	123	2	168	778	258	0	3775
% Cars	93.8	85.4	88.3	0	71.4	91.8	83.9	100	87.8	83	83.7	66.7	92.8	93.5	96.3	0	89.3
Heavy Vehicles	20	109	6	0	8	21	17	0	22	66	12	1	12	28	10	0	332
% Heavy Vehicles	5.4	13.6	3	0	10.4	3.5	11	0	11.7	16	8.2	33.3	6.6	3.4	3.7	0	7.9
Buses	3	8	17	0	14	28	8	0	1	4	12	0	1	26	0	0	122
% Buses	0.8	1	8.6	0	18.2	4.7	5.2	0	0.5	1	8.2	0	0.6	3.1	0	0	2.9

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	52	118	25	0	195	7	81	13	1	102	28	51	17	0	96	23	114	32	0	169	562
08:15 AM	51	104	27	0	182	7	85	22	1	115	21	52	26	1	100	19	146	43	0	208	605
08:30 AM	45	111	30	0	186	13	76	18	0	107	29	69	14	0	112	34	113	32	0	179	584
08:45 AM	42	109	24	0	175	8	71	24	0	103	34	69	18	0	121	20	102	41	0	163	562
Total Volume	190	442	106	0	738	35	313	77	2	427	112	241	75	1	429	96	475	148	0	719	2313
% App. Total	25.7	59.9	14.4	0		8.2	73.3	18	0.5		26.1	56.2	17.5	0.2		13.4	66.1	20.6	0		
PHF	.913	.936	.883	.000	.946	.673	.921	.802	.500	.928	.824	.873	.721	.250	.886	.706	.813	.860	.000	.864	.956
Cars	180	372	96	0	648	25	285	67	2	379	98	200	64	0	362	88	445	144	0	677	2066
% Cars	94.7	84.2	90.6	0	87.8	71.4	91.1	87.0	100	88.8	87.5	83.0	85.3	0	84.4	91.7	93.7	97.3	0	94.2	89.3
Heavy Vehicles	9	68	2	0	79	3	14	6	0	23	13	39	5	1	58	8	18	4	0	30	190
% Heavy Vehicles	4.7	15.4	1.9	0	10.7	8.6	4.5	7.8	0	5.4	11.6	16.2	6.7	100	13.5	8.3	3.8	2.7	0	4.2	8.2
Buses	1	2	8	0	11	7	14	4	0	25	1	2	6	0	9	0	12	0	0	12	57
% Buses	0.5	0.5	7.5	0	1.5	20.0	4.5	5.2	0	5.9	0.9	0.8	8.0	0	2.1	0	2.5	0	0	1.7	2.5

N/S: Galileo Galilei Way
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	31	69	16	0	5	63	8	1	12	28	12	1	17	65	27	0	355
07:45 AM	59	80	19	0	2	81	20	2	17	35	15	0	20	83	27	0	460
Total	90	149	35	0	7	144	28	3	29	63	27	1	37	148	54	0	815
08:00 AM	49	100	23	0	5	78	10	1	26	41	15	0	18	106	32	0	504
08:15 AM	49	87	26	0	5	77	19	1	15	45	21	0	19	136	41	0	541
08:30 AM	42	91	26	0	9	65	18	0	25	55	12	0	32	109	32	0	516
08:45 AM	40	94	21	0	6	65	20	0	32	59	16	0	19	94	39	0	505
Total	180	372	96	0	25	285	67	2	98	200	64	0	88	445	144	0	2066
09:00 AM	37	95	26	0	10	49	19	0	19	37	19	0	23	98	31	0	463
09:15 AM	39	68	17	0	13	67	16	0	19	42	13	1	20	87	29	0	431
Grand Total	346	684	174	0	55	545	130	5	165	342	123	2	168	778	258	0	3775
Apprch %	28.7	56.8	14.5	0	7.5	74.1	17.7	0.7	26.1	54.1	19.5	0.3	14	64.6	21.4	0	
Total %	9.2	18.1	4.6	0	1.5	14.4	3.4	0.1	4.4	9.1	3.3	0.1	4.5	20.6	6.8	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	49	100	23	0	172	5	78	10	1	94	26	41	15	0	82	18	106	32	0	156	504
08:15 AM	49	87	26	0	162	5	77	19	1	102	15	45	21	0	81	19	136	41	0	196	541
08:30 AM	42	91	26	0	159	9	65	18	0	92	25	55	12	0	92	32	109	32	0	173	516
08:45 AM	40	94	21	0	155	6	65	20	0	91	32	59	16	0	107	19	94	39	0	152	505
Total Volume	180	372	96	0	648	25	285	67	2	379	98	200	64	0	362	88	445	144	0	677	2066
% App. Total	27.8	57.4	14.8	0		6.6	75.2	17.7	0.5		27.1	55.2	17.7	0		13	65.7	21.3	0		
PHF	.918	.930	.923	.000	.942	.694	.913	.838	.500	.929	.766	.847	.762	.000	.846	.688	.818	.878	.000	.864	.955

N/S: Galileo Galilei Way
E/W: Broadway
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Heavy Vehicles

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	7	2	0	0	1	1	0	4	2	2	0	1	2	1	0	24
07:45 AM	6	10	1	0	1	2	3	0	0	8	0	0	2	0	2	0	35
Total	7	17	3	0	1	3	4	0	4	10	2	0	3	2	3	0	59
08:00 AM	3	17	0	0	0	1	2	0	1	9	0	0	5	7	0	0	45
08:15 AM	1	16	0	0	1	3	1	0	6	6	3	1	0	4	2	0	44
08:30 AM	3	20	2	0	2	5	0	0	4	14	1	0	2	2	0	0	55
08:45 AM	2	15	0	0	0	5	3	0	2	10	1	0	1	5	2	0	46
Total	9	68	2	0	3	14	6	0	13	39	5	1	8	18	4	0	190
09:00 AM	3	14	0	0	2	2	2	0	2	13	3	0	1	6	1	0	49
09:15 AM	1	10	1	0	2	2	5	0	3	4	2	0	0	2	2	0	34
Grand Total	20	109	6	0	8	21	17	0	22	66	12	1	12	28	10	0	332
Apprch %	14.8	80.7	4.4	0	17.4	45.7	37	0	21.8	65.3	11.9	1	24	56	20	0	
Total %	6	32.8	1.8	0	2.4	6.3	5.1	0	6.6	19.9	3.6	0.3	3.6	8.4	3	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	1	16	0	0	17	1	3	1	0	5	6	6	3	1	16	0	4	2	0	6	44
08:30 AM	3	20	2	0	25	2	5	0	0	7	4	14	1	0	19	2	2	0	0	4	55
08:45 AM	2	15	0	0	17	0	5	3	0	8	2	10	1	0	13	1	5	2	0	8	46
09:00 AM	3	14	0	0	17	2	2	2	0	6	2	13	3	0	18	1	6	1	0	8	49
Total Volume	9	65	2	0	76	5	15	6	0	26	14	43	8	1	66	4	17	5	0	26	194
% App. Total	11.8	85.5	2.6	0		19.2	57.7	23.1	0		21.2	65.2	12.1	1.5		15.4	65.4	19.2	0		
PHF	.750	.813	.250	.000	.760	.625	.750	.500	.000	.813	.583	.768	.667	.250	.868	.500	.708	.625	.000	.813	.882

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 M
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Buses

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	2	2	2	0	1	3	0	0	0	1	1	0	0	4	0	0	16
07:45 AM	0	1	2	0	2	4	2	0	0	0	2	0	0	4	0	0	17
Total	2	3	4	0	3	7	2	0	0	1	3	0	0	8	0	0	33
08:00 AM	0	1	2	0	2	2	1	0	1	1	2	0	0	1	0	0	13
08:15 AM	1	1	1	0	1	5	2	0	0	1	2	0	0	6	0	0	20
08:30 AM	0	0	2	0	2	6	0	0	0	0	1	0	0	2	0	0	13
08:45 AM	0	0	3	0	2	1	1	0	0	0	1	0	0	3	0	0	11
Total	1	2	8	0	7	14	4	0	1	2	6	0	0	12	0	0	57
09:00 AM	0	2	2	0	2	6	1	0	0	1	1	0	0	5	0	0	20
09:15 AM	0	1	3	0	2	1	1	0	0	0	2	0	1	1	0	0	12
Grand Total	3	8	17	0	14	28	8	0	1	4	12	0	1	26	0	0	122
Apprch %	10.7	28.6	60.7	0	28	56	16	0	5.9	23.5	70.6	0	3.7	96.3	0	0	
Total %	2.5	6.6	13.9	0	11.5	23	6.6	0	0.8	3.3	9.8	0	0.8	21.3	0	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	2	2	2	0	6	1	3	0	0	4	0	1	1	0	2	0	4	0	0	4	16
07:45 AM	0	1	2	0	3	2	4	2	0	8	0	0	2	0	2	0	4	0	0	4	17
08:00 AM	0	1	2	0	3	2	2	1	0	5	1	1	2	0	4	0	1	0	0	1	13
08:15 AM	1	1	1	0	3	1	5	2	0	8	0	1	2	0	3	0	6	0	0	6	20
Total Volume	3	5	7	0	15	6	14	5	0	25	1	3	7	0	11	0	15	0	0	15	66
% App. Total	20	33.3	46.7	0		24	56	20	0		9.1	27.3	63.6	0		0	100	0	0		
PHF	.375	.625	.875	.000	.625	.750	.700	.625	.000	.781	.250	.750	.875	.000	.688	.000	.625	.000	.000	.625	.825

N/S: Galileo Galilei Way
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 M
Site Code : TBA
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Page No : 1

Groups Printed- Peds and Bicycles

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	1	1	18	17	0	0	0	0	1	0	2	0	30	23	1	41	0	21	11	167
07:45 AM	2	2	2	19	22	0	0	0	1	1	0	1	3	54	37	0	45	0	44	15	248
Total	2	3	3	37	39	0	0	0	1	2	0	3	3	84	60	1	86	0	65	26	415
08:00 AM	0	0	0	27	15	0	4	0	3	3	0	0	0	41	30	2	69	1	16	7	218
08:15 AM	0	1	0	27	37	0	2	0	9	12	0	0	1	60	38	1	77	0	30	19	314
08:30 AM	0	8	0	0	10	0	3	0	13	22	1	5	3	24	43	12	102	1	4	9	260
08:45 AM	1	8	0	18	12	0	3	1	19	37	0	2	1	57	51	12	99	1	17	6	345
Total	1	17	0	72	74	0	12	1	44	74	1	7	5	182	162	27	347	3	67	41	1137
09:00 AM	0	10	0	16	13	1	4	0	14	14	0	7	3	38	70	15	75	1	13	20	314
09:15 AM	0	9	0	25	26	0	9	0	16	11	0	1	4	31	49	15	66	2	14	13	291
Grand Total	3	39	3	150	152	1	25	1	75	101	1	18	15	335	341	58	574	6	159	100	2157
Apprch %	0.9	11.2	0.9	43.2	43.8	0.5	12.3	0.5	36.9	49.8	0.1	2.5	2.1	47.2	48	6.5	64	0.7	17.7	11.1	
Total %	0.1	1.8	0.1	7	7	0	1.2	0	3.5	4.7	0	0.8	0.7	15.5	15.8	2.7	26.6	0.3	7.4	4.6	

	Galileo Galilei Way From North						Broadway From East						Galileo Galilei Way From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	1	0	27	37	65	0	2	0	9	12	23	0	0	1	60	38	99	1	77	0	30	19	127	314
08:30 AM	0	8	0	0	10	18	0	3	0	13	22	38	1	5	3	24	43	76	12	102	1	4	9	128	260
08:45 AM	1	8	0	18	12	39	0	3	1	19	37	60	0	2	1	57	51	111	12	99	1	17	6	135	345
09:00 AM	0	10	0	16	13	39	1	4	0	14	14	33	0	7	3	38	70	118	15	75	1	13	20	124	314
Total Volume	1	27	0	61	72	161	1	12	1	55	85	154	1	14	8	179	202	404	40	353	3	64	54	514	1233
% App. Total	0.6	16.8	0	37.9	44.7		0.6	7.8	0.6	35.7	55.2		0.2	3.5	2	44.3	50		7.8	68.7	0.6	12.5	10.5		
PHF	.250	.675	.000	.565	.486	.619	.250	.750	.250	.724	.574	.642	.250	.500	.667	.746	.721	.856	.667	.865	.750	.533	.675	.952	.893

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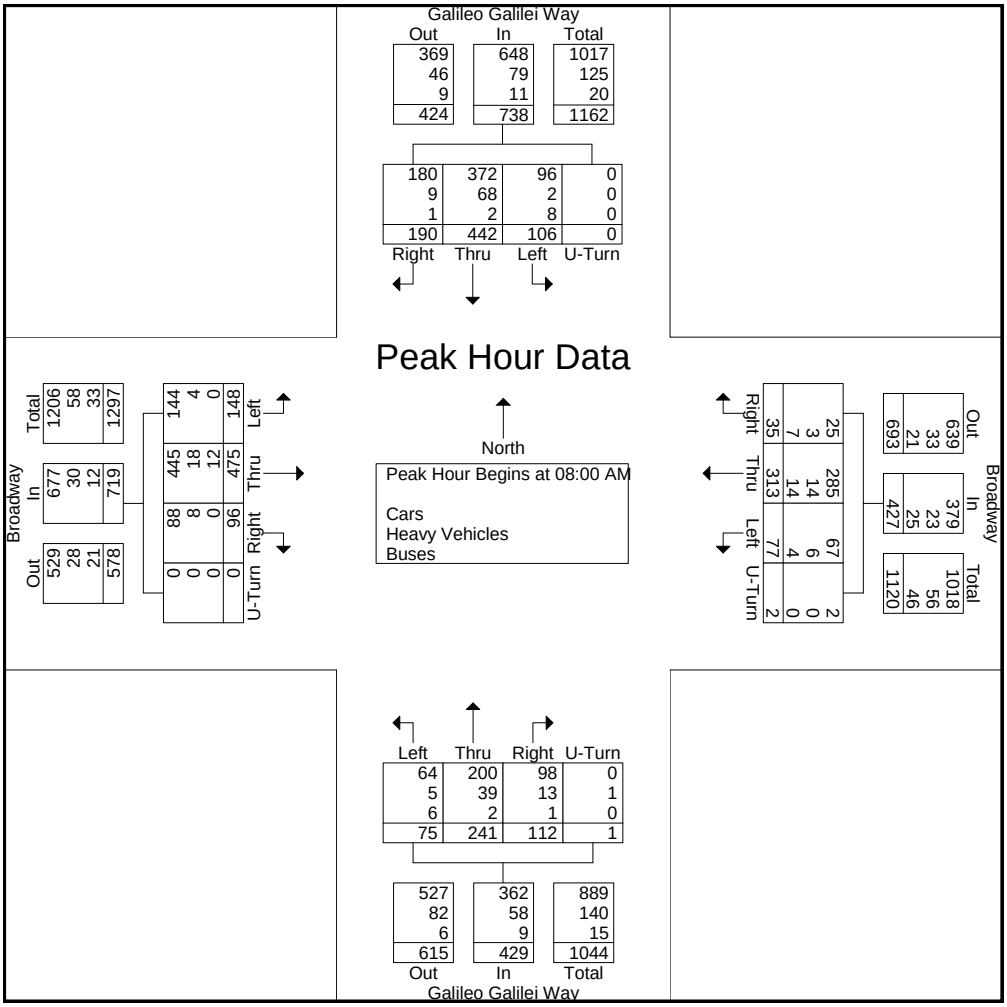
	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	52	118	25	0	195	7	81	13	1	102	28	51	17	0	96	23	114	32	0	169	562
08:15 AM	51	104	27	0	182	7	85	22	1	115	21	52	26	1	100	19	146	43	0	208	605
08:30 AM	45	111	30	0	186	13	76	18	0	107	29	69	14	0	112	34	113	32	0	179	584
08:45 AM	42	109	24	0	175	8	71	24	0	103	34	69	18	0	121	20	102	41	0	163	562
Total Volume	190	442	106	0	738	35	313	77	2	427	112	241	75	1	429	96	475	148	0	719	2313
% App. Total	25.7	59.9	14.4	0		8.2	73.3	18	0.5		26.1	56.2	17.5	0.2		13.4	66.1	20.6	0		
PHF	.913	.936	.883	.000	.946	.673	.921	.802	.500	.928	.824	.873	.721	.250	.886	.706	.813	.860	.000	.864	.956
Cars	180	372	96	0	648	25	285	67	2	379	98	200	64	0	362	88	445	144	0	677	2066
% Cars	94.7	84.2	90.6	0	87.8	71.4	91.1	87.0	100	88.8	87.5	83.0	85.3	0	84.4	91.7	93.7	97.3	0	94.2	89.3
Heavy Vehicles	9	68	2	0	79	3	14	6	0	23	13	39	5	1	58	8	18	4	0	30	190
% Heavy Vehicles	4.7	15.4	1.9	0	10.7	8.6	4.5	7.8	0	5.4	11.6	16.2	6.7	100	13.5	8.3	3.8	2.7	0	4.2	8.2
Buses	1	2	8	0	11	7	14	4	0	25	1	2	6	0	9	0	12	0	0	12	57
% Buses	0.5	0.5	7.5	0	1.5	20.0	4.5	5.2	0	5.9	0.9	0.8	8.0	0	2.1	0	2.5	0	0	1.7	2.5



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Groups Printed- Cars - Heavy Vehicles - Buses

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	35	62	21	0	9	113	30	6	25	100	22	1	13	85	44	0	566
04:45 PM	37	86	14	0	5	110	34	4	39	100	21	1	21	87	36	0	595
Total	72	148	35	0	14	223	64	10	64	200	43	2	34	172	80	0	1161
05:00 PM	32	76	20	0	11	130	43	3	26	111	23	1	16	112	33	0	637
05:15 PM	46	82	23	0	5	121	35	2	28	124	31	3	13	110	40	0	663
05:30 PM	46	79	16	0	3	91	32	4	11	87	27	3	6	99	37	0	541
05:45 PM	36	60	21	0	8	103	21	3	24	107	31	0	8	85	25	0	532
Total	160	297	80	0	27	445	131	12	89	429	112	7	43	406	135	0	2373
06:00 PM	35	61	22	0	8	96	30	4	21	92	37	0	8	87	25	0	526
06:15 PM	37	60	15	0	7	90	34	2	28	82	30	1	16	78	34	0	514
Grand Total	304	566	152	0	56	854	259	28	202	803	222	10	101	743	274	0	4574
Apprch %	29.7	55.4	14.9	0	4.7	71.3	21.6	2.3	16.3	64.9	17.9	0.8	9	66.5	24.5	0	
Total %	6.6	12.4	3.3	0	1.2	18.7	5.7	0.6	4.4	17.6	4.9	0.2	2.2	16.2	6	0	
Cars	296	547	131	0	42	823	253	28	194	768	217	10	100	699	268	0	4376
% Cars	97.4	96.6	86.2	0	75	96.4	97.7	100	96	95.6	97.7	100	99	94.1	97.8	0	95.7
Heavy Vehicles	6	12	1	0	1	7	2	0	3	28	3	0	1	7	5	0	76
% Heavy Vehicles	2	2.1	0.7	0	1.8	0.8	0.8	0	1.5	3.5	1.4	0	1	0.9	1.8	0	1.7
Buses	2	7	20	0	13	24	4	0	5	7	2	0	0	37	1	0	122
% Buses	0.7	1.2	13.2	0	23.2	2.8	1.5	0	2.5	0.9	0.9	0	0	5	0.4	0	2.7

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	35	62	21	0	118	9	113	30	6	158	25	100	22	1	148	13	85	44	0	142	566
04:45 PM	37	86	14	0	137	5	110	34	4	153	39	100	21	1	161	21	87	36	0	144	595
05:00 PM	32	76	20	0	128	11	130	43	3	187	26	111	23	1	161	16	112	33	0	161	637
05:15 PM	46	82	23	0	151	5	121	35	2	163	28	124	31	3	186	13	110	40	0	163	663
Total Volume	150	306	78	0	534	30	474	142	15	661	118	435	97	6	656	63	394	153	0	610	2461
% App. Total	28.1	57.3	14.6	0		4.5	71.7	21.5	2.3		18	66.3	14.8	0.9		10.3	64.6	25.1	0		
PHF	.815	.890	.848	.000	.884	.682	.912	.826	.625	.884	.756	.877	.782	.500	.882	.750	.879	.869	.000	.936	.928
Cars	145	294	70	0	509	23	457	138	15	633	112	413	97	6	628	63	373	147	0	583	2353
% Cars	96.7	96.1	89.7	0	95.3	76.7	96.4	97.2	100	95.8	94.9	94.9	100	100	95.7	100	94.7	96.1	0	95.6	95.6
Heavy Vehicles	3	10	0	0	13	1	4	2	0	7	2	19	0	0	21	0	4	5	0	9	50
% Heavy Vehicles	2.0	3.3	0	0	2.4	3.3	0.8	1.4	0	1.1	1.7	4.4	0	0	3.2	0	1.0	3.3	0	1.5	2.0
Buses	2	2	8	0	12	6	13	2	0	21	4	3	0	0	7	0	17	1	0	18	58
% Buses	1.3	0.7	10.3	0	2.2	20.0	2.7	1.4	0	3.2	3.4	0.7	0	0	1.1	0	4.3	0.7	0	3.0	2.4

N/S: Galileo Galilei Way
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	33	61	20	0	7	106	30	6	25	95	22	1	13	81	42	0	542
04:45 PM	35	81	11	0	4	108	33	4	36	93	21	1	21	80	32	0	560
Total	68	142	31	0	11	214	63	10	61	188	43	2	34	161	74	0	1102
05:00 PM	31	74	18	0	8	126	41	3	24	103	23	1	16	107	33	0	608
05:15 PM	46	78	21	0	4	117	34	2	27	122	31	3	13	105	40	0	643
05:30 PM	46	79	14	0	1	88	30	4	10	80	27	3	5	92	37	0	516
05:45 PM	35	59	18	0	6	101	21	3	24	106	31	0	8	79	25	0	516
Total	158	290	71	0	19	432	126	12	85	411	112	7	42	383	135	0	2283
06:00 PM	33	59	17	0	7	92	30	4	21	92	35	0	8	82	25	0	505
06:15 PM	37	56	12	0	5	85	34	2	27	77	27	1	16	73	34	0	486
Grand Total	296	547	131	0	42	823	253	28	194	768	217	10	100	699	268	0	4376
Apprch %	30.4	56.2	13.4	0	3.7	71.8	22.1	2.4	16.3	64.6	18.3	0.8	9.4	65.5	25.1	0	
Total %	6.8	12.5	3	0	1	18.8	5.8	0.6	4.4	17.6	5	0.2	2.3	16	6.1	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	61	20	0	114	7	106	30	6	149	25	95	22	1	143	13	81	42	0	136	542
04:45 PM	35	81	11	0	127	4	108	33	4	149	36	93	21	1	151	21	80	32	0	133	560
05:00 PM	31	74	18	0	123	8	126	41	3	178	24	103	23	1	151	16	107	33	0	156	608
05:15 PM	46	78	21	0	145	4	117	34	2	157	27	122	31	3	183	13	105	40	0	158	643
Total Volume	145	294	70	0	509	23	457	138	15	633	112	413	97	6	628	63	373	147	0	583	2353
% App. Total	28.5	57.8	13.8	0		3.6	72.2	21.8	2.4		17.8	65.8	15.4	1		10.8	64	25.2	0		
PHF	.788	.907	.833	.000	.878	.719	.907	.841	.625	.889	.778	.846	.782	.500	.858	.750	.871	.875	.000	.922	.915

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Groups Printed- Heavy Vehicles

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	3	0	0	0	3	0	0	0	0	1	0	8
04:45 PM	2	5	0	0	0	0	1	0	1	7	0	0	0	3	4	0	23
Total	2	6	0	0	0	3	1	0	1	10	0	0	0	3	5	0	31
05:00 PM	1	0	0	0	1	1	0	0	1	7	0	0	0	0	0	0	11
05:15 PM	0	4	0	0	0	0	1	0	0	2	0	0	0	1	0	0	8
05:30 PM	0	0	0	0	0	0	0	0	1	4	0	0	1	2	0	0	8
05:45 PM	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	4
Total	2	4	0	0	1	2	1	0	2	14	0	0	1	4	0	0	31
06:00 PM	2	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	5
06:15 PM	0	2	0	0	0	2	0	0	0	4	1	0	0	0	0	0	9
Grand Total	6	12	1	0	1	7	2	0	3	28	3	0	1	7	5	0	76
Apprch %	31.6	63.2	5.3	0	10	70	20	0	8.8	82.4	8.8	0	7.7	53.8	38.5	0	
Total %	7.9	15.8	1.3	0	1.3	9.2	2.6	0	3.9	36.8	3.9	0	1.3	9.2	6.6	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	1	0	0	1	0	3	0	0	3	0	3	0	0	3	0	0	1	0	1	8
04:45 PM	2	5	0	0	7	0	0	1	0	1	1	7	0	0	8	0	3	4	0	7	23
05:00 PM	1	0	0	0	1	1	1	0	0	2	1	7	0	0	8	0	0	0	0	0	11
05:15 PM	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	8
Total Volume	3	10	0	0	13	1	4	2	0	7	2	19	0	0	21	0	4	5	0	9	50
% App. Total	23.1	76.9	0	0		14.3	57.1	28.6	0		9.5	90.5	0	0		0	44.4	55.6	0		
PHF	.375	.500	.000	.000	.464	.250	.333	.500	.000	.583	.500	.679	.000	.000	.656	.000	.333	.313	.000	.321	.543

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	2	0	1	0	2	4	0	0	0	2	0	0	0	4	1	0	16
04:45 PM	0	0	3	0	1	2	0	0	2	0	0	0	0	4	0	0	12
Total	2	0	4	0	3	6	0	0	2	2	0	0	0	8	1	0	28
05:00 PM	0	2	2	0	2	3	2	0	1	1	0	0	0	5	0	0	18
05:15 PM	0	0	2	0	1	4	0	0	1	0	0	0	0	4	0	0	12
05:30 PM	0	0	2	0	2	3	2	0	0	3	0	0	0	5	0	0	17
05:45 PM	0	1	3	0	2	1	0	0	0	0	0	0	0	5	0	0	12
Total	0	3	9	0	7	11	4	0	2	4	0	0	0	19	0	0	59
06:00 PM	0	2	4	0	1	4	0	0	0	0	0	0	0	5	0	0	16
06:15 PM	0	2	3	0	2	3	0	0	1	1	2	0	0	5	0	0	19
Grand Total	2	7	20	0	13	24	4	0	5	7	2	0	0	37	1	0	122
Apprch %	6.9	24.1	69	0	31.7	58.5	9.8	0	35.7	50	14.3	0	0	97.4	2.6	0	
Total %	1.6	5.7	16.4	0	10.7	19.7	3.3	0	4.1	5.7	1.6	0	0	30.3	0.8	0	

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	0	0	2	0	2	2	3	2	0	7	0	3	0	0	3	0	5	0	0	5	17
05:45 PM	0	1	3	0	4	2	1	0	0	3	0	0	0	0	0	0	5	0	0	5	12
06:00 PM	0	2	4	0	6	1	4	0	0	5	0	0	0	0	0	0	5	0	0	5	16
06:15 PM	0	2	3	0	5	2	3	0	0	5	1	1	2	0	4	0	5	0	0	5	19
Total Volume	0	5	12	0	17	7	11	2	0	20	1	4	2	0	7	0	20	0	0	20	64
% App. Total	0	29.4	70.6	0		35	55	10	0		14.3	57.1	28.6	0		0	100	0	0		
PHF	.000	.625	.750	.000	.708	.875	.688	.250	.000	.714	.250	.333	.250	.000	.438	.000	1.00	.000	.000	1.00	.842

N/S: Galileo Galilei Way
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	1	3	0	20	22	0	20	1	14	5	0	1	6	32	58	1	5	0	15	22	226
04:45 PM	1	2	0	35	21	0	33	5	16	11	0	5	3	22	64	0	7	0	9	15	249
Total	2	5	0	55	43	0	53	6	30	16	0	6	9	54	122	1	12	0	24	37	475
05:00 PM	0	3	0	54	44	0	38	4	34	19	0	5	8	37	70	3	14	1	18	10	362
05:15 PM	1	4	0	42	37	0	39	0	22	7	0	2	8	64	44	2	17	2	17	7	315
05:30 PM	10	10	0	37	59	0	70	0	26	18	0	1	9	65	48	0	16	0	27	21	417
05:45 PM	4	10	0	34	70	1	38	3	17	18	1	5	7	49	37	0	18	1	25	15	353
Total	15	27	0	167	210	1	185	7	99	62	1	13	32	215	199	5	65	4	87	53	1447
06:00 PM	0	3	0	42	50	1	34	5	19	18	1	9	6	68	49	2	10	0	25	20	362
06:15 PM	2	4	0	47	69	0	55	3	27	24	0	4	10	56	44	0	11	0	26	21	403
Grand Total	19	39	0	311	372	2	327	21	175	120	2	32	57	393	414	8	98	4	162	131	2687
Apprch %	2.6	5.3	0	42	50.2	0.3	50.7	3.3	27.1	18.6	0.2	3.6	6.3	43.8	46.1	2	24.3	1	40.2	32.5	
Total %	0.7	1.5	0	11.6	13.8	0.1	12.2	0.8	6.5	4.5	0.1	1.2	2.1	14.6	15.4	0.3	3.6	0.1	6	4.9	

	Galileo Galilei Way From North						Broadway From East						Galileo Galilei Way From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:30 PM																									
05:30 PM	10	10	0	37	59	116	0	70	0	26	18	114	0	1	9	65	48	123	0	16	0	27	21	64	417
05:45 PM	4	10	0	34	70	118	1	38	3	17	18	77	1	5	7	49	37	99	0	18	1	25	15	59	353
06:00 PM	0	3	0	42	50	95	1	34	5	19	18	77	1	9	6	68	49	133	2	10	0	25	20	57	362
06:15 PM	2	4	0	47	69	122	0	55	3	27	24	109	0	4	10	56	44	114	0	11	0	26	21	58	403
Total Volume	16	27	0	160	248	451	2	197	11	89	78	377	2	19	32	238	178	469	2	55	1	103	77	238	1535
% App. Total	3.5	6	0	35.5	55		0.5	52.3	2.9	23.6	20.7		0.4	4.1	6.8	50.7	38		0.8	23.1	0.4	43.3	32.4		
PHF	.400	.675	.000	.851	.886	.924	.500	.704	.550	.824	.813	.827	.500	.528	.800	.875	.908	.882	.250	.764	.250	.954	.917	.930	.920

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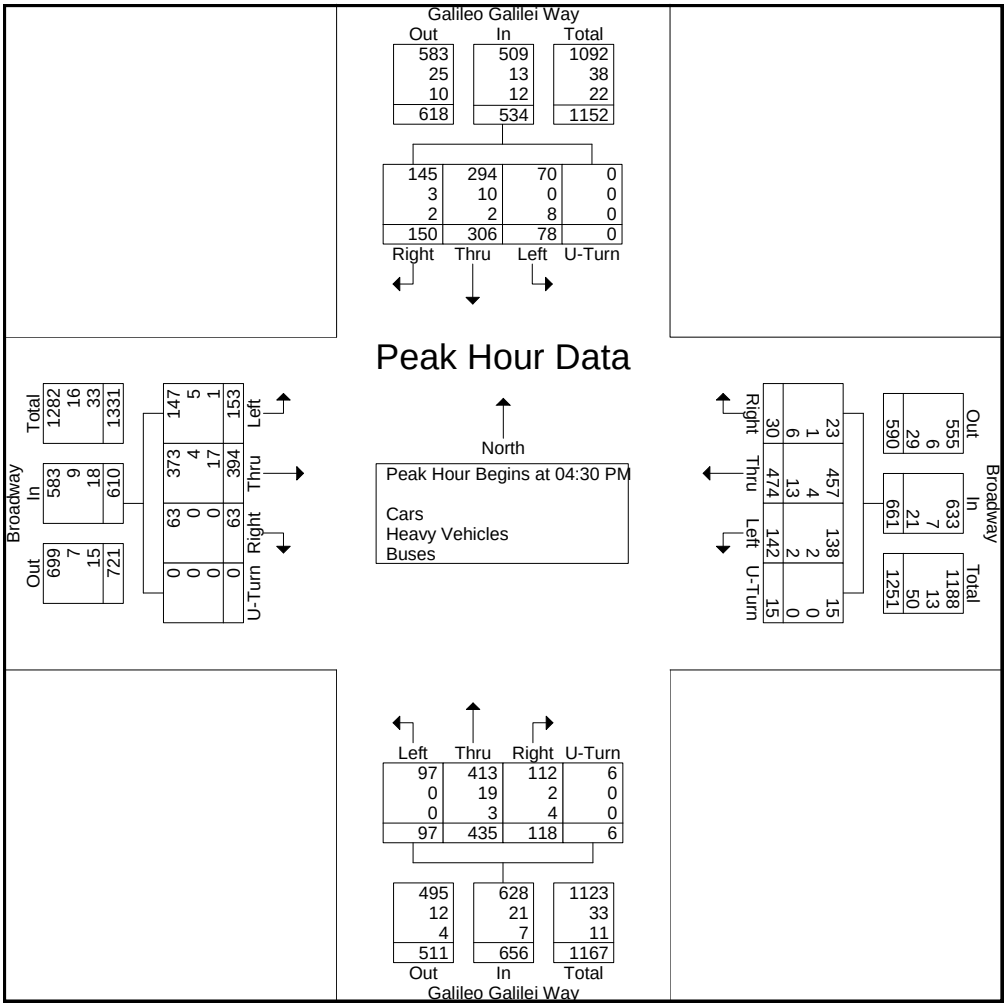
	Galileo Galilei Way From North					Broadway From East					Galileo Galilei Way From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	35	62	21	0	118	9	113	30	6	158	25	100	22	1	148	13	85	44	0	142	566
04:45 PM	37	86	14	0	137	5	110	34	4	153	39	100	21	1	161	21	87	36	0	144	595
05:00 PM	32	76	20	0	128	11	130	43	3	187	26	111	23	1	161	16	112	33	0	161	637
05:15 PM	46	82	23	0	151	5	121	35	2	163	28	124	31	3	186	13	110	40	0	163	663
Total Volume	150	306	78	0	534	30	474	142	15	661	118	435	97	6	656	63	394	153	0	610	2461
% App. Total	28.1	57.3	14.6	0		4.5	71.7	21.5	2.3		18	66.3	14.8	0.9		10.3	64.6	25.1	0		
PHF	.815	.890	.848	.000	.884	.682	.912	.826	.625	.884	.756	.877	.782	.500	.882	.750	.879	.869	.000	.936	.928
Cars	145	294	70	0	509	23	457	138	15	633	112	413	97	6	628	63	373	147	0	583	2353
% Cars	96.7	96.1	89.7	0	95.3	76.7	96.4	97.2	100	95.8	94.9	94.9	100	100	95.7	100	94.7	96.1	0	95.6	95.6
Heavy Vehicles	3	10	0	0	13	1	4	2	0	7	2	19	0	0	21	0	4	5	0	9	50
% Heavy Vehicles	2.0	3.3	0	0	2.4	3.3	0.8	1.4	0	1.1	1.7	4.4	0	0	3.2	0	1.0	3.3	0	1.5	2.0
Buses	2	2	8	0	12	6	13	2	0	21	4	3	0	0	7	0	17	1	0	18	58
% Buses	1.3	0.7	10.3	0	2.2	20.0	2.7	1.4	0	3.2	3.4	0.7	0	0	1.1	0	4.3	0.7	0	3.0	2.4



N/S: Ped Walkway/ Ames Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 N
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	92	44	1	22	0	14	0	7	102	0	1	283
07:45 AM	0	0	0	0	0	101	40	2	16	0	21	0	11	101	0	0	292
Total	0	0	0	0	0	193	84	3	38	0	35	0	18	203	0	1	575
08:00 AM	0	0	0	0	0	93	39	1	22	0	18	1	18	143	0	1	336
08:15 AM	0	0	0	0	0	99	40	1	19	0	19	0	15	180	0	0	373
08:30 AM	0	0	0	0	0	89	31	5	25	0	18	0	38	147	0	0	353
08:45 AM	0	0	0	0	0	98	43	4	20	0	18	0	32	130	0	1	346
Total	0	0	0	0	0	379	153	11	86	0	73	1	103	600	0	2	1408
09:00 AM	0	0	0	0	0	78	39	2	18	0	19	0	30	131	0	1	318
09:15 AM	0	0	0	0	0	84	45	0	12	0	25	0	35	102	0	2	305
Grand Total	0	0	0	0	0	734	321	16	154	0	152	1	186	1036	0	6	2606
Apprch %	0	0	0	0	0	68.5	30	1.5	50.2	0	49.5	0.3	15.1	84.4	0	0.5	
Total %	0	0	0	0	0	28.2	12.3	0.6	5.9	0	5.8	0	7.1	39.8	0	0.2	
Cars	0	0	0	0	0	704	301	16	134	0	95	1	173	962	0	6	2392
% Cars	0	0	0	0	0	95.9	93.8	100	87	0	62.5	100	93	92.9	0	100	91.8
Heavy Vehicles	0	0	0	0	0	26	16	0	13	0	17	0	13	32	0	0	117
% Heavy Vehicles	0	0	0	0	0	3.5	5	0	8.4	0	11.2	0	7	3.1	0	0	4.5
Buses	0	0	0	0	0	4	4	0	7	0	40	0	0	42	0	0	97
% Buses	0	0	0	0	0	0.5	1.2	0	4.5	0	26.3	0	0	4.1	0	0	3.7

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	93	39	1	133	22	0	18	1	41	18	143	0	1	162	336
08:15 AM	0	0	0	0	0	0	99	40	1	140	19	0	19	0	38	15	180	0	0	195	373
08:30 AM	0	0	0	0	0	0	89	31	5	125	25	0	18	0	43	38	147	0	0	185	353
08:45 AM	0	0	0	0	0	0	98	43	4	145	20	0	18	0	38	32	130	0	1	163	346
Total Volume	0	0	0	0	0	0	379	153	11	543	86	0	73	1	160	103	600	0	2	705	1408
% App. Total	0	0	0	0		0	69.8	28.2	2		53.8	0	45.6	0.6		14.6	85.1	0	0.3		
PHF	.000	.000	.000	.000	.000	.000	.957	.890	.550	.936	.860	.000	.961	.250	.930	.678	.833	.000	.500	.904	.944
Cars	0	0	0	0	0	0	365	141	11	517	75	0	45	1	121	93	562	0	2	657	1295
% Cars	0	0	0	0	0	0	96.3	92.2	100	95.2	87.2	0	61.6	100	75.6	90.3	93.7	0	100	93.2	92.0
Heavy Vehicles	0	0	0	0	0	0	12	11	0	23	8	0	7	0	15	10	19	0	0	29	67
% Heavy Vehicles	0	0	0	0	0	0	3.2	7.2	0	4.2	9.3	0	9.6	0	9.4	9.7	3.2	0	0	4.1	4.8
Buses	0	0	0	0	0	0	2	1	0	3	3	0	21	0	24	0	19	0	0	19	46
% Buses	0	0	0	0	0	0	0.5	0.7	0	0.6	3.5	0	28.8	0	15.0	0	3.2	0	0	2.7	3.3

N/S: Ped Walkway/ Ames Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 N
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	89	41	1	22	0	9	0	7	89	0	1	259
07:45 AM	0	0	0	0	0	95	38	2	12	0	14	0	10	95	0	0	266
Total	0	0	0	0	0	184	79	3	34	0	23	0	17	184	0	1	525
08:00 AM	0	0	0	0	0	90	35	1	19	0	12	1	17	135	0	1	311
08:15 AM	0	0	0	0	0	95	39	1	14	0	9	0	10	168	0	0	336
08:30 AM	0	0	0	0	0	86	29	5	23	0	12	0	35	138	0	0	328
08:45 AM	0	0	0	0	0	94	38	4	19	0	12	0	31	121	0	1	320
Total	0	0	0	0	0	365	141	11	75	0	45	1	93	562	0	2	1295
09:00 AM	0	0	0	0	0	74	37	2	15	0	8	0	29	119	0	1	285
09:15 AM	0	0	0	0	0	81	44	0	10	0	19	0	34	97	0	2	287
Grand Total	0	0	0	0	0	704	301	16	134	0	95	1	173	962	0	6	2392
Apprch %	0	0	0	0	0	69	29.5	1.6	58.3	0	41.3	0.4	15.2	84.3	0	0.5	
Total %	0	0	0	0	0	29.4	12.6	0.7	5.6	0	4	0	7.2	40.2	0	0.3	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	90	35	1	126	19	0	12	1	32	17	135	0	1	153	311
08:15 AM	0	0	0	0	0	0	95	39	1	135	14	0	9	0	23	10	168	0	0	178	336
08:30 AM	0	0	0	0	0	0	86	29	5	120	23	0	12	0	35	35	138	0	0	173	328
08:45 AM	0	0	0	0	0	0	94	38	4	136	19	0	12	0	31	31	121	0	1	153	320
Total Volume	0	0	0	0	0	0	365	141	11	517	75	0	45	1	121	93	562	0	2	657	1295
% App. Total	0	0	0	0		0	70.6	27.3	2.1		62	0	37.2	0.8		14.2	85.5	0	0.3		
PHF	.000	.000	.000	.000	.000	.000	.961	.904	.550	.950	.815	.000	.938	.250	.864	.664	.836	.000	.500	.923	.964

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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	3	2	0	0	0	1	0	0	7	0	0	13
07:45 AM	0	0	0	0	0	5	1	0	3	0	0	0	1	0	0	0	10
Total	0	0	0	0	0	8	3	0	3	0	1	0	1	7	0	0	23
08:00 AM	0	0	0	0	0	3	3	0	2	0	1	0	1	5	0	0	15
08:15 AM	0	0	0	0	0	2	1	0	4	0	3	0	5	5	0	0	20
08:30 AM	0	0	0	0	0	3	2	0	1	0	1	0	3	3	0	0	13
08:45 AM	0	0	0	0	0	4	5	0	1	0	2	0	1	6	0	0	19
Total	0	0	0	0	0	12	11	0	8	0	7	0	10	19	0	0	67
09:00 AM	0	0	0	0	0	4	1	0	1	0	6	0	1	4	0	0	17
09:15 AM	0	0	0	0	0	2	1	0	1	0	3	0	1	2	0	0	10
Grand Total	0	0	0	0	0	26	16	0	13	0	17	0	13	32	0	0	117
Apprch %	0	0	0	0	0	61.9	38.1	0	43.3	0	56.7	0	28.9	71.1	0	0	
Total %	0	0	0	0	0	22.2	13.7	0	11.1	0	14.5	0	11.1	27.4	0	0	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	2	1	0	3	4	0	3	0	7	5	5	0	0	10	20
08:30 AM	0	0	0	0	0	0	3	2	0	5	1	0	1	0	2	3	3	0	0	6	13
08:45 AM	0	0	0	0	0	0	4	5	0	9	1	0	2	0	3	1	6	0	0	7	19
09:00 AM	0	0	0	0	0	0	4	1	0	5	1	0	6	0	7	1	4	0	0	5	17
Total Volume	0	0	0	0	0	0	13	9	0	22	7	0	12	0	19	10	18	0	0	28	69
% App. Total	0	0	0	0		0	59.1	40.9	0		36.8	0	63.2	0		35.7	64.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.813	.450	.000	.611	.438	.000	.500	.000	.679	.500	.750	.000	.000	.700	.863

N/S: Ped Walkway/ Ames Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Buses

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	1	0	0	0	4	0	0	6	0	0	11
07:45 AM	0	0	0	0	0	1	1	0	1	0	7	0	0	6	0	0	16
Total	0	0	0	0	0	1	2	0	1	0	11	0	0	12	0	0	27
08:00 AM	0	0	0	0	0	0	1	0	1	0	5	0	0	3	0	0	10
08:15 AM	0	0	0	0	0	2	0	0	1	0	7	0	0	7	0	0	17
08:30 AM	0	0	0	0	0	0	0	0	1	0	5	0	0	6	0	0	12
08:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	3	0	0	7
Total	0	0	0	0	0	2	1	0	3	0	21	0	0	19	0	0	46
09:00 AM	0	0	0	0	0	0	1	0	2	0	5	0	0	8	0	0	16
09:15 AM	0	0	0	0	0	1	0	0	1	0	3	0	0	3	0	0	8
Grand Total	0	0	0	0	0	4	4	0	7	0	40	0	0	42	0	0	97
Apprch %	0	0	0	0	0	50	50	0	14.9	0	85.1	0	0	100	0	0	
Total %	0	0	0	0	0	4.1	4.1	0	7.2	0	41.2	0	0	43.3	0	0	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	0	1	1	0	2	1	0	7	0	8	0	6	0	0	6	16
08:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	5	0	6	0	3	0	0	3	10
08:15 AM	0	0	0	0	0	0	2	0	0	2	1	0	7	0	8	0	7	0	0	7	17
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	5	0	6	0	6	0	0	6	12
Total Volume	0	0	0	0	0	0	3	2	0	5	4	0	24	0	28	0	22	0	0	22	55
% App. Total	0	0	0	0		0	60	40	0		14.3	0	85.7	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.375	.500	.000	.625	1.00	.000	.857	.000	.875	.000	.786	.000	.000	.786	.809

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Groups Printed- Peds and Bicycles

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	4	17	0	1	0	9	42	3	0	0	106	41	0	28	0	60	13	324
07:45 AM	0	0	0	0	17	0	4	3	9	71	0	0	0	160	33	0	31	0	73	15	416
Total	0	0	0	4	34	0	5	3	18	113	3	0	0	266	74	0	59	0	133	28	740
08:00 AM	0	0	0	0	7	0	3	1	13	45	1	0	1	139	104	0	53	0	88	34	489
08:15 AM	0	0	0	0	6	0	6	2	18	58	1	0	1	163	79	0	62	0	105	37	538
08:30 AM	0	0	0	24	21	0	1	1	28	35	2	0	1	109	51	5	73	0	68	16	435
08:45 AM	0	0	0	9	19	0	1	0	23	44	6	0	0	90	56	1	92	0	49	16	406
Total	0	0	0	33	53	0	11	4	82	182	10	0	3	501	290	6	280	0	310	103	1868
09:00 AM	0	0	0	2	18	0	4	3	16	26	7	0	1	82	59	4	64	0	52	18	356
09:15 AM	0	0	0	6	22	0	6	1	24	22	5	0	1	110	38	0	52	0	53	34	374
Grand Total	0	0	0	45	127	0	26	11	140	343	25	0	5	959	461	10	455	0	548	183	3338
Apprch %	0	0	0	26.2	73.8	0	5	2.1	26.9	66	1.7	0	0.3	66.1	31.8	0.8	38	0	45.8	15.3	
Total %	0	0	0	1.3	3.8	0	0.8	0.3	4.2	10.3	0.7	0	0.1	28.7	13.8	0.3	13.6	0	16.4	5.5	

	Ped Walkway From North						Broadway From East						Ames Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:45 AM																									
07:45 AM	0	0	0	0	17	17	0	4	3	9	71	87	0	0	0	160	33	193	0	31	0	73	15	119	416
08:00 AM	0	0	0	0	7	7	0	3	1	13	45	62	1	0	1	139	104	245	0	53	0	88	34	175	489
08:15 AM	0	0	0	0	6	6	0	6	2	18	58	84	1	0	1	163	79	244	0	62	0	105	37	204	538
08:30 AM	0	0	0	24	21	45	0	1	1	28	35	65	2	0	1	109	51	163	5	73	0	68	16	162	435
Total Volume	0	0	0	24	51	75	0	14	7	68	209	298	4	0	3	571	267	845	5	219	0	334	102	660	1878
% App. Total	0	0	0	32	68		0	4.7	2.3	22.8	70.1		0.5	0	0.4	67.6	31.6		0.8	33.2	0	50.6	15.5		
PHF	.000	.000	.000	.250	.607	.417	.000	.583	.583	.607	.736	.856	.500	.000	.750	.876	.642	.862	.250	.750	.000	.795	.689	.809	.873

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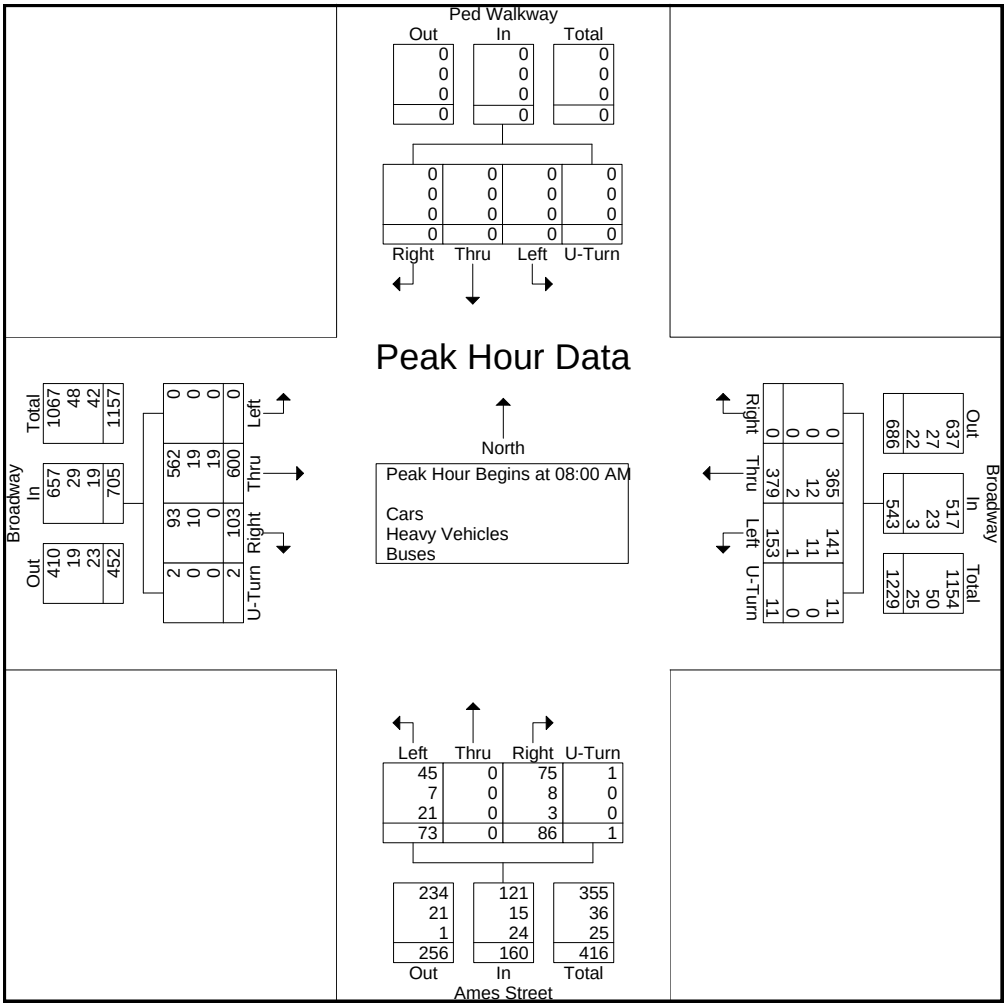
	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	93	39	1	133	22	0	18	1	41	18	143	0	1	162	336
08:15 AM	0	0	0	0	0	0	99	40	1	140	19	0	19	0	38	15	180	0	0	195	373
08:30 AM	0	0	0	0	0	0	89	31	5	125	25	0	18	0	43	38	147	0	0	185	353
08:45 AM	0	0	0	0	0	0	98	43	4	145	20	0	18	0	38	32	130	0	1	163	346
Total Volume	0	0	0	0	0	0	379	153	11	543	86	0	73	1	160	103	600	0	2	705	1408
% App. Total	0	0	0	0		0	69.8	28.2	2		53.8	0	45.6	0.6		14.6	85.1	0	0.3		
PHF	.000	.000	.000	.000	.000	.000	.957	.890	.550	.936	.860	.000	.961	.250	.930	.678	.833	.000	.500	.904	.944
Cars	0	0	0	0	0	0	365	141	11	517	75	0	45	1	121	93	562	0	2	657	1295
% Cars	0	0	0	0	0	0	96.3	92.2	100	95.2	87.2	0	61.6	100	75.6	90.3	93.7	0	100	93.2	92.0
Heavy Vehicles	0	0	0	0	0	0	12	11	0	23	8	0	7	0	15	10	19	0	0	29	67
% Heavy Vehicles	0	0	0	0	0	0	3.2	7.2	0	4.2	9.3	0	9.6	0	9.4	9.7	3.2	0	0	4.1	4.8
Buses	0	0	0	0	0	0	2	1	0	3	3	0	21	0	24	0	19	0	0	19	46
% Buses	0	0	0	0	0	0	0.5	0.7	0	0.6	3.5	0	28.8	0	15.0	0	3.2	0	0	2.7	3.3



N/S: Ped Walkway/ Ames Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 NN
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	88	32	0	40	0	27	0	14	130	0	0	331
04:45 PM	0	0	0	0	0	88	19	1	38	0	36	0	10	123	0	2	317
Total	0	0	0	0	0	176	51	1	78	0	63	0	24	253	0	2	648
05:00 PM	0	0	0	0	0	89	29	0	38	0	42	0	14	154	0	0	366
05:15 PM	0	0	0	0	0	89	28	0	30	0	35	1	16	148	0	1	348
05:30 PM	0	0	0	0	0	77	36	2	27	0	27	0	18	111	0	0	298
05:45 PM	0	0	0	0	0	76	33	3	21	0	33	1	13	126	0	1	307
Total	0	0	0	0	0	331	126	5	116	0	137	2	61	539	0	2	1319
06:00 PM	0	0	0	0	0	90	22	3	28	0	28	3	13	121	0	0	308
06:15 PM	0	0	0	0	0	89	23	0	33	0	27	0	18	107	0	0	297
Grand Total	0	0	0	0	0	686	222	9	255	0	255	5	116	1020	0	4	2572
Apprch %	0	0	0	0	0	74.8	24.2	1	49.5	0	49.5	1	10.2	89.5	0	0.4	
Total %	0	0	0	0	0	26.7	8.6	0.3	9.9	0	9.9	0.2	4.5	39.7	0	0.2	
Cars	0	0	0	0	0	675	215	9	239	0	217	5	101	963	0	4	2428
% Cars	0	0	0	0	0	98.4	96.8	100	93.7	0	85.1	100	87.1	94.4	0	100	94.4
Heavy Vehicles	0	0	0	0	0	9	5	0	6	0	2	0	1	10	0	0	33
% Heavy Vehicles	0	0	0	0	0	1.3	2.3	0	2.4	0	0.8	0	0.9	1	0	0	1.3
Buses	0	0	0	0	0	2	2	0	10	0	36	0	14	47	0	0	111
% Buses	0	0	0	0	0	0.3	0.9	0	3.9	0	14.1	0	12.1	4.6	0	0	4.3

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	88	32	0	120	40	0	27	0	67	14	130	0	0	144	331
04:45 PM	0	0	0	0	0	0	88	19	1	108	38	0	36	0	74	10	123	0	2	135	317
05:00 PM	0	0	0	0	0	0	89	29	0	118	38	0	42	0	80	14	154	0	0	168	366
05:15 PM	0	0	0	0	0	0	89	28	0	117	30	0	35	1	66	16	148	0	1	165	348
Total Volume	0	0	0	0	0	0	354	108	1	463	146	0	140	1	287	54	555	0	3	612	1362
% App. Total	0	0	0	0		0	76.5	23.3	0.2		50.9	0	48.8	0.3		8.8	90.7	0	0.5		
PHF	.000	.000	.000	.000	.000	.000	.994	.844	.250	.965	.913	.000	.833	.250	.897	.844	.901	.000	.375	.911	.930
Cars	0	0	0	0	0	0	346	102	1	449	139	0	121	1	261	48	527	0	3	578	1288
% Cars	0	0	0	0	0	0	97.7	94.4	100	97.0	95.2	0	86.4	100	90.9	88.9	95.0	0	100	94.4	94.6
Heavy Vehicles	0	0	0	0	0	0	7	4	0	11	2	0	1	0	3	0	6	0	0	6	20
% Heavy Vehicles	0	0	0	0	0	0	2.0	3.7	0	2.4	1.4	0	0.7	0	1.0	0	1.1	0	0	1.0	1.5
Buses	0	0	0	0	0	0	1	2	0	3	5	0	18	0	23	6	22	0	0	28	54
% Buses	0	0	0	0	0	0	0.3	1.9	0	0.6	3.4	0	12.9	0	8.0	11.1	4.0	0	0	4.6	4.0

N/S: Ped Walkway/ Ames Street
E/W: Broadway
City, State: Cambridge, MA
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 NN
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	86	28	0	37	0	20	0	13	126	0	0	310
04:45 PM	0	0	0	0	0	86	19	1	36	0	33	0	9	113	0	2	299
Total	0	0	0	0	0	172	47	1	73	0	53	0	22	239	0	2	609
05:00 PM	0	0	0	0	0	86	27	0	38	0	37	0	12	146	0	0	346
05:15 PM	0	0	0	0	0	88	28	0	28	0	31	1	14	142	0	1	333
05:30 PM	0	0	0	0	0	76	36	2	25	0	22	0	16	103	0	0	280
05:45 PM	0	0	0	0	0	75	33	3	20	0	30	1	11	119	0	1	293
Total	0	0	0	0	0	325	124	5	111	0	120	2	53	510	0	2	1252
06:00 PM	0	0	0	0	0	89	21	3	24	0	23	3	11	113	0	0	287
06:15 PM	0	0	0	0	0	89	23	0	31	0	21	0	15	101	0	0	280
Grand Total	0	0	0	0	0	675	215	9	239	0	217	5	101	963	0	4	2428
Apprch %	0	0	0	0	0	75.1	23.9	1	51.8	0	47.1	1.1	9.5	90.2	0	0.4	
Total %	0	0	0	0	0	27.8	8.9	0.4	9.8	0	8.9	0.2	4.2	39.7	0	0.2	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	86	28	0	114	37	0	20	0	57	13	126	0	0	139	310
04:45 PM	0	0	0	0	0	0	86	19	1	106	36	0	33	0	69	9	113	0	2	124	299
05:00 PM	0	0	0	0	0	0	86	27	0	113	38	0	37	0	75	12	146	0	0	158	346
05:15 PM	0	0	0	0	0	0	88	28	0	116	28	0	31	1	60	14	142	0	1	157	333
Total Volume	0	0	0	0	0	0	346	102	1	449	139	0	121	1	261	48	527	0	3	578	1288
% App. Total	0	0	0	0		0	77.1	22.7	0.2		53.3	0	46.4	0.4		8.3	91.2	0	0.5		
PHF	.000	.000	.000	.000	.000	.000	.983	.911	.250	.968	.914	.000	.818	.250	.870	.857	.902	.000	.375	.915	.931

N/S: Ped Walkway/ Ames Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	2	3	0	1	0	1	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
Total	0	0	0	0	0	4	3	0	1	0	1	0	0	3	0	0	12
05:00 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	5
05:15 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	4
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	4	1	0	2	0	0	0	1	6	0	0	14
06:00 PM	0	0	0	0	0	1	1	0	2	0	0	0	0	1	0	0	5
06:15 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Grand Total	0	0	0	0	0	9	5	0	6	0	2	0	1	10	0	0	33
Apprch %	0	0	0	0	0	64.3	35.7	0	75	0	25	0	9.1	90.9	0	0	
Total %	0	0	0	0	0	27.3	15.2	0	18.2	0	6.1	0	3	30.3	0	0	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	2	3	0	5	1	0	1	0	2	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
05:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	5
05:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	3
Total Volume	0	0	0	0	0	0	7	4	0	11	2	0	1	0	3	0	6	0	0	6	20
% App. Total	0	0	0	0		0	63.6	36.4	0		66.7	0	33.3	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.875	.333	.000	.550	.500	.000	.250	.000	.375	.000	.500	.000	.000	.500	.714

N/S: Ped Walkway/ Ames Street
E/W: Broadway
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Start Date : 5/16/2013
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Groups Printed- Buses

	Ped Walkway From North				Broadway From East				Ames Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	1	0	2	0	6	0	1	4	0	0	14
04:45 PM	0	0	0	0	0	0	0	0	2	0	3	0	1	7	0	0	13
Total	0	0	0	0	0	0	1	0	4	0	9	0	2	11	0	0	27
05:00 PM	0	0	0	0	0	1	1	0	0	0	5	0	2	6	0	0	15
05:15 PM	0	0	0	0	0	0	0	0	1	0	4	0	2	5	0	0	12
05:30 PM	0	0	0	0	0	1	0	0	1	0	5	0	1	6	0	0	14
05:45 PM	0	0	0	0	0	0	0	0	1	0	3	0	2	6	0	0	12
Total	0	0	0	0	0	2	1	0	3	0	17	0	7	23	0	0	53
06:00 PM	0	0	0	0	0	0	0	0	2	0	5	0	2	7	0	0	16
06:15 PM	0	0	0	0	0	0	0	0	1	0	5	0	3	6	0	0	15
Grand Total	0	0	0	0	0	2	2	0	10	0	36	0	14	47	0	0	111
Apprch %	0	0	0	0	0	50	50	0	21.7	0	78.3	0	23	77	0	0	
Total %	0	0	0	0	0	1.8	1.8	0	9	0	32.4	0	12.6	42.3	0	0	

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	5	0	6	1	6	0	0	7	14
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	2	6	0	0	8	12
06:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	5	0	7	2	7	0	0	9	16
06:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	5	0	6	3	6	0	0	9	15
Total Volume	0	0	0	0	0	0	1	0	0	1	5	0	18	0	23	8	25	0	0	33	57
% App. Total	0	0	0	0		0	100	0	0		21.7	0	78.3	0		24.2	75.8	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.625	.000	.900	.000	.821	.667	.893	.000	.000	.917	.891

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Groups Printed- Peds and Bicycles

	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	15	14	0	24	1	44	16	1	0	4	34	163	0	4	0	17	39	376
04:45 PM	0	0	0	8	10	0	31	1	93	11	2	0	6	77	263	0	10	0	17	32	561
Total	0	0	0	23	24	0	55	2	137	27	3	0	10	111	426	0	14	0	34	71	937
05:00 PM	0	0	0	6	8	0	38	4	112	23	1	0	9	35	182	0	17	0	18	46	499
05:15 PM	0	0	0	5	2	0	54	6	71	36	2	0	2	65	131	4	13	0	17	36	444
05:30 PM	0	0	0	17	15	0	72	3	33	24	1	0	9	53	83	0	11	0	14	41	376
05:45 PM	0	0	0	9	19	0	56	7	31	17	3	0	6	63	71	0	17	0	17	40	356
Total	0	0	0	37	44	0	220	20	247	100	7	0	26	216	467	4	58	0	66	163	1675
06:00 PM	0	0	0	4	9	0	51	3	37	16	2	0	12	46	69	0	9	0	12	32	302
06:15 PM	0	0	0	7	10	0	54	6	32	16	4	0	7	53	56	0	6	0	13	20	284
Grand Total	0	0	0	71	87	0	380	31	453	159	16	0	55	426	1018	4	87	0	125	286	3198
Apprch %	0	0	0	44.9	55.1	0	37.1	3	44.3	15.5	1.1	0	3.6	28.1	67.2	0.8	17.3	0	24.9	57	
Total %	0	0	0	2.2	2.7	0	11.9	1	14.2	5	0.5	0	1.7	13.3	31.8	0.1	2.7	0	3.9	8.9	

	Ped Walkway From North						Broadway From East						Ames Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
04:30 PM	0	0	0	15	14	29	0	24	1	44	16	85	1	0	4	34	163	202	0	4	0	17	39	60	376
04:45 PM	0	0	0	8	10	18	0	31	1	93	11	136	2	0	6	77	263	348	0	10	0	17	32	59	561
05:00 PM	0	0	0	6	8	14	0	38	4	112	23	177	1	0	9	35	182	227	0	17	0	18	46	81	499
05:15 PM	0	0	0	5	2	7	0	54	6	71	36	167	2	0	2	65	131	200	4	13	0	17	36	70	444
Total Volume	0	0	0	34	34	68	0	147	12	320	86	565	6	0	21	211	739	977	4	44	0	69	153	270	1880
% App. Total	0	0	0	50	50		0	26	2.1	56.6	15.2		0.6	0	2.1	21.6	75.6		1.5	16.3	0	25.6	56.7		
PHF	.000	.000	.000	.567	.607	.586	.000	.681	.500	.714	.597	.798	.750	.000	.583	.685	.702	.702	.250	.647	.000	.958	.832	.833	.838

N/S: Ped Walkway/ Ames Street
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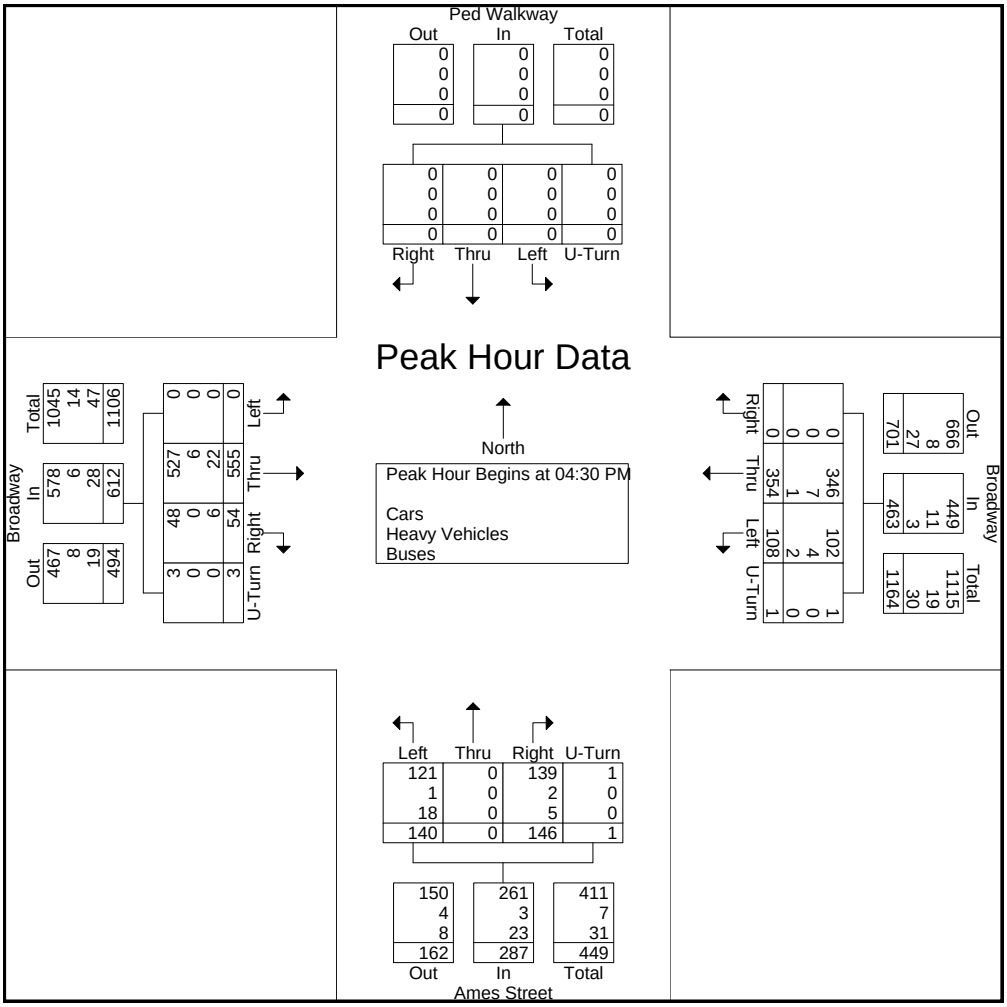
	Ped Walkway From North					Broadway From East					Ames Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	88	32	0	120	40	0	27	0	67	14	130	0	0	144	331
04:45 PM	0	0	0	0	0	0	88	19	1	108	38	0	36	0	74	10	123	0	2	135	317
05:00 PM	0	0	0	0	0	0	89	29	0	118	38	0	42	0	80	14	154	0	0	168	366
05:15 PM	0	0	0	0	0	0	89	28	0	117	30	0	35	1	66	16	148	0	1	165	348
Total Volume	0	0	0	0	0	0	354	108	1	463	146	0	140	1	287	54	555	0	3	612	1362
% App. Total	0	0	0	0		0	76.5	23.3	0.2		50.9	0	48.8	0.3		8.8	90.7	0	0.5		
PHF	.000	.000	.000	.000	.000	.000	.994	.844	.250	.965	.913	.000	.833	.250	.897	.844	.901	.000	.375	.911	.930
Cars	0	0	0	0	0	0	346	102	1	449	139	0	121	1	261	48	527	0	3	578	1288
% Cars	0	0	0	0	0	0	97.7	94.4	100	97.0	95.2	0	86.4	100	90.9	88.9	95.0	0	100	94.4	94.6
Heavy Vehicles	0	0	0	0	0	0	7	4	0	11	2	0	1	0	3	0	6	0	0	6	20
% Heavy Vehicles	0	0	0	0	0	0	2.0	3.7	0	2.4	1.4	0	0.7	0	1.0	0	1.1	0	0	1.0	1.5
Buses	0	0	0	0	0	0	1	2	0	3	5	0	18	0	23	6	22	0	0	28	54
% Buses	0	0	0	0	0	0	0.3	1.9	0	0.6	3.4	0	12.9	0	8.0	11.1	4.0	0	0	4.6	4.0



N/S: 3rd Street
E: Broad Canal Way
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	69	1	0	1	1	0	4	95	0	171
07:45 AM	80	6	0	5	2	0	5	90	0	188
Total	149	7	0	6	3	0	9	185	0	359
08:00 AM	67	3	0	5	2	0	4	126	0	207
08:15 AM	69	4	1	4	1	0	6	124	0	209
08:30 AM	74	10	0	11	3	0	6	120	2	226
08:45 AM	75	9	0	7	2	0	4	117	0	214
Total	285	26	1	27	8	0	20	487	2	856
09:00 AM	82	11	0	7	1	0	9	117	1	228
09:15 AM	87	13	1	8	2	0	10	91	1	213
Grand Total	603	57	2	48	14	0	48	880	4	1656
Apprch %	91.1	8.6	0.3	77.4	22.6	0	5.2	94.4	0.4	
Total %	36.4	3.4	0.1	2.9	0.8	0	2.9	53.1	0.2	
Cars	575	56	2	44	11	0	43	850	2	1583
% Cars	95.4	98.2	100	91.7	78.6	0	89.6	96.6	50	95.6
Heavy Vehicles	22	1	0	4	3	0	5	24	2	61
% Heavy Vehicles	3.6	1.8	0	8.3	21.4	0	10.4	2.7	50	3.7
Buses	6	0	0	0	0	0	0	6	0	12
% Buses	1	0	0	0	0	0	0	0.7	0	0.7

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	74	10	0	84	11	3	0	14	6	120	2	128	226
08:45 AM	75	9	0	84	7	2	0	9	4	117	0	121	214
09:00 AM	82	11	0	93	7	1	0	8	9	117	1	127	228
09:15 AM	87	13	1	101	8	2	0	10	10	91	1	102	213
Total Volume	318	43	1	362	33	8	0	41	29	445	4	478	881
% App. Total	87.8	11.9	0.3		80.5	19.5	0		6.1	93.1	0.8		
PHF	.914	.827	.250	.896	.750	.667	.000	.732	.725	.927	.500	.934	.966
Cars	304	43	1	348	30	6	0	36	28	427	2	457	841
% Cars	95.6	100	100	96.1	90.9	75.0	0	87.8	96.6	96.0	50.0	95.6	95.5
Heavy Vehicles	12	0	0	12	3	2	0	5	1	15	2	18	35
% Heavy Vehicles	3.8	0	0	3.3	9.1	25.0	0	12.2	3.4	3.4	50.0	3.8	4.0
Buses	2	0	0	2	0	0	0	0	0	3	0	3	5
% Buses	0.6	0	0	0.6	0	0	0	0	0	0.7	0	0.6	0.6

N/S: 3rd Street
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Groups Printed- Cars

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	66	1	0	1	1	0	3	92	0	164
07:45 AM	74	5	0	4	2	0	5	87	0	177
Total	140	6	0	5	3	0	8	179	0	341
08:00 AM	64	3	0	5	1	0	2	123	0	198
08:15 AM	67	4	1	4	1	0	5	121	0	203
08:30 AM	70	10	0	9	3	0	6	115	2	215
08:45 AM	74	9	0	7	0	0	4	113	0	207
Total	275	26	1	25	5	0	17	472	2	823
09:00 AM	77	11	0	6	1	0	8	113	0	216
09:15 AM	83	13	1	8	2	0	10	86	0	203
Grand Total	575	56	2	44	11	0	43	850	2	1583
Apprch %	90.8	8.8	0.3	80	20	0	4.8	95	0.2	
Total %	36.3	3.5	0.1	2.8	0.7	0	2.7	53.7	0.1	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:15 AM													
08:15 AM	67	4	1	72	4	1	0	5	5	121	0	126	203
08:30 AM	70	10	0	80	9	3	0	12	6	115	2	123	215
08:45 AM	74	9	0	83	7	0	0	7	4	113	0	117	207
09:00 AM	77	11	0	88	6	1	0	7	8	113	0	121	216
Total Volume	288	34	1	323	26	5	0	31	23	462	2	487	841
% App. Total	89.2	10.5	0.3		83.9	16.1	0		4.7	94.9	0.4		
PHF	.935	.773	.250	.918	.722	.417	.000	.646	.719	.955	.250	.966	.973

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Groups Printed- Heavy Vehicles

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	2	0	0	0	0	0	1	2	0	5
07:45 AM	5	1	0	1	0	0	0	3	0	10
Total	7	1	0	1	0	0	1	5	0	15
08:00 AM	2	0	0	0	1	0	2	3	0	8
08:15 AM	1	0	0	0	0	0	1	1	0	3
08:30 AM	4	0	0	2	0	0	0	5	0	11
08:45 AM	1	0	0	0	2	0	0	4	0	7
Total	8	0	0	2	3	0	3	13	0	29
09:00 AM	4	0	0	1	0	0	1	3	1	10
09:15 AM	3	0	0	0	0	0	0	3	1	7
Grand Total	22	1	0	4	3	0	5	24	2	61
Apprch %	95.7	4.3	0	57.1	42.9	0	16.1	77.4	6.5	
Total %	36.1	1.6	0	6.6	4.9	0	8.2	39.3	3.3	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	4	0	0	4	2	0	0	2	0	5	0	5	11
08:45 AM	1	0	0	1	0	2	0	2	0	4	0	4	7
09:00 AM	4	0	0	4	1	0	0	1	1	3	1	5	10
09:15 AM	3	0	0	3	0	0	0	0	0	3	1	4	7
Total Volume	12	0	0	12	3	2	0	5	1	15	2	18	35
% App. Total	100	0	0		60	40	0		5.6	83.3	11.1		
PHF	.750	.000	.000	.750	.375	.250	.000	.625	.250	.750	.500	.900	.795

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Groups Printed- Buses

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	0	0	1	0	2
07:45 AM	1	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	0	0	0	1	0	3
08:00 AM	1	0	0	0	0	0	0	0	0	1
08:15 AM	1	0	0	0	0	0	0	2	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	0	2	0	4
09:00 AM	1	0	0	0	0	0	0	1	0	2
09:15 AM	1	0	0	0	0	0	0	2	0	3
Grand Total	6	0	0	0	0	0	0	6	0	12
Apprch %	100	0	0	0	0	0	0	100	0	
Total %	50	0	0	0	0	0	0	50	0	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	4	0	0	4	0	0	0	0	0	3	0	3	7
% App. Total	100	0	0		0	0	0		0	100	0		
PHF	1.00	.000	.000	1.00	.000	.000	.000	.000	.000	.375	.000	.375	.583

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Groups Printed- Peds and Bicycles

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
07:30 AM	4	0	2	3	0	0	24	34	2	6	0	0	75
07:45 AM	9	0	2	2	0	1	26	60	2	3	0	0	105
Total	13	0	4	5	0	1	50	94	4	9	0	0	180
08:00 AM	7	0	1	1	1	0	36	47	1	9	0	0	103
08:15 AM	10	0	4	4	0	0	37	68	1	9	0	0	133
08:30 AM	10	2	7	4	1	0	57	82	2	7	0	0	172
08:45 AM	7	2	4	8	0	0	52	107	4	8	1	0	193
Total	34	4	16	17	2	0	182	304	8	33	1	0	601
09:00 AM	4	0	7	3	0	0	34	86	2	2	0	0	138
09:15 AM	4	0	7	3	0	0	37	81	5	6	0	0	143
Grand Total	55	4	34	28	2	1	303	565	19	50	1	0	1062
Apprch %	45.5	3.3	28.1	23.1	0.2	0.1	34.8	64.9	27.1	71.4	1.4	0	
Total %	5.2	0.4	3.2	2.6	0.2	0.1	28.5	53.2	1.8	4.7	0.1	0	

	3rd Street From North					Broad Canal Way From East					3rd Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	10	2	7	4	23	1	0	57	82	140	2	7	0	0	9	172
08:45 AM	7	2	4	8	21	0	0	52	107	159	4	8	1	0	13	193
09:00 AM	4	0	7	3	14	0	0	34	86	120	2	2	0	0	4	138
09:15 AM	4	0	7	3	14	0	0	37	81	118	5	6	0	0	11	143
Total Volume	25	4	25	18	72	1	0	180	356	537	13	23	1	0	37	646
% App. Total	34.7	5.6	34.7	25		0.2	0	33.5	66.3		35.1	62.2	2.7	0		
PHF	.625	.500	.893	.563	.783	.250	.000	.789	.832	.844	.650	.719	.250	.000	.712	.837

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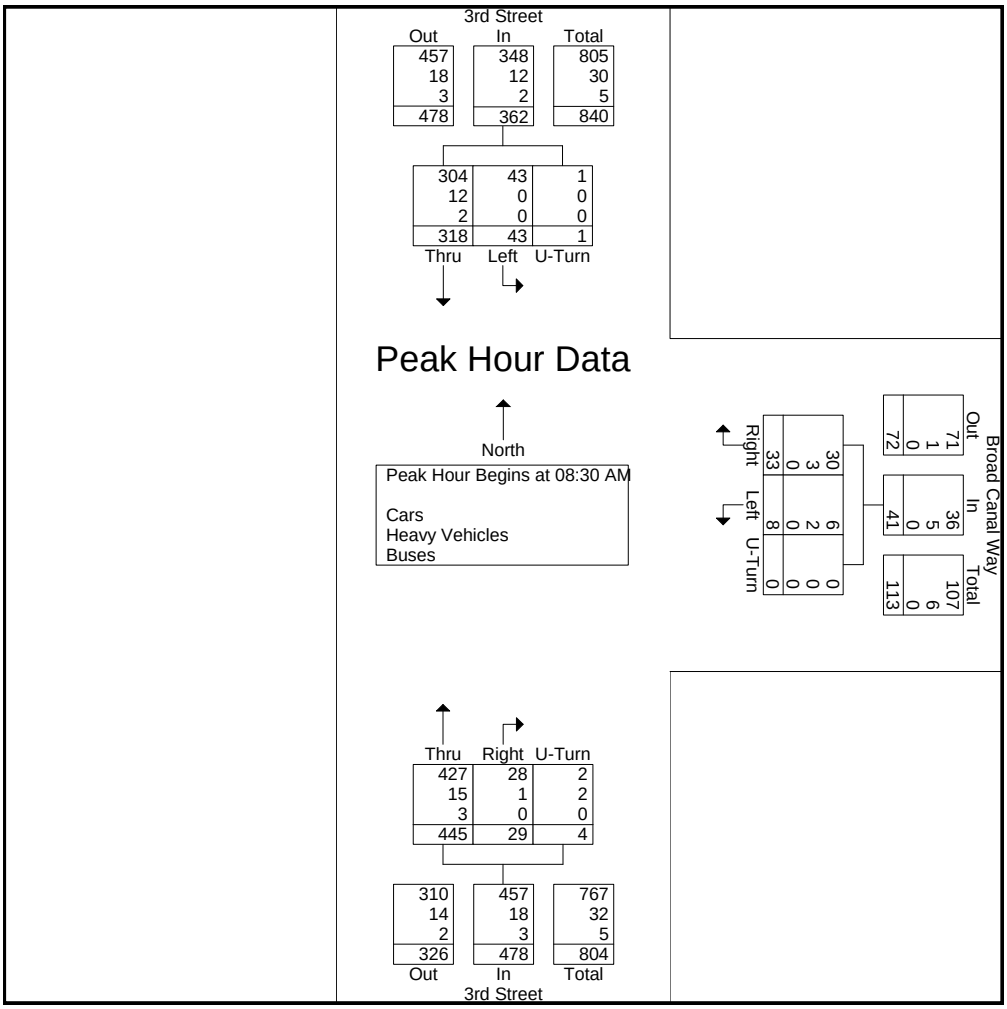
	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	74	10	0	84	11	3	0	14	6	120	2	128	226
08:45 AM	75	9	0	84	7	2	0	9	4	117	0	121	214
09:00 AM	82	11	0	93	7	1	0	8	9	117	1	127	228
09:15 AM	87	13	1	101	8	2	0	10	10	91	1	102	213
Total Volume	318	43	1	362	33	8	0	41	29	445	4	478	881
% App. Total	87.8	11.9	0.3		80.5	19.5	0		6.1	93.1	0.8		
PHF	.914	.827	.250	.896	.750	.667	.000	.732	.725	.927	.500	.934	.966
Cars	304	43	1	348	30	6	0	36	28	427	2	457	841
% Cars	95.6	100	100	96.1	90.9	75.0	0	87.8	96.6	96.0	50.0	95.6	95.5
Heavy Vehicles	12	0	0	12	3	2	0	5	1	15	2	18	35
% Heavy Vehicles	3.8	0	0	3.3	9.1	25.0	0	12.2	3.4	3.4	50.0	3.8	4.0
Buses	2	0	0	2	0	0	0	0	0	3	0	3	5
% Buses	0.6	0	0	0.6	0	0	0	0	0	0.7	0	0.6	0.6



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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	100	2	0	10	7	0	1	91	1	212
04:45 PM	110	1	0	12	12	0	4	83	0	222
Total	210	3	0	22	19	0	5	174	1	434
05:00 PM	119	4	0	19	13	0	2	103	0	260
05:15 PM	107	2	0	15	9	0	4	89	0	226
05:30 PM	100	6	0	9	11	0	2	91	0	219
05:45 PM	90	3	0	14	10	0	1	90	0	208
Total	416	15	0	57	43	0	9	373	0	913
06:00 PM	93	1	0	11	6	0	6	89	0	206
06:15 PM	77	3	0	13	15	0	1	90	0	199
Grand Total	796	22	0	103	83	0	21	726	1	1752
Apprch %	97.3	2.7	0	55.4	44.6	0	2.8	97.1	0.1	
Total %	45.4	1.3	0	5.9	4.7	0	1.2	41.4	0.1	
Cars	784	22	0	102	81	0	21	709	1	1720
% Cars	98.5	100	0	99	97.6	0	100	97.7	100	98.2
Heavy Vehicles	11	0	0	1	0	0	0	10	0	22
% Heavy Vehicles	1.4	0	0	1	0	0	0	1.4	0	1.3
Buses	1	0	0	0	2	0	0	7	0	10
% Buses	0.1	0	0	0	2.4	0	0	1	0	0.6

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	110	1	0	111	12	12	0	24	4	83	0	87	222
05:00 PM	119	4	0	123	19	13	0	32	2	103	0	105	260
05:15 PM	107	2	0	109	15	9	0	24	4	89	0	93	226
05:30 PM	100	6	0	106	9	11	0	20	2	91	0	93	219
Total Volume	436	13	0	449	55	45	0	100	12	366	0	378	927
% App. Total	97.1	2.9	0		55	45	0		3.2	96.8	0		
PHF	.916	.542	.000	.913	.724	.865	.000	.781	.750	.888	.000	.900	.891
Cars	432	13	0	445	55	43	0	98	12	355	0	367	910
% Cars	99.1	100	0	99.1	100	95.6	0	98.0	100	97.0	0	97.1	98.2
Heavy Vehicles	4	0	0	4	0	0	0	0	0	6	0	6	10
% Heavy Vehicles	0.9	0	0	0.9	0	0	0	0	0	1.6	0	1.6	1.1
Buses	0	0	0	0	0	2	0	2	0	5	0	5	7
% Buses	0	0	0	0	0	4.4	0	2.0	0	1.4	0	1.3	0.8

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Groups Printed- Cars

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	98	2	0	10	7	0	1	89	1	208
04:45 PM	108	1	0	12	12	0	4	79	0	216
Total	206	3	0	22	19	0	5	168	1	424
05:00 PM	119	4	0	19	12	0	2	102	0	258
05:15 PM	106	2	0	15	8	0	4	86	0	221
05:30 PM	99	6	0	9	11	0	2	88	0	215
05:45 PM	85	3	0	13	10	0	1	88	0	200
Total	409	15	0	56	41	0	9	364	0	894
06:00 PM	92	1	0	11	6	0	6	89	0	205
06:15 PM	77	3	0	13	15	0	1	88	0	197
Grand Total	784	22	0	102	81	0	21	709	1	1720
Apprch %	97.3	2.7	0	55.7	44.3	0	2.9	97	0.1	
Total %	45.6	1.3	0	5.9	4.7	0	1.2	41.2	0.1	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	108	1	0	109	12	12	0	24	4	79	0	83	216
05:00 PM	119	4	0	123	19	12	0	31	2	102	0	104	258
05:15 PM	106	2	0	108	15	8	0	23	4	86	0	90	221
05:30 PM	99	6	0	105	9	11	0	20	2	88	0	90	215
Total Volume	432	13	0	445	55	43	0	98	12	355	0	367	910
% App. Total	97.1	2.9	0		56.1	43.9	0		3.3	96.7	0		
PHF	.908	.542	.000	.904	.724	.896	.000	.790	.750	.870	.000	.882	.882

N/S: 3rd Street
E: Broad Canal Way
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	2	0	0	0	0	0	0	0	0	2
04:45 PM	2	0	0	0	0	0	0	1	0	3
Total	4	0	0	0	0	0	0	1	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	0	0	0	0	2	0	3
05:30 PM	1	0	0	0	0	0	0	3	0	4
05:45 PM	4	0	0	1	0	0	0	2	0	7
Total	6	0	0	1	0	0	0	7	0	14
06:00 PM	1	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	2	0	2
Grand Total	11	0	0	1	0	0	0	10	0	22
Apprch %	100	0	0	100	0	0	0	100	0	
Total %	50	0	0	4.5	0	0	0	45.5	0	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
05:30 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
05:45 PM	4	0	0	4	1	0	0	1	0	2	0	2	7
06:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	7	0	0	7	1	0	0	1	0	7	0	7	15
% App. Total	100	0	0		100	0	0		0	100	0		
PHF	.438	.000	.000	.438	.250	.000	.000	.250	.000	.583	.000	.583	.536

N/S: 3rd Street
E: Broad Canal Way
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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File Name : 133347 OO
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Buses

	3rd Street From North			Broad Canal Way From East			3rd Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	2	0	2
04:45 PM	0	0	0	0	0	0	0	3	0	3
Total	0	0	0	0	0	0	0	5	0	5
05:00 PM	0	0	0	0	1	0	0	1	0	2
05:15 PM	0	0	0	0	1	0	0	1	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	2	0	0	2	0	5
06:00 PM	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	2	0	0	7	0	10
Apprch %	100	0	0	0	100	0	0	100	0	
Total %	10	0	0	0	20	0	0	70	0	

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
05:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	2
Total Volume	0	0	0	0	0	2	0	2	0	7	0	7	9
% App. Total	0	0	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.583	.000	.583	.750

N/S: 3rd Street
E: Broad Canal Way
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Peds and Bicycles

	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
04:30 PM	8	1	5	4	0	1	61	36	1	3	0	0	120
04:45 PM	5	0	3	3	0	4	67	46	0	8	0	0	136
Total	13	1	8	7	0	5	128	82	1	11	0	0	256
05:00 PM	8	0	5	6	0	0	94	72	1	13	0	0	199
05:15 PM	9	0	4	10	2	0	99	87	1	10	0	0	222
05:30 PM	8	0	1	2	1	3	62	73	0	14	4	1	169
05:45 PM	11	0	5	2	0	4	68	62	2	8	0	0	162
Total	36	0	15	20	3	7	323	294	4	45	4	1	752
06:00 PM	9	2	12	4	0	1	72	51	1	6	0	0	158
06:15 PM	5	0	6	5	0	1	62	46	0	8	0	0	133
Grand Total	63	3	41	36	3	14	585	473	6	70	4	1	1299
Apprch %	44.1	2.1	28.7	25.2	0.3	1.3	54.4	44	7.4	86.4	4.9	1.2	
Total %	4.8	0.2	3.2	2.8	0.2	1.1	45	36.4	0.5	5.4	0.3	0.1	

	3rd Street From North					Broad Canal Way From East					3rd Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	8	0	5	6	19	0	0	94	72	166	1	13	0	0	14	199
05:15 PM	9	0	4	10	23	2	0	99	87	188	1	10	0	0	11	222
05:30 PM	8	0	1	2	11	1	3	62	73	139	0	14	4	1	19	169
05:45 PM	11	0	5	2	18	0	4	68	62	134	2	8	0	0	10	162
Total Volume	36	0	15	20	71	3	7	323	294	627	4	45	4	1	54	752
% App. Total	50.7	0	21.1	28.2		0.5	1.1	51.5	46.9		7.4	83.3	7.4	1.9		
PHF	.818	.000	.750	.500	.772	.375	.438	.816	.845	.834	.500	.804	.250	.250	.711	.847

N/S: 3rd Street
E: Broad Canal Way
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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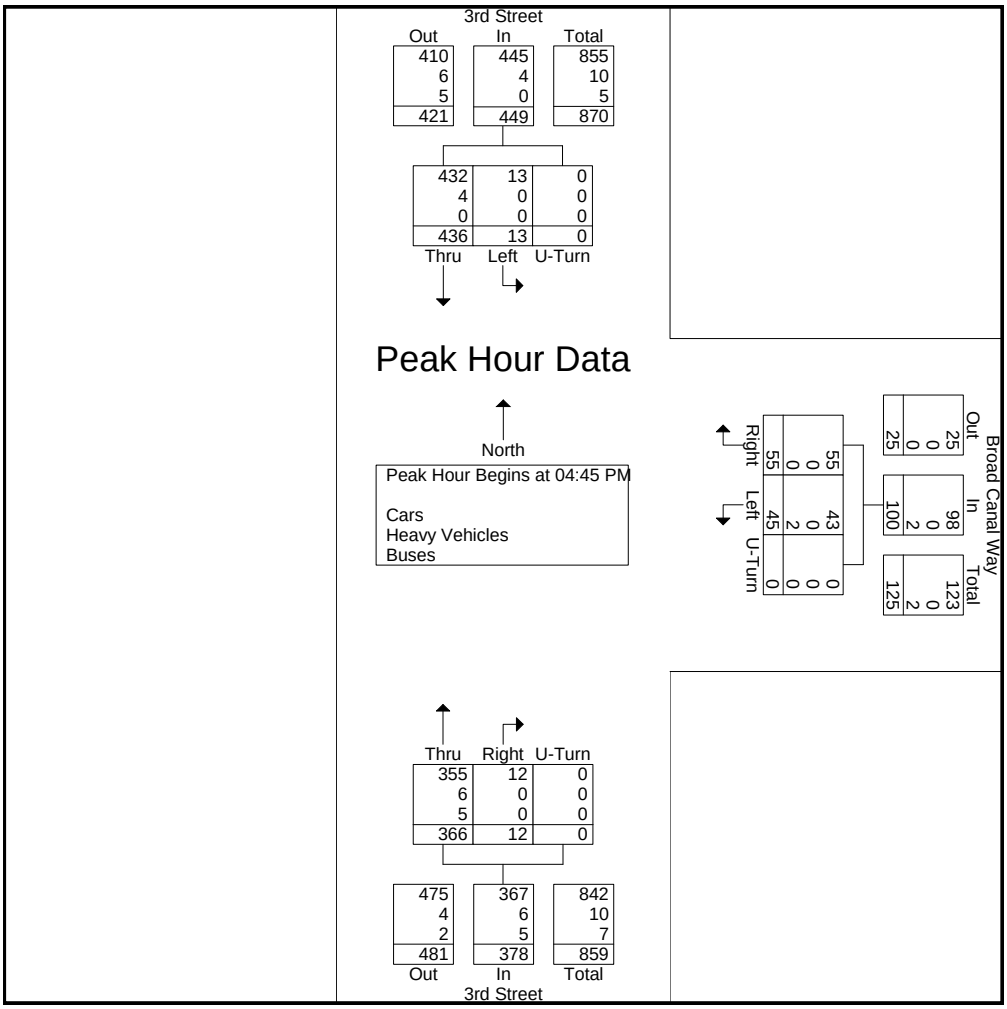
	3rd Street From North				Broad Canal Way From East				3rd Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	110	1	0	111	12	12	0	24	4	83	0	87	222
05:00 PM	119	4	0	123	19	13	0	32	2	103	0	105	260
05:15 PM	107	2	0	109	15	9	0	24	4	89	0	93	226
05:30 PM	100	6	0	106	9	11	0	20	2	91	0	93	219
Total Volume	436	13	0	449	55	45	0	100	12	366	0	378	927
% App. Total	97.1	2.9	0		55	45	0		3.2	96.8	0		
PHF	.916	.542	.000	.913	.724	.865	.000	.781	.750	.888	.000	.900	.891
Cars	432	13	0	445	55	43	0	98	12	355	0	367	910
% Cars	99.1	100	0	99.1	100	95.6	0	98.0	100	97.0	0	97.1	98.2
Heavy Vehicles	4	0	0	4	0	0	0	0	0	6	0	6	10
% Heavy Vehicles	0.9	0	0	0.9	0	0	0	0	0	1.6	0	1.6	1.1
Buses	0	0	0	0	0	2	0	2	0	5	0	5	7
% Buses	0	0	0	0	0	4.4	0	2.0	0	1.4	0	1.3	0.8



N/S: 3rd Street/ Main Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	30	0	40	0	56	128	0	1	0	0	0	0	16	68	46	2	387
07:45 AM	33	0	42	0	72	129	0	0	0	0	0	0	22	74	28	1	401
Total	63	0	82	0	128	257	0	1	0	0	0	0	38	142	74	3	788
08:00 AM	30	0	34	0	78	124	0	0	0	0	0	0	18	84	58	0	426
08:15 AM	34	0	33	0	81	139	0	0	0	0	0	0	20	102	57	1	467
08:30 AM	39	0	28	0	76	118	0	1	0	0	0	0	14	104	59	1	440
08:45 AM	38	0	33	0	80	122	0	0	0	0	0	0	10	91	53	0	427
Total	141	0	128	0	315	503	0	1	0	0	0	0	62	381	227	2	1760
09:00 AM	34	0	40	0	83	119	0	0	0	0	0	0	14	83	49	1	423
09:15 AM	41	0	43	0	70	118	0	0	0	0	0	0	10	56	38	0	376
Grand Total	279	0	293	0	596	997	0	2	0	0	0	0	124	662	388	6	3347
Apprch %	48.8	0	51.2	0	37.4	62.5	0	0.1	0	0	0	0	10.5	56.1	32.9	0.5	
Total %	8.3	0	8.8	0	17.8	29.8	0	0.1	0	0	0	0	3.7	19.8	11.6	0.2	
Cars	257	0	280	0	586	968	0	2	0	0	0	0	69	644	361	6	3173
% Cars	92.1	0	95.6	0	98.3	97.1	0	100	0	0	0	0	55.6	97.3	93	100	94.8
Heavy Vehicles	17	0	12	0	8	24	0	0	0	0	0	0	8	18	24	0	111
% Heavy Vehicles	6.1	0	4.1	0	1.3	2.4	0	0	0	0	0	0	6.5	2.7	6.2	0	3.3
Buses	5	0	1	0	2	5	0	0	0	0	0	0	47	0	3	0	63
% Buses	1.8	0	0.3	0	0.3	0.5	0	0	0	0	0	0	37.9	0	0.8	0	1.9

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	30	0	34	0	64	78	124	0	0	202	0	0	0	0	0	18	84	58	0	160	426
08:15 AM	34	0	33	0	67	81	139	0	0	220	0	0	0	0	0	20	102	57	1	180	467
08:30 AM	39	0	28	0	67	76	118	0	1	195	0	0	0	0	0	14	104	59	1	178	440
08:45 AM	38	0	33	0	71	80	122	0	0	202	0	0	0	0	0	10	91	53	0	154	427
Total Volume	141	0	128	0	269	315	503	0	1	819	0	0	0	0	0	62	381	227	2	672	1760
% App. Total	52.4	0	47.6	0		38.5	61.4	0	0.1		0	0	0	0		9.2	56.7	33.8	0.3		
PHF	.904	.000	.941	.000	.947	.972	.905	.000	.250	.931	.000	.000	.000	.000	.000	.775	.916	.962	.500	.933	.942
Cars	131	0	122	0	253	311	487	0	1	799	0	0	0	0	0	35	368	211	2	616	1668
% Cars	92.9	0	95.3	0	94.1	98.7	96.8	0	100	97.6	0	0	0	0	0	56.5	96.6	93.0	100	91.7	94.8
Heavy Vehicles	8	0	5	0	13	4	15	0	0	19	0	0	0	0	0	5	13	14	0	32	64
% Heavy Vehicles	5.7	0	3.9	0	4.8	1.3	3.0	0	0	2.3	0	0	0	0	0	8.1	3.4	6.2	0	4.8	3.6
Buses	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	22	0	2	0	24	28
% Buses	1.4	0	0.8	0	1.1	0	0.2	0	0	0.1	0	0	0	0	0	35.5	0	0.9	0	3.6	1.6

N/S: 3rd Street/ Main Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Cars

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	29	0	38	0	56	125	0	1	0	0	0	0	11	67	42	2	371
07:45 AM	28	0	41	0	72	125	0	0	0	0	0	0	13	74	25	1	379
Total	57	0	79	0	128	250	0	1	0	0	0	0	24	141	67	3	750
08:00 AM	27	0	33	0	77	121	0	0	0	0	0	0	11	81	53	0	403
08:15 AM	32	0	31	0	81	136	0	0	0	0	0	0	11	99	53	1	444
08:30 AM	36	0	26	0	74	112	0	1	0	0	0	0	7	101	56	1	414
08:45 AM	36	0	32	0	79	118	0	0	0	0	0	0	6	87	49	0	407
Total	131	0	122	0	311	487	0	1	0	0	0	0	35	368	211	2	1668
09:00 AM	31	0	37	0	80	116	0	0	0	0	0	0	5	80	47	1	397
09:15 AM	38	0	42	0	67	115	0	0	0	0	0	0	5	55	36	0	358
Grand Total	257	0	280	0	586	968	0	2	0	0	0	0	69	644	361	6	3173
Apprch %	47.9	0	52.1	0	37.7	62.2	0	0.1	0	0	0	0	6.4	59.6	33.4	0.6	
Total %	8.1	0	8.8	0	18.5	30.5	0	0.1	0	0	0	0	2.2	20.3	11.4	0.2	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	27	0	33	0	60	77	121	0	0	198	0	0	0	0	0	11	81	53	0	145	403
08:15 AM	32	0	31	0	63	81	136	0	0	217	0	0	0	0	0	11	99	53	1	164	444
08:30 AM	36	0	26	0	62	74	112	0	1	187	0	0	0	0	0	7	101	56	1	165	414
08:45 AM	36	0	32	0	68	79	118	0	0	197	0	0	0	0	0	6	87	49	0	142	407
Total Volume	131	0	122	0	253	311	487	0	1	799	0	0	0	0	0	35	368	211	2	616	1668
% App. Total	51.8	0	48.2	0		38.9	61	0	0.1		0	0	0	0		5.7	59.7	34.3	0.3		
PHF	.910	.000	.924	.000	.930	.960	.895	.000	.250	.921	.000	.000	.000	.000	.000	.795	.911	.942	.500	.933	.939

N/S: 3rd Street/ Main Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Heavy Vehicles

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	2	0	0	3	0	0	0	0	0	0	0	1	3	0	9
07:45 AM	4	0	1	0	0	3	0	0	0	0	0	0	2	0	3	0	13
Total	4	0	3	0	0	6	0	0	0	0	0	0	2	1	6	0	22
08:00 AM	2	0	1	0	1	3	0	0	0	0	0	0	2	3	4	0	16
08:15 AM	1	0	1	0	0	2	0	0	0	0	0	0	2	3	3	0	12
08:30 AM	3	0	2	0	2	6	0	0	0	0	0	0	1	3	3	0	20
08:45 AM	2	0	1	0	1	4	0	0	0	0	0	0	0	4	4	0	16
Total	8	0	5	0	4	15	0	0	0	0	0	0	5	13	14	0	64
09:00 AM	2	0	3	0	2	2	0	0	0	0	0	0	0	3	2	0	14
09:15 AM	3	0	1	0	2	1	0	0	0	0	0	0	1	1	2	0	11
Grand Total	17	0	12	0	8	24	0	0	0	0	0	0	8	18	24	0	111
Apprch %	58.6	0	41.4	0	25	75	0	0	0	0	0	0	16	36	48	0	
Total %	15.3	0	10.8	0	7.2	21.6	0	0	0	0	0	0	7.2	16.2	21.6	0	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	1	0	3	1	3	0	0	4	0	0	0	0	0	2	3	4	0	9	16
08:15 AM	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	2	3	3	0	8	12
08:30 AM	3	0	2	0	5	2	6	0	0	8	0	0	0	0	0	1	3	3	0	7	20
08:45 AM	2	0	1	0	3	1	4	0	0	5	0	0	0	0	0	0	4	4	0	8	16
Total Volume	8	0	5	0	13	4	15	0	0	19	0	0	0	0	0	5	13	14	0	32	64
% App. Total	61.5	0	38.5	0		21.1	78.9	0	0		0	0	0	0		15.6	40.6	43.8	0		
PHF	.667	.000	.625	.000	.650	.500	.625	.000	.000	.594	.000	.000	.000	.000	.000	.625	.813	.875	.000	.889	.800

N/S: 3rd Street/ Main Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 P
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Buses

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	7
07:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	7	0	0	0	9
Total	2	0	0	0	0	1	0	0	0	0	0	0	12	0	1	0	16
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	7
08:15 AM	1	0	1	0	0	1	0	0	0	0	0	0	7	0	1	0	11
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
Total	2	0	1	0	0	1	0	0	0	0	0	0	22	0	2	0	28
09:00 AM	1	0	0	0	1	1	0	0	0	0	0	0	9	0	0	0	12
09:15 AM	0	0	0	0	1	2	0	0	0	0	0	0	4	0	0	0	7
Grand Total	5	0	1	0	2	5	0	0	0	0	0	0	47	0	3	0	63
Apprch %	83.3	0	16.7	0	28.6	71.4	0	0	0	0	0	0	94	0	6	0	
Total %	7.9	0	1.6	0	3.2	7.9	0	0	0	0	0	0	74.6	0	4.8	0	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	1	0	6	7
07:45 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	7	0	0	0	7	9
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	1	0	6	7
08:15 AM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	7	0	1	0	8	11
Total Volume	4	0	1	0	5	0	2	0	0	2	0	0	0	0	0	24	0	3	0	27	34
% App. Total	80	0	20	0		0	100	0	0		0	0	0	0		88.9	0	11.1	0		
PHF	1.00	.000	.250	.000	.625	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.857	.000	.750	.000	.844	.773

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Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	2	5	6	3	1	0	33	84	0	0	0	0	0	1	24	7	9	30	205
07:45 AM	2	0	5	2	4	4	5	0	46	104	0	0	0	0	0	0	38	1	21	32	264
Total	2	0	7	7	10	7	6	0	79	188	0	0	0	0	0	1	62	8	30	62	469
08:00 AM	1	0	1	7	8	5	4	0	39	101	0	0	0	0	0	2	39	7	14	37	265
08:15 AM	2	0	6	7	7	6	8	0	53	150	0	0	0	0	0	1	54	5	25	46	370
08:30 AM	0	0	6	9	3	9	3	0	90	204	0	0	0	0	0	3	54	8	23	40	452
08:45 AM	1	0	3	13	5	6	3	0	89	185	0	0	0	0	0	1	70	7	17	61	461
Total	4	0	16	36	23	26	18	0	271	640	0	0	0	0	0	7	217	27	79	184	1548
09:00 AM	1	0	0	9	4	4	13	0	98	152	0	0	0	0	0	4	48	10	17	49	409
09:15 AM	1	0	0	9	1	6	10	0	73	177	0	0	0	0	0	3	42	8	38	39	407
Grand Total	8	0	23	61	38	43	47	0	521	1157	0	0	0	0	0	15	369	53	164	334	2833
Apprch %	6.2	0	17.7	46.9	29.2	2.4	2.7	0	29.5	65.4	0	0	0	0	0	1.6	39.5	5.7	17.5	35.7	
Total %	0.3	0	0.8	2.2	1.3	1.5	1.7	0	18.4	40.8	0	0	0	0	0	0.5	13	1.9	5.8	11.8	

	3rd Street From North						Broadway From East						Main Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:30 AM																									
08:30 AM	0	0	6	9	3	18	9	3	0	90	204	306	0	0	0	0	0	0	3	54	8	23	40	128	452
08:45 AM	1	0	3	13	5	22	6	3	0	89	185	283	0	0	0	0	0	0	1	70	7	17	61	156	461
09:00 AM	1	0	0	9	4	14	4	13	0	98	152	267	0	0	0	0	0	0	4	48	10	17	49	128	409
09:15 AM	1	0	0	9	1	11	6	10	0	73	177	266	0	0	0	0	0	0	3	42	8	38	39	130	407
Total Volume	3	0	9	40	13	65	25	29	0	350	718	1122	0	0	0	0	0	0	11	214	33	95	189	542	1729
% App. Total	4.6	0	13.8	61.5	20		2.2	2.6	0	31.2	64		0	0	0	0	0		2	39.5	6.1	17.5	34.9		
PHF	.750	.000	.375	.769	.650	.739	.694	.558	.000	.893	.880	.917	.000	.000	.000	.000	.000	.000	.688	.764	.825	.625	.775	.869	.938

N/S: 3rd Street/ Main Street
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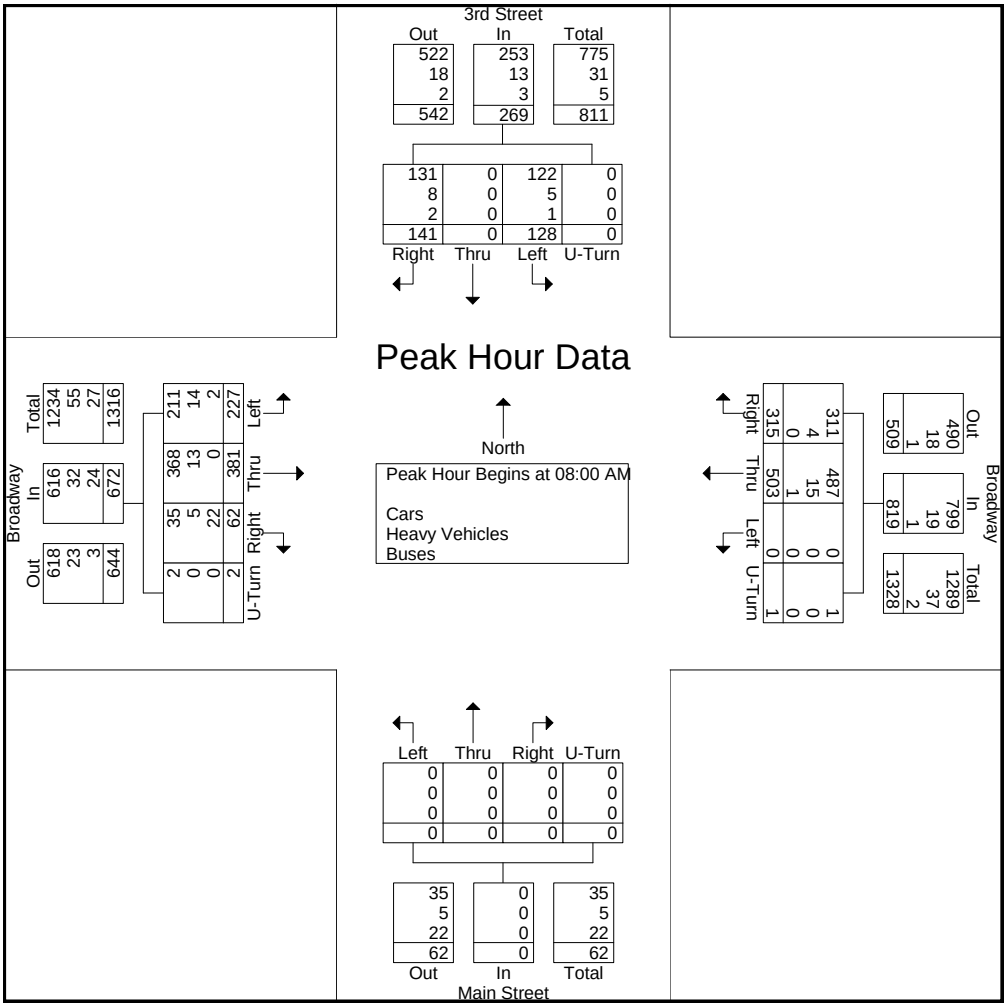
	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	30	0	34	0	64	78	124	0	0	202	0	0	0	0	0	18	84	58	0	160	426
08:15 AM	34	0	33	0	67	81	139	0	0	220	0	0	0	0	0	20	102	57	1	180	467
08:30 AM	39	0	28	0	67	76	118	0	1	195	0	0	0	0	0	14	104	59	1	178	440
08:45 AM	38	0	33	0	71	80	122	0	0	202	0	0	0	0	0	10	91	53	0	154	427
Total Volume	141	0	128	0	269	315	503	0	1	819	0	0	0	0	0	62	381	227	2	672	1760
% App. Total	52.4	0	47.6	0		38.5	61.4	0	0.1		0	0	0	0		9.2	56.7	33.8	0.3		
PHF	.904	.000	.941	.000	.947	.972	.905	.000	.250	.931	.000	.000	.000	.000	.000	.775	.916	.962	.500	.933	.942
Cars	131	0	122	0	253	311	487	0	1	799	0	0	0	0	0	35	368	211	2	616	1668
% Cars	92.9	0	95.3	0	94.1	98.7	96.8	0	100	97.6	0	0	0	0	0	56.5	96.6	93.0	100	91.7	94.8
Heavy Vehicles	8	0	5	0	13	4	15	0	0	19	0	0	0	0	0	5	13	14	0	32	64
% Heavy Vehicles	5.7	0	3.9	0	4.8	1.3	3.0	0	0	2.3	0	0	0	0	0	8.1	3.4	6.2	0	4.8	3.6
Buses	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	22	0	2	0	24	28
% Buses	1.4	0	0.8	0	1.1	0	0.2	0	0	0.1	0	0	0	0	0	35.5	0	0.9	0	3.6	1.6



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Groups Printed- Cars - Heavy Vehicles - Buses

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	35	0	90	1	46	98	0	0	0	0	0	0	17	123	52	1	463
04:45 PM	37	0	94	0	38	106	0	0	0	0	0	0	18	119	50	2	464
Total	72	0	184	1	84	204	0	0	0	0	0	0	35	242	102	3	927
05:00 PM	37	0	103	0	45	102	0	0	0	0	0	0	19	148	62	0	516
05:15 PM	35	0	98	0	40	100	0	0	0	0	0	0	19	148	45	2	487
05:30 PM	26	0	87	0	41	97	0	0	0	0	0	0	16	131	36	3	437
05:45 PM	35	0	72	0	42	94	0	0	0	0	0	0	18	118	42	1	422
Total	133	0	360	0	168	393	0	0	0	0	0	0	72	545	185	6	1862
06:00 PM	35	0	69	1	47	117	0	0	0	0	0	0	27	109	53	4	462
06:15 PM	27	0	76	0	51	107	0	0	0	0	0	0	12	101	38	1	413
Grand Total	267	0	689	2	350	821	0	0	0	0	0	0	146	997	378	14	3664
Apprch %	27.9	0	71.9	0.2	29.9	70.1	0	0	0	0	0	0	9.5	65	24.6	0.9	
Total %	7.3	0	18.8	0.1	9.6	22.4	0	0	0	0	0	0	4	27.2	10.3	0.4	
Cars	260	0	683	2	342	808	0	0	0	0	0	0	103	981	368	14	3561
% Cars	97.4	0	99.1	100	97.7	98.4	0	0	0	0	0	0	70.5	98.4	97.4	100	97.2
Heavy Vehicles	7	0	4	0	3	9	0	0	0	0	0	0	3	12	3	0	41
% Heavy Vehicles	2.6	0	0.6	0	0.9	1.1	0	0	0	0	0	0	2.1	1.2	0.8	0	1.1
Buses	0	0	2	0	5	4	0	0	0	0	0	0	40	4	7	0	62
% Buses	0	0	0.3	0	1.4	0.5	0	0	0	0	0	0	27.4	0.4	1.9	0	1.7

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	35	0	90	1	126	46	98	0	0	144	0	0	0	0	0	17	123	52	1	193	463
04:45 PM	37	0	94	0	131	38	106	0	0	144	0	0	0	0	0	18	119	50	2	189	464
05:00 PM	37	0	103	0	140	45	102	0	0	147	0	0	0	0	0	19	148	62	0	229	516
05:15 PM	35	0	98	0	133	40	100	0	0	140	0	0	0	0	0	19	148	45	2	214	487
Total Volume	144	0	385	1	530	169	406	0	0	575	0	0	0	0	0	73	538	209	5	825	1930
% App. Total	27.2	0	72.6	0.2		29.4	70.6	0	0		0	0	0	0		8.8	65.2	25.3	0.6		
PHF	.973	.000	.934	.250	.946	.918	.958	.000	.000	.978	.000	.000	.000	.000	.000	.961	.909	.843	.625	.901	.935
Cars	141	0	381	1	523	164	395	0	0	559	0	0	0	0	0	51	533	202	5	791	1873
% Cars	97.9	0	99.0	100	98.7	97.0	97.3	0	0	97.2	0	0	0	0	0	69.9	99.1	96.7	100	95.9	97.0
Heavy Vehicles	3	0	3	0	6	2	8	0	0	10	0	0	0	0	0	1	3	3	0	7	23
% Heavy Vehicles	2.1	0	0.8	0	1.1	1.2	2.0	0	0	1.7	0	0	0	0	0	1.4	0.6	1.4	0	0.8	1.2
Buses	0	0	1	0	1	3	3	0	0	6	0	0	0	0	0	21	2	4	0	27	34
% Buses	0	0	0.3	0	0.2	1.8	0.7	0	0	1.0	0	0	0	0	0	28.8	0.4	1.9	0	3.3	1.8

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Groups Printed- Cars

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	33	0	89	1	45	94	0	0	0	0	0	0	11	123	51	1	448
04:45 PM	36	0	93	0	36	104	0	0	0	0	0	0	14	117	47	2	449
Total	69	0	182	1	81	198	0	0	0	0	0	0	25	240	98	3	897
05:00 PM	37	0	102	0	44	99	0	0	0	0	0	0	14	147	61	0	504
05:15 PM	35	0	97	0	39	98	0	0	0	0	0	0	12	146	43	2	472
05:30 PM	26	0	87	0	40	96	0	0	0	0	0	0	11	126	35	3	424
05:45 PM	31	0	70	0	41	94	0	0	0	0	0	0	12	116	41	1	406
Total	129	0	356	0	164	387	0	0	0	0	0	0	49	535	180	6	1806
06:00 PM	35	0	69	1	47	116	0	0	0	0	0	0	21	107	52	4	452
06:15 PM	27	0	76	0	50	107	0	0	0	0	0	0	8	99	38	1	406
Grand Total	260	0	683	2	342	808	0	0	0	0	0	0	103	981	368	14	3561
Apprch %	27.5	0	72.3	0.2	29.7	70.3	0	0	0	0	0	0	7	66.9	25.1	1	
Total %	7.3	0	19.2	0.1	9.6	22.7	0	0	0	0	0	0	2.9	27.5	10.3	0.4	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	0	89	1	123	45	94	0	0	139	0	0	0	0	0	11	123	51	1	186	448
04:45 PM	36	0	93	0	129	36	104	0	0	140	0	0	0	0	0	14	117	47	2	180	449
05:00 PM	37	0	102	0	139	44	99	0	0	143	0	0	0	0	0	14	147	61	0	222	504
05:15 PM	35	0	97	0	132	39	98	0	0	137	0	0	0	0	0	12	146	43	2	203	472
Total Volume	141	0	381	1	523	164	395	0	0	559	0	0	0	0	0	51	533	202	5	791	1873
% App. Total	27	0	72.8	0.2		29.3	70.7	0	0		0	0	0	0		6.4	67.4	25.5	0.6		
PHF	.953	.000	.934	.250	.941	.911	.950	.000	.000	.977	.000	.000	.000	.000	.000	.911	.906	.828	.625	.891	.929

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Groups Printed- Heavy Vehicles

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	6
04:45 PM	1	0	1	0	0	2	0	0	0	0	0	0	0	1	2	0	7
Total	3	0	2	0	0	5	0	0	0	0	0	0	0	1	2	0	13
05:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
05:15 PM	0	0	1	0	1	2	0	0	0	0	0	0	1	1	1	0	7
05:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	4	0	0	6
05:45 PM	4	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	8
Total	4	0	2	0	3	3	0	0	0	0	0	0	3	8	1	0	24
06:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Grand Total	7	0	4	0	3	9	0	0	0	0	0	0	3	12	3	0	41
Apprch %	63.6	0	36.4	0	25	75	0	0	0	0	0	0	16.7	66.7	16.7	0	
Total %	17.1	0	9.8	0	7.3	22	0	0	0	0	0	0	7.3	29.3	7.3	0	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	3
05:15 PM	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	1	1	1	0	3	7
05:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	4	0	0	5	6
05:45 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	8
Total Volume	4	0	2	0	6	3	3	0	0	6	0	0	0	0	0	3	8	1	0	12	24
% App. Total	66.7	0	33.3	0		50	50	0	0		0	0	0	0		25	66.7	8.3	0		
PHF	.250	.000	.500	.000	.300	.750	.375	.000	.000	.500	.000	.000	.000	.000	.000	.750	.500	.250	.000	.600	.750

N/S: 3rd Street/ Main Street
E/W: Broadway
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	3rd Street From North				Broadway From East				Main Street From South				Broadway From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	6	0	1	0	9
04:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	4	1	1	0	8
Total	0	0	0	0	3	1	0	0	0	0	0	0	10	1	2	0	17
05:00 PM	0	0	1	0	0	2	0	0	0	0	0	0	5	0	1	0	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	1	1	0	8
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	4	1	1	0	7
05:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	5	0	1	0	8
Total	0	0	2	0	1	3	0	0	0	0	0	0	20	2	4	0	32
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	7
06:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	4	1	0	0	6
Grand Total	0	0	2	0	5	4	0	0	0	0	0	0	40	4	7	0	62
Apprch %	0	0	100	0	55.6	44.4	0	0	0	0	0	0	78.4	7.8	13.7	0	
Total %	0	0	3.2	0	8.1	6.5	0	0	0	0	0	0	64.5	6.5	11.3	0	

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	6	0	1	0	7	9
04:45 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	4	1	1	0	6	8
05:00 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	5	0	1	0	6	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	1	0	8	8
Total Volume	0	0	1	0	1	3	3	0	0	6	0	0	0	0	0	21	2	4	0	27	34
% App. Total	0	0	100	0		50	50	0	0		0	0	0	0		77.8	7.4	14.8	0		
PHF	.000	.000	.250	.000	.250	.375	.375	.000	.000	.750	.000	.000	.000	.000	.000	.875	.500	1.00	.000	.844	.944

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	7	0	3	2	13	5	18	0	0	0	0	0	0	0	0	0	4	1	23	32	108
04:45 PM	7	0	2	5	6	3	24	0	0	0	0	0	0	0	0	0	7	2	24	25	105
Total	14	0	5	7	19	8	42	0	0	0	0	0	0	0	0	0	11	3	47	57	213
05:00 PM	8	0	2	6	8	7	34	0	0	0	0	0	0	0	0	1	10	4	37	40	157
05:15 PM	9	0	2	16	12	9	52	0	0	0	0	0	0	0	0	0	9	2	54	54	219
05:30 PM	4	0	3	12	7	11	63	0	0	0	0	0	0	0	0	0	3	2	50	36	191
05:45 PM	5	0	8	19	10	5	56	0	0	0	0	0	0	0	0	0	8	1	42	39	193
Total	26	0	15	53	37	32	205	0	0	0	0	0	0	0	0	1	30	9	183	169	760
06:00 PM	1	0	2	19	13	6	44	0	0	0	0	0	0	0	0	0	5	1	59	39	189
06:15 PM	1	0	2	12	14	7	48	0	0	0	0	0	0	0	0	0	2	2	52	43	183
Grand Total	42	0	24	91	83	53	339	0	0	0	0	0	0	0	0	1	48	15	341	308	1345
Apprch %	17.5	0	10	37.9	34.6	13.5	86.5	0	0	0	0	0	0	0	0	0.1	6.7	2.1	47.8	43.2	
Total %	3.1	0	1.8	6.8	6.2	3.9	25.2	0	0	0	0	0	0	0	0	0.1	3.6	1.1	25.4	22.9	

	3rd Street From North						Broadway From East						Main Street From South						Broadway From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:15 PM																									
05:15 PM	9	0	2	16	12	39	9	52	0	0	0	61	0	0	0	0	0	0	0	9	2	54	54	119	219
05:30 PM	4	0	3	12	7	26	11	63	0	0	0	74	0	0	0	0	0	0	0	3	2	50	36	91	191
05:45 PM	5	0	8	19	10	42	5	56	0	0	0	61	0	0	0	0	0	0	0	8	1	42	39	90	193
06:00 PM	1	0	2	19	13	35	6	44	0	0	0	50	0	0	0	0	0	0	0	5	1	59	39	104	189
Total Volume	19	0	15	66	42	142	31	215	0	0	0	246	0	0	0	0	0	0	0	25	6	205	168	404	792
% App. Total	13.4	0	10.6	46.5	29.6		12.6	87.4	0	0	0		0	0	0	0	0		0	6.2	1.5	50.7	41.6		
PHF	.528	.000	.469	.868	.808	.845	.705	.853	.000	.000	.000	.831	.000	.000	.000	.000	.000	.000	.000	.694	.750	.869	.778	.849	.904

N/S: 3rd Street/ Main Street
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Office: 508.481.3999 Fax: 508.545.1234
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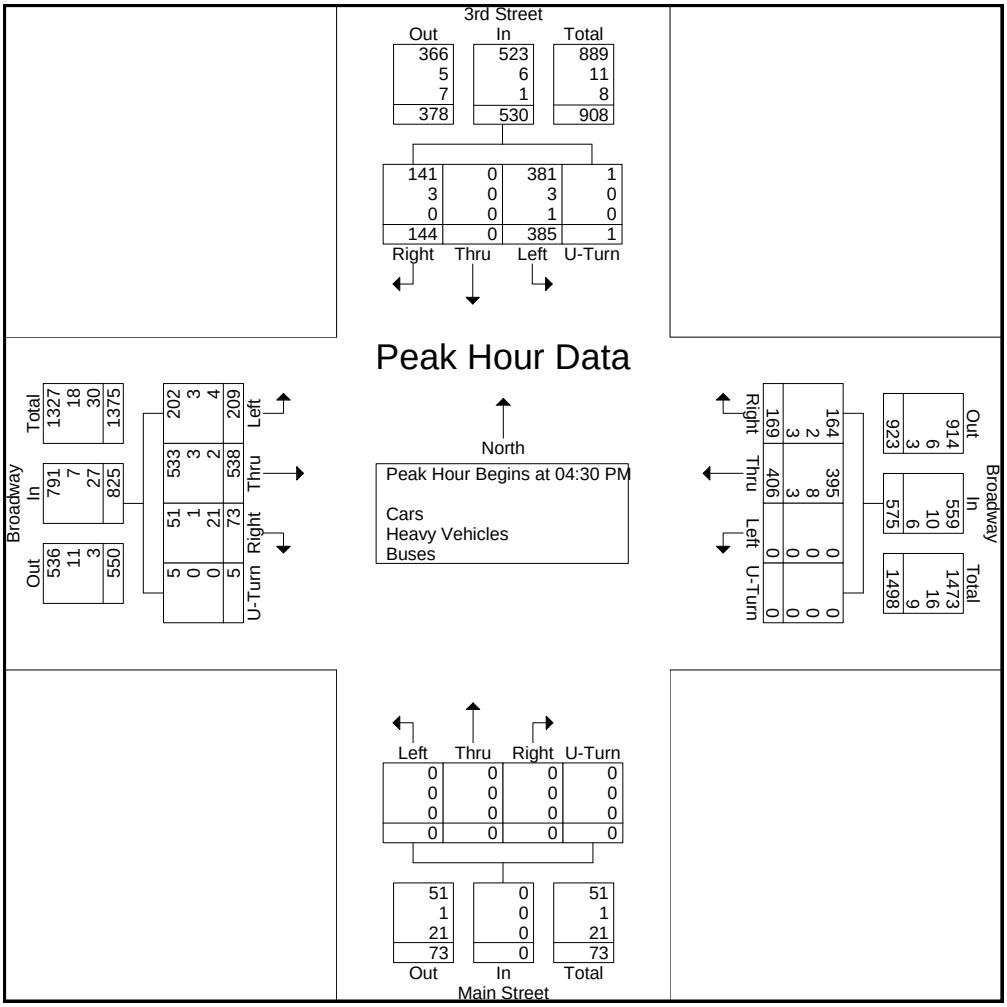
	3rd Street From North					Broadway From East					Main Street From South					Broadway From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	35	0	90	1	126	46	98	0	0	144	0	0	0	0	0	17	123	52	1	193	463
04:45 PM	37	0	94	0	131	38	106	0	0	144	0	0	0	0	0	18	119	50	2	189	464
05:00 PM	37	0	103	0	140	45	102	0	0	147	0	0	0	0	0	19	148	62	0	229	516
05:15 PM	35	0	98	0	133	40	100	0	0	140	0	0	0	0	0	19	148	45	2	214	487
Total Volume	144	0	385	1	530	169	406	0	0	575	0	0	0	0	0	73	538	209	5	825	1930
% App. Total	27.2	0	72.6	0.2		29.4	70.6	0	0		0	0	0	0		8.8	65.2	25.3	0.6		
PHF	.973	.000	.934	.250	.946	.918	.958	.000	.000	.978	.000	.000	.000	.000	.000	.961	.909	.843	.625	.901	.935
Cars	141	0	381	1	523	164	395	0	0	559	0	0	0	0	0	51	533	202	5	791	1873
% Cars	97.9	0	99.0	100	98.7	97.0	97.3	0	0	97.2	0	0	0	0	0	69.9	99.1	96.7	100	95.9	97.0
Heavy Vehicles	3	0	3	0	6	2	8	0	0	10	0	0	0	0	0	1	3	3	0	7	23
% Heavy Vehicles	2.1	0	0.8	0	1.1	1.2	2.0	0	0	1.7	0	0	0	0	0	1.4	0.6	1.4	0	0.8	1.2
Buses	0	0	1	0	1	3	3	0	0	6	0	0	0	0	0	21	2	4	0	27	34
% Buses	0	0	0.3	0	0.2	1.8	0.7	0	0	1.0	0	0	0	0	0	28.8	0.4	1.9	0	3.3	1.8



N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 Q
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Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	43	73	11	0	21	31	13	0	21	48	19	0	9	40	18	0	347
07:45 AM	50	77	10	2	21	18	22	1	22	47	15	0	16	40	25	0	366
Total	93	150	21	2	42	49	35	1	43	95	34	0	25	80	43	0	713
08:00 AM	56	84	14	2	20	28	15	0	46	65	15	0	17	43	39	0	444
08:15 AM	58	75	13	1	25	24	13	0	36	53	14	0	12	50	40	0	414
08:30 AM	65	88	10	0	29	21	10	0	33	63	19	0	23	58	57	0	476
08:45 AM	46	87	17	0	31	20	14	0	33	65	19	0	20	57	58	0	467
Total	225	334	54	3	105	93	52	0	148	246	67	0	72	208	194	0	1801
09:00 AM	50	92	12	3	31	24	17	0	33	67	9	0	24	30	42	0	434
09:15 AM	35	71	14	0	43	18	15	0	49	50	13	0	22	43	32	0	405
Grand Total	403	647	101	8	221	184	119	1	273	458	123	0	143	361	311	0	3353
Apprch %	34.8	55.8	8.7	0.7	42.1	35	22.7	0.2	32	53.6	14.4	0	17.5	44.3	38.2	0	
Total %	12	19.3	3	0.2	6.6	5.5	3.5	0	8.1	13.7	3.7	0	4.3	10.8	9.3	0	
Cars	352	549	90	8	203	160	99	1	212	400	118	0	129	333	268	0	2922
% Cars	87.3	84.9	89.1	100	91.9	87	83.2	100	77.7	87.3	95.9	0	90.2	92.2	86.2	0	87.1
Heavy Vehicles	50	93	9	0	13	22	8	0	23	52	4	0	13	23	43	0	353
% Heavy Vehicles	12.4	14.4	8.9	0	5.9	12	6.7	0	8.4	11.4	3.3	0	9.1	6.4	13.8	0	10.5
Buses	1	5	2	0	5	2	12	0	38	6	1	0	1	5	0	0	78
% Buses	0.2	0.8	2	0	2.3	1.1	10.1	0	13.9	1.3	0.8	0	0.7	1.4	0	0	2.3

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	56	84	14	2	156	20	28	15	0	63	46	65	15	0	126	17	43	39	0	99	444
08:15 AM	58	75	13	1	147	25	24	13	0	62	36	53	14	0	103	12	50	40	0	102	414
08:30 AM	65	88	10	0	163	29	21	10	0	60	33	63	19	0	115	23	58	57	0	138	476
08:45 AM	46	87	17	0	150	31	20	14	0	65	33	65	19	0	117	20	57	58	0	135	467
Total Volume	225	334	54	3	616	105	93	52	0	250	148	246	67	0	461	72	208	194	0	474	1801
% App. Total	36.5	54.2	8.8	0.5		42	37.2	20.8	0		32.1	53.4	14.5	0		15.2	43.9	40.9	0		
PHF	.865	.949	.794	.375	.945	.847	.830	.867	.000	.962	.804	.946	.882	.000	.915	.783	.897	.836	.000	.859	.946
Cars	195	278	48	3	524	93	81	44	0	218	113	213	65	0	391	63	193	169	0	425	1558
% Cars	86.7	83.2	88.9	100	85.1	88.6	87.1	84.6	0	87.2	76.4	86.6	97.0	0	84.8	87.5	92.8	87.1	0	89.7	86.5
Heavy Vehicles	30	55	6	0	91	10	12	3	0	25	15	29	2	0	46	8	15	25	0	48	210
% Heavy Vehicles	13.3	16.5	11.1	0	14.8	9.5	12.9	5.8	0	10.0	10.1	11.8	3.0	0	10.0	11.1	7.2	12.9	0	10.1	11.7
Buses	0	1	0	0	1	2	0	5	0	7	20	4	0	0	24	1	0	0	0	1	33
% Buses	0	0.3	0	0	0.2	1.9	0	9.6	0	2.8	13.5	1.6	0	0	5.2	1.4	0	0	0	0.2	1.8

N/S:Galileo Galilei Way/ Vassar Street
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Groups Printed- Cars

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	39	64	10	0	20	27	9	0	19	44	19	0	8	35	16	0	310
07:45 AM	44	66	9	2	19	18	21	1	15	42	15	0	16	35	21	0	324
Total	83	130	19	2	39	45	30	1	34	86	34	0	24	70	37	0	634
08:00 AM	48	68	11	2	19	26	10	0	40	53	14	0	15	40	32	0	378
08:15 AM	50	64	12	1	20	22	13	0	25	44	14	0	9	48	35	0	357
08:30 AM	56	73	10	0	26	16	7	0	22	55	18	0	22	52	52	0	409
08:45 AM	41	73	15	0	28	17	14	0	26	61	19	0	17	53	50	0	414
Total	195	278	48	3	93	81	44	0	113	213	65	0	63	193	169	0	1558
09:00 AM	44	81	10	3	30	18	13	0	24	55	7	0	23	28	33	0	369
09:15 AM	30	60	13	0	41	16	12	0	41	46	12	0	19	42	29	0	361
Grand Total	352	549	90	8	203	160	99	1	212	400	118	0	129	333	268	0	2922
Apprch %	35.2	55	9	0.8	43.8	34.6	21.4	0.2	29	54.8	16.2	0	17.7	45.6	36.7	0	
Total %	12	18.8	3.1	0.3	6.9	5.5	3.4	0	7.3	13.7	4	0	4.4	11.4	9.2	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	48	68	11	2	129	19	26	10	0	55	40	53	14	0	107	15	40	32	0	87	378
08:15 AM	50	64	12	1	127	20	22	13	0	55	25	44	14	0	83	9	48	35	0	92	357
08:30 AM	56	73	10	0	139	26	16	7	0	49	22	55	18	0	95	22	52	52	0	126	409
08:45 AM	41	73	15	0	129	28	17	14	0	59	26	61	19	0	106	17	53	50	0	120	414
Total Volume	195	278	48	3	524	93	81	44	0	218	113	213	65	0	391	63	193	169	0	425	1558
% App. Total	37.2	53.1	9.2	0.6		42.7	37.2	20.2	0		28.9	54.5	16.6	0		14.8	45.4	39.8	0		
PHF	.871	.952	.800	.375	.942	.830	.779	.786	.000	.924	.706	.873	.855	.000	.914	.716	.910	.813	.000	.843	.941

N/S:Galileo Galilei Way/ Vassar Street
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Groups Printed- Heavy Vehicles

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	4	9	1	0	1	4	1	0	1	4	0	0	1	3	2	0	31
07:45 AM	6	11	0	0	2	0	1	0	2	4	0	0	0	3	4	0	33
Total	10	20	1	0	3	4	2	0	3	8	0	0	1	6	6	0	64
08:00 AM	8	16	3	0	1	2	1	0	0	10	1	0	2	3	7	0	54
08:15 AM	8	11	1	0	5	2	0	0	6	8	0	0	2	2	5	0	50
08:30 AM	9	15	0	0	2	5	2	0	4	7	1	0	1	6	5	0	57
08:45 AM	5	13	2	0	2	3	0	0	5	4	0	0	3	4	8	0	49
Total	30	55	6	0	10	12	3	0	15	29	2	0	8	15	25	0	210
09:00 AM	5	9	2	0	0	4	1	0	5	11	1	0	1	1	9	0	49
09:15 AM	5	9	0	0	0	2	2	0	0	4	1	0	3	1	3	0	30
Grand Total	50	93	9	0	13	22	8	0	23	52	4	0	13	23	43	0	353
Apprch %	32.9	61.2	5.9	0	30.2	51.2	18.6	0	29.1	65.8	5.1	0	16.5	29.1	54.4	0	
Total %	14.2	26.3	2.5	0	3.7	6.2	2.3	0	6.5	14.7	1.1	0	3.7	6.5	12.2	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	8	16	3	0	27	1	2	1	0	4	0	10	1	0	11	2	3	7	0	12	54
08:15 AM	8	11	1	0	20	5	2	0	0	7	6	8	0	0	14	2	2	5	0	9	50
08:30 AM	9	15	0	0	24	2	5	2	0	9	4	7	1	0	12	1	6	5	0	12	57
08:45 AM	5	13	2	0	20	2	3	0	0	5	5	4	0	0	9	3	4	8	0	15	49
Total Volume	30	55	6	0	91	10	12	3	0	25	15	29	2	0	46	8	15	25	0	48	210
% App. Total	33	60.4	6.6	0		40	48	12	0		32.6	63	4.3	0		16.7	31.2	52.1	0		
PHF	.833	.859	.500	.000	.843	.500	.600	.375	.000	.694	.625	.725	.500	.000	.821	.667	.625	.781	.000	.800	.921

N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 Q
Site Code : TBA
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Groups Printed- Buses

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	3	0	1	0	0	0	0	2	0	0	6
07:45 AM	0	0	1	0	0	0	0	0	5	1	0	0	0	2	0	0	9
Total	0	0	1	0	0	0	3	0	6	1	0	0	0	4	0	0	15
08:00 AM	0	0	0	0	0	0	4	0	6	2	0	0	0	0	0	0	12
08:15 AM	0	0	0	0	0	0	0	0	5	1	0	0	1	0	0	0	7
08:30 AM	0	0	0	0	1	0	1	0	7	1	0	0	0	0	0	0	10
08:45 AM	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4
Total	0	1	0	0	2	0	5	0	20	4	0	0	1	0	0	0	33
09:00 AM	1	2	0	0	1	2	3	0	4	1	1	0	0	1	0	0	16
09:15 AM	0	2	1	0	2	0	1	0	8	0	0	0	0	0	0	0	14
Grand Total	1	5	2	0	5	2	12	0	38	6	1	0	1	5	0	0	78
Apprch %	12.5	62.5	25	0	26.3	10.5	63.2	0	84.4	13.3	2.2	0	16.7	83.3	0	0	
Total %	1.3	6.4	2.6	0	6.4	2.6	15.4	0	48.7	7.7	1.3	0	1.3	6.4	0	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	0	0	0	0	1	0	1	0	2	7	1	0	0	8	0	0	0	0	0	10
08:45 AM	0	1	0	0	1	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	4
09:00 AM	1	2	0	0	3	1	2	3	0	6	4	1	1	0	6	0	1	0	0	1	16
09:15 AM	0	2	1	0	3	2	0	1	0	3	8	0	0	0	8	0	0	0	0	0	14
Total Volume	1	5	1	0	7	5	2	5	0	12	21	2	1	0	24	0	1	0	0	1	44
% App. Total	14.3	71.4	14.3	0		41.7	16.7	41.7	0		87.5	8.3	4.2	0		0	100	0	0		
PHF	.250	.625	.250	.000	.583	.625	.250	.417	.000	.500	.656	.500	.250	.000	.750	.000	.250	.000	.000	.250	.688

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Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Peds and Bicycles

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	1	2	0	13	57	2	1	0	8	1	8	4	0	8	6	0	13	0	3	7	134
07:45 AM	0	5	0	16	57	0	0	2	16	12	3	6	1	23	9	0	12	0	9	5	176
Total	1	7	0	29	114	2	1	2	24	13	11	10	1	31	15	0	25	0	12	12	310
08:00 AM	0	10	3	36	40	1	0	0	13	6	1	4	1	16	20	1	14	0	7	6	179
08:15 AM	0	7	2	22	98	0	2	0	26	11	3	10	0	28	24	1	18	3	5	10	270
08:30 AM	1	22	3	28	70	0	2	0	14	16	4	14	1	15	35	0	31	2	6	15	279
08:45 AM	1	18	2	32	72	0	3	0	24	17	8	8	0	32	40	1	21	4	11	16	310
Total	2	57	10	118	280	1	7	0	77	50	16	36	2	91	119	3	84	9	29	47	1038
09:00 AM	2	16	1	34	73	0	4	0	24	19	4	7	1	26	30	2	17	6	8	16	290
09:15 AM	0	16	2	30	62	0	4	0	20	33	8	6	0	21	17	3	19	0	6	11	258
Grand Total	5	96	13	211	529	3	16	2	145	115	39	59	4	169	181	8	145	15	55	86	1896
Apprch %	0.6	11.2	1.5	24.7	61.9	1.1	5.7	0.7	51.6	40.9	8.6	13.1	0.9	37.4	40	2.6	46.9	4.9	17.8	27.8	
Total %	0.3	5.1	0.7	11.1	27.9	0.2	0.8	0.1	7.6	6.1	2.1	3.1	0.2	8.9	9.5	0.4	7.6	0.8	2.9	4.5	

	Galileo Galilei Way From North						Main Street From East						Vassar Street From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	7	2	22	98	129	0	2	0	26	11	39	3	10	0	28	24	65	1	18	3	5	10	37	270
08:30 AM	1	22	3	28	70	124	0	2	0	14	16	32	4	14	1	15	35	69	0	31	2	6	15	54	279
08:45 AM	1	18	2	32	72	125	0	3	0	24	17	44	8	8	0	32	40	88	1	21	4	11	16	53	310
09:00 AM	2	16	1	34	73	126	0	4	0	24	19	47	4	7	1	26	30	68	2	17	6	8	16	49	290
Total Volume	4	63	8	116	313	504	0	11	0	88	63	162	19	39	2	101	129	290	4	87	15	30	57	193	1149
% App. Total	0.8	12.5	1.6	23	62.1		0	6.8	0	54.3	38.9		6.6	13.4	0.7	34.8	44.5		2.1	45.1	7.8	15.5	29.5		
PHF	.500	.716	.667	.853	.798	.977	.000	.688	.000	.846	.829	.862	.594	.696	.500	.789	.806	.824	.500	.702	.625	.682	.891	.894	.927

N/S:Galileo Galilei Way/ Vassar Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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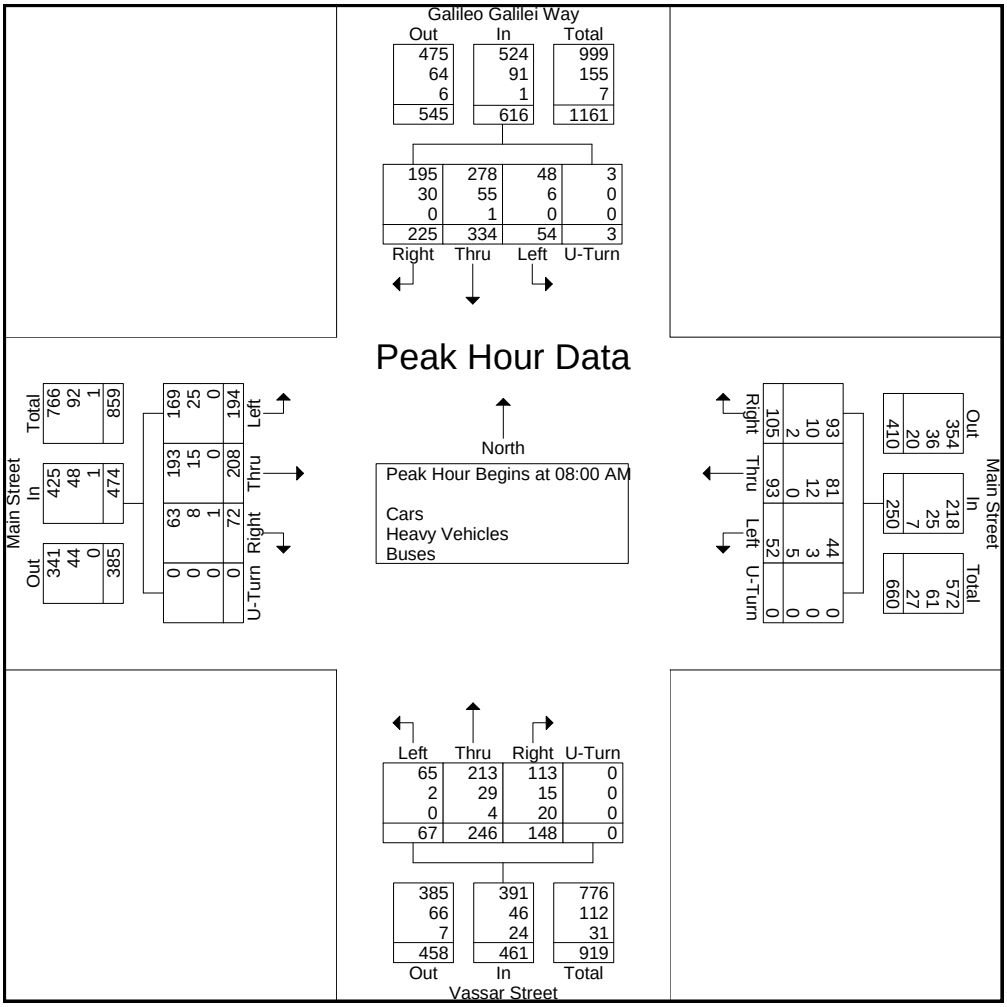
	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	56	84	14	2	156	20	28	15	0	63	46	65	15	0	126	17	43	39	0	99	444
08:15 AM	58	75	13	1	147	25	24	13	0	62	36	53	14	0	103	12	50	40	0	102	414
08:30 AM	65	88	10	0	163	29	21	10	0	60	33	63	19	0	115	23	58	57	0	138	476
08:45 AM	46	87	17	0	150	31	20	14	0	65	33	65	19	0	117	20	57	58	0	135	467
Total Volume	225	334	54	3	616	105	93	52	0	250	148	246	67	0	461	72	208	194	0	474	1801
% App. Total	36.5	54.2	8.8	0.5		42	37.2	20.8	0		32.1	53.4	14.5	0		15.2	43.9	40.9	0		
PHF	.865	.949	.794	.375	.945	.847	.830	.867	.000	.962	.804	.946	.882	.000	.915	.783	.897	.836	.000	.859	.946
Cars	195	278	48	3	524	93	81	44	0	218	113	213	65	0	391	63	193	169	0	425	1558
% Cars	86.7	83.2	88.9	100	85.1	88.6	87.1	84.6	0	87.2	76.4	86.6	97.0	0	84.8	87.5	92.8	87.1	0	89.7	86.5
Heavy Vehicles	30	55	6	0	91	10	12	3	0	25	15	29	2	0	46	8	15	25	0	48	210
% Heavy Vehicles	13.3	16.5	11.1	0	14.8	9.5	12.9	5.8	0	10.0	10.1	11.8	3.0	0	10.0	11.1	7.2	12.9	0	10.1	11.7
Buses	0	1	0	0	1	2	0	5	0	7	20	4	0	0	24	1	0	0	0	1	33
% Buses	0	0.3	0	0	0.2	1.9	0	9.6	0	2.8	13.5	1.6	0	0	5.2	1.4	0	0	0	0.2	1.8



N/S:Galileo Galilei Way/ Vassar Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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File Name : 133347 QQ
Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	32	66	9	0	2	32	11	0	31	69	12	0	10	56	55	0	385
04:45 PM	38	88	9	0	6	22	4	0	32	62	9	0	16	77	60	0	423
Total	70	154	18	0	8	54	15	0	63	131	21	0	26	133	115	0	808
05:00 PM	38	78	17	1	3	34	17	0	30	57	10	0	16	66	71	0	438
05:15 PM	36	81	12	0	8	35	14	0	34	95	7	0	24	60	63	0	469
05:30 PM	41	64	9	0	5	30	14	0	42	50	11	0	18	58	56	0	398
05:45 PM	30	58	9	0	10	35	14	0	38	74	7	0	19	65	52	0	411
Total	145	281	47	1	26	134	59	0	144	276	35	0	77	249	242	0	1716
06:00 PM	46	49	6	0	3	23	14	0	34	78	13	0	13	54	52	0	385
06:15 PM	32	61	11	1	4	16	6	0	28	60	12	0	17	73	56	0	377
Grand Total	293	545	82	2	41	227	94	0	269	545	81	0	133	509	465	0	3286
Apprch %	31.8	59.1	8.9	0.2	11.3	62.7	26	0	30.1	60.9	9.1	0	12	46	42	0	
Total %	8.9	16.6	2.5	0.1	1.2	6.9	2.9	0	8.2	16.6	2.5	0	4	15.5	14.2	0	
Cars	284	533	76	2	40	224	86	0	243	518	80	0	133	503	446	0	3168
% Cars	96.9	97.8	92.7	100	97.6	98.7	91.5	0	90.3	95	98.8	0	100	98.8	95.9	0	96.4
Heavy Vehicles	6	10	3	0	1	2	2	0	4	18	1	0	0	5	12	0	64
% Heavy Vehicles	2	1.8	3.7	0	2.4	0.9	2.1	0	1.5	3.3	1.2	0	0	1	2.6	0	1.9
Buses	3	2	3	0	0	1	6	0	22	9	0	0	0	1	7	0	54
% Buses	1	0.4	3.7	0	0	0.4	6.4	0	8.2	1.7	0	0	0	0.2	1.5	0	1.6

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	38	88	9	0	135	6	22	4	0	32	32	62	9	0	103	16	77	60	0	153	423
05:00 PM	38	78	17	1	134	3	34	17	0	54	30	57	10	0	97	16	66	71	0	153	438
05:15 PM	36	81	12	0	129	8	35	14	0	57	34	95	7	0	136	24	60	63	0	147	469
05:30 PM	41	64	9	0	114	5	30	14	0	49	42	50	11	0	103	18	58	56	0	132	398
Total Volume	153	311	47	1	512	22	121	49	0	192	138	264	37	0	439	74	261	250	0	585	1728
% App. Total	29.9	60.7	9.2	0.2		11.5	63	25.5	0		31.4	60.1	8.4	0		12.6	44.6	42.7	0		
PHF	.933	.884	.691	.250	.948	.688	.864	.721	.000	.842	.821	.695	.841	.000	.807	.771	.847	.880	.000	.956	.921
Cars	148	303	45	1	497	21	120	45	0	186	123	248	37	0	408	74	259	235	0	568	1659
% Cars	96.7	97.4	95.7	100	97.1	95.5	99.2	91.8	0	96.9	89.1	93.9	100	0	92.9	100	99.2	94.0	0	97.1	96.0
Heavy Vehicles	2	7	2	0	11	1	1	1	0	3	2	12	0	0	14	0	2	9	0	11	39
% Heavy Vehicles	1.3	2.3	4.3	0	2.1	4.5	0.8	2.0	0	1.6	1.4	4.5	0	0	3.2	0	0.8	3.6	0	1.9	2.3
Buses	3	1	0	0	4	0	0	3	0	3	13	4	0	0	17	0	0	6	0	6	30
% Buses	2.0	0.3	0	0	0.8	0	0	6.1	0	1.6	9.4	1.5	0	0	3.9	0	0	2.4	0	1.0	1.7

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Groups Printed- Cars

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	32	65	9	0	2	32	11	0	28	67	12	0	10	55	53	0	376
04:45 PM	38	83	9	0	6	22	3	0	25	56	9	0	16	77	55	0	399
Total	70	148	18	0	8	54	14	0	53	123	21	0	26	132	108	0	775
05:00 PM	37	77	16	1	3	33	16	0	29	53	10	0	16	65	66	0	422
05:15 PM	34	79	11	0	8	35	12	0	31	92	7	0	24	59	62	0	454
05:30 PM	39	64	9	0	4	30	14	0	38	47	11	0	18	58	52	0	384
05:45 PM	30	56	8	0	10	34	12	0	34	73	7	0	19	65	52	0	400
Total	140	276	44	1	25	132	54	0	132	265	35	0	77	247	232	0	1660
06:00 PM	43	49	5	0	3	22	13	0	31	77	12	0	13	52	52	0	372
06:15 PM	31	60	9	1	4	16	5	0	27	53	12	0	17	72	54	0	361
Grand Total	284	533	76	2	40	224	86	0	243	518	80	0	133	503	446	0	3168
Apprch %	31.7	59.6	8.5	0.2	11.4	64	24.6	0	28.9	61.6	9.5	0	12.3	46.5	41.2	0	
Total %	9	16.8	2.4	0.1	1.3	7.1	2.7	0	7.7	16.4	2.5	0	4.2	15.9	14.1	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	37	77	16	1	131	3	33	16	0	52	29	53	10	0	92	16	65	66	0	147	422
05:15 PM	34	79	11	0	124	8	35	12	0	55	31	92	7	0	130	24	59	62	0	145	454
05:30 PM	39	64	9	0	112	4	30	14	0	48	38	47	11	0	96	18	58	52	0	128	384
05:45 PM	30	56	8	0	94	10	34	12	0	56	34	73	7	0	114	19	65	52	0	136	400
Total Volume	140	276	44	1	461	25	132	54	0	211	132	265	35	0	432	77	247	232	0	556	1660
% App. Total	30.4	59.9	9.5	0.2		11.8	62.6	25.6	0		30.6	61.3	8.1	0		13.8	44.4	41.7	0		
PHF	.897	.873	.688	.250	.880	.625	.943	.844	.000	.942	.868	.720	.795	.000	.831	.802	.950	.879	.000	.946	.914

N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 QQ
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Heavy Vehicles

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	0	5
04:45 PM	0	5	0	0	0	0	0	0	0	4	0	0	0	0	3	0	12
Total	0	6	0	0	0	0	0	0	1	5	0	0	0	1	4	0	17
05:00 PM	0	0	1	0	0	1	0	0	0	4	0	0	0	1	3	0	10
05:15 PM	2	2	1	0	0	0	1	0	1	2	0	0	0	1	1	0	11
05:30 PM	0	0	0	0	1	0	0	0	1	2	0	0	0	0	2	0	6
05:45 PM	0	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	5
Total	2	3	3	0	1	2	2	0	2	9	0	0	0	2	6	0	32
06:00 PM	3	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	7
06:15 PM	1	1	0	0	0	0	0	0	1	3	0	0	0	0	2	0	8
Grand Total	6	10	3	0	1	2	2	0	4	18	1	0	0	5	12	0	64
Apprch %	31.6	52.6	15.8	0	20	40	40	0	17.4	78.3	4.3	0	0	29.4	70.6	0	
Total %	9.4	15.6	4.7	0	1.6	3.1	3.1	0	6.2	28.1	1.6	0	0	7.8	18.8	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	3	0	3	12
05:00 PM	0	0	1	0	1	0	1	0	0	1	0	4	0	0	4	0	1	3	0	4	10
05:15 PM	2	2	1	0	5	0	0	1	0	1	1	2	0	0	3	0	1	1	0	2	11
05:30 PM	0	0	0	0	0	1	0	0	0	1	1	2	0	0	3	0	0	2	0	2	6
Total Volume	2	7	2	0	11	1	1	1	0	3	2	12	0	0	14	0	2	9	0	11	39
% App. Total	18.2	63.6	18.2	0		33.3	33.3	33.3	0		14.3	85.7	0	0		0	18.2	81.8	0		
PHF	.250	.350	.500	.000	.550	.250	.250	.250	.000	.750	.500	.750	.000	.000	.875	.000	.500	.750	.000	.688	.813

N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 QQ
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Buses

	Galileo Galilei Way From North				Main Street From East				Vassar Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1	0	4
04:45 PM	0	0	0	0	0	0	1	0	7	2	0	0	0	0	2	0	12
Total	0	0	0	0	0	0	1	0	9	3	0	0	0	0	3	0	16
05:00 PM	1	1	0	0	0	0	1	0	1	0	0	0	0	0	2	0	6
05:15 PM	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	4
05:30 PM	2	0	0	0	0	0	0	0	3	1	0	0	0	0	2	0	8
05:45 PM	0	1	0	0	0	0	1	0	4	0	0	0	0	0	0	0	6
Total	3	2	0	0	0	0	3	0	10	2	0	0	0	0	4	0	24
06:00 PM	0	0	1	0	0	1	1	0	3	0	0	0	0	0	0	0	6
06:15 PM	0	0	2	0	0	0	1	0	0	4	0	0	0	1	0	0	8
Grand Total	3	2	3	0	0	1	6	0	22	9	0	0	0	1	7	0	54
Apprch %	37.5	25	37.5	0	0	14.3	85.7	0	71	29	0	0	0	12.5	87.5	0	
Total %	5.6	3.7	5.6	0	0	1.9	11.1	0	40.7	16.7	0	0	0	1.9	13	0	

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	1	0	1	7	2	0	0	9	0	0	2	0	2	12
05:00 PM	1	1	0	0	2	0	0	1	0	1	1	0	0	0	1	0	0	2	0	2	6
05:15 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	4
05:30 PM	2	0	0	0	2	0	0	0	0	0	3	1	0	0	4	0	0	2	0	2	8
Total Volume	3	1	0	0	4	0	0	3	0	3	13	4	0	0	17	0	0	6	0	6	30
% App. Total	75	25	0	0		0	0	100	0		76.5	23.5	0	0		0	0	100	0		
PHF	.375	.250	.000	.000	.500	.000	.000	.750	.000	.750	.464	.500	.000	.000	.472	.000	.000	.750	.000	.750	.625

N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Page No : 1

Groups Printed- Peds and Bicycles

	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	1	3	1	104	64	0	6	1	18	22	6	4	1	21	32	0	5	1	10	19	319
04:45 PM	2	7	0	68	45	0	5	1	22	11	3	6	0	31	28	0	6	0	13	13	261
Total	3	10	1	172	109	0	11	2	40	33	9	10	1	52	60	0	11	1	23	32	580
05:00 PM	0	11	0	91	60	0	6	3	14	37	2	10	0	53	59	1	10	0	25	29	411
05:15 PM	1	12	0	92	45	0	14	3	26	16	1	15	1	46	43	0	7	0	34	20	376
05:30 PM	1	9	0	126	102	0	11	2	27	24	0	8	0	40	44	0	6	0	46	21	467
05:45 PM	4	18	0	56	74	0	13	4	18	15	3	13	0	26	30	1	6	1	22	17	321
Total	6	50	0	365	281	0	44	12	85	92	6	46	1	165	176	2	29	1	127	87	1575
06:00 PM	5	12	0	53	85	0	20	3	10	23	2	11	0	46	28	2	5	3	21	23	352
06:15 PM	3	6	0	37	77	0	14	5	9	16	3	11	2	34	28	1	2	2	8	13	271
Grand Total	17	78	1	627	552	0	89	22	144	164	20	78	4	297	292	5	47	7	179	155	2778
Apprch %	1.3	6.1	0.1	49.2	43.3	0	21.2	5.3	34.4	39.1	2.9	11.3	0.6	43	42.3	1.3	12	1.8	45.5	39.4	
Total %	0.6	2.8	0	22.6	19.9	0	3.2	0.8	5.2	5.9	0.7	2.8	0.1	10.7	10.5	0.2	1.7	0.3	6.4	5.6	

	Galileo Galilei Way From North						Main Street From East						Vassar Street From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	11	0	91	60	162	0	6	3	14	37	60	2	10	0	53	59	124	1	10	0	25	29	65	411
05:15 PM	1	12	0	92	45	150	0	14	3	26	16	59	1	15	1	46	43	106	0	7	0	34	20	61	376
05:30 PM	1	9	0	126	102	238	0	11	2	27	24	64	0	8	0	40	44	92	0	6	0	46	21	73	467
05:45 PM	4	18	0	56	74	152	0	13	4	18	15	50	3	13	0	26	30	72	1	6	1	22	17	47	321
Total Volume	6	50	0	365	281	702	0	44	12	85	92	233	6	46	1	165	176	394	2	29	1	127	87	246	1575
% App. Total	0.9	7.1	0	52	40		0	18.9	5.2	36.5	39.5		1.5	11.7	0.3	41.9	44.7		0.8	11.8	0.4	51.6	35.4		
PHF	.375	.694	.000	.724	.689	.737	.000	.786	.750	.787	.622	.910	.500	.767	.250	.778	.746	.794	.500	.725	.250	.690	.750	.842	.843

N/S:Galileo Galilei Way/ Vassar Street
E/W: Main Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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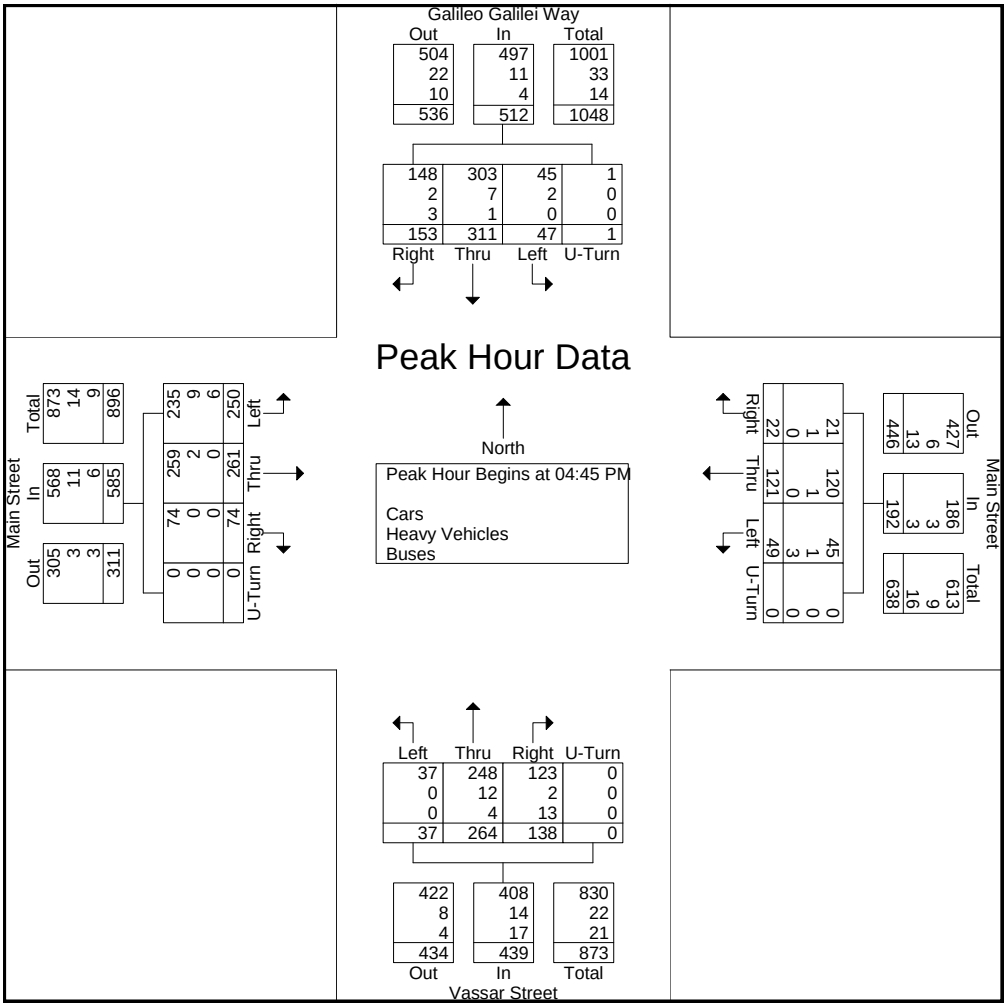
	Galileo Galilei Way From North					Main Street From East					Vassar Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	38	88	9	0	135	6	22	4	0	32	32	62	9	0	103	16	77	60	0	153	423
05:00 PM	38	78	17	1	134	3	34	17	0	54	30	57	10	0	97	16	66	71	0	153	438
05:15 PM	36	81	12	0	129	8	35	14	0	57	34	95	7	0	136	24	60	63	0	147	469
05:30 PM	41	64	9	0	114	5	30	14	0	49	42	50	11	0	103	18	58	56	0	132	398
Total Volume	153	311	47	1	512	22	121	49	0	192	138	264	37	0	439	74	261	250	0	585	1728
% App. Total	29.9	60.7	9.2	0.2		11.5	63	25.5	0		31.4	60.1	8.4	0		12.6	44.6	42.7	0		
PHF	.933	.884	.691	.250	.948	.688	.864	.721	.000	.842	.821	.695	.841	.000	.807	.771	.847	.880	.000	.956	.921
Cars	148	303	45	1	497	21	120	45	0	186	123	248	37	0	408	74	259	235	0	568	1659
% Cars	96.7	97.4	95.7	100	97.1	95.5	99.2	91.8	0	96.9	89.1	93.9	100	0	92.9	100	99.2	94.0	0	97.1	96.0
Heavy Vehicles	2	7	2	0	11	1	1	1	0	3	2	12	0	0	14	0	2	9	0	11	39
% Heavy Vehicles	1.3	2.3	4.3	0	2.1	4.5	0.8	2.0	0	1.6	1.4	4.5	0	0	3.2	0	0.8	3.6	0	1.9	2.3
Buses	3	1	0	0	4	0	0	3	0	3	13	4	0	0	17	0	0	6	0	6	30
% Buses	2.0	0.3	0	0	0.8	0	0	6.1	0	1.6	9.4	1.5	0	0	3.9	0	0	2.4	0	1.0	1.7



N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 R
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	35	11	14	1	6	13	0	0	4	19	20	0	8	53	10	1	195
07:45 AM	37	4	14	1	12	4	0	0	4	19	17	0	10	50	13	0	185
Total	72	15	28	2	18	17	0	0	8	38	37	0	18	103	23	1	380
08:00 AM	42	7	12	4	13	8	2	0	2	25	20	0	16	69	21	0	241
08:15 AM	38	7	14	1	11	9	1	1	3	21	16	0	15	58	16	0	211
08:30 AM	37	10	19	2	10	7	1	0	3	23	13	0	20	63	21	0	229
08:45 AM	50	13	15	0	2	5	1	0	2	29	17	0	18	78	16	0	246
Total	167	37	60	7	36	29	5	1	10	98	66	0	69	268	74	0	927
09:00 AM	46	10	15	0	7	9	0	0	3	19	16	0	9	54	13	0	201
09:15 AM	53	17	15	2	4	7	0	0	3	30	15	0	11	63	19	2	241
Grand Total	338	79	118	11	65	62	5	1	24	185	134	0	107	488	129	3	1749
Apprch %	61.9	14.5	21.6	2	48.9	46.6	3.8	0.8	7	53.9	39.1	0	14.7	67.1	17.7	0.4	
Total %	19.3	4.5	6.7	0.6	3.7	3.5	0.3	0.1	1.4	10.6	7.7	0	6.1	27.9	7.4	0.2	
Cars	316	77	106	11	30	41	5	1	20	162	109	0	94	420	110	3	1505
% Cars	93.5	97.5	89.8	100	46.2	66.1	100	100	83.3	87.6	81.3	0	87.9	86.1	85.3	100	86
Heavy Vehicles	20	2	9	0	4	5	0	0	4	9	18	0	13	29	12	0	125
% Heavy Vehicles	5.9	2.5	7.6	0	6.2	8.1	0	0	16.7	4.9	13.4	0	12.1	5.9	9.3	0	7.1
Buses	2	0	3	0	31	16	0	0	0	14	7	0	0	39	7	0	119
% Buses	0.6	0	2.5	0	47.7	25.8	0	0	0	7.6	5.2	0	0	8	5.4	0	6.8

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	42	7	12	4	65	13	8	2	0	23	2	25	20	0	47	16	69	21	0	106	241
08:15 AM	38	7	14	1	60	11	9	1	1	22	3	21	16	0	40	15	58	16	0	89	211
08:30 AM	37	10	19	2	68	10	7	1	0	18	3	23	13	0	39	20	63	21	0	104	229
08:45 AM	50	13	15	0	78	2	5	1	0	8	2	29	17	0	48	18	78	16	0	112	246
Total Volume	167	37	60	7	271	36	29	5	1	71	10	98	66	0	174	69	268	74	0	411	927
% App. Total	61.6	13.7	22.1	2.6		50.7	40.8	7	1.4		5.7	56.3	37.9	0		16.8	65.2	18	0		
PHF	.835	.712	.789	.438	.869	.692	.806	.625	.250	.772	.833	.845	.825	.000	.906	.863	.859	.881	.000	.917	.942
Cars	152	36	53	7	248	18	19	5	1	43	10	84	52	0	146	58	231	64	0	353	790
% Cars	91.0	97.3	88.3	100	91.5	50.0	65.5	100	100	60.6	100	85.7	78.8	0	83.9	84.1	86.2	86.5	0	85.9	85.2
Heavy Vehicles	14	1	7	0	22	3	4	0	0	7	0	7	11	0	18	11	20	7	0	38	85
% Heavy Vehicles	8.4	2.7	11.7	0	8.1	8.3	13.8	0	0	9.9	0	7.1	16.7	0	10.3	15.9	7.5	9.5	0	9.2	9.2
Buses	1	0	0	0	1	15	6	0	0	21	0	7	3	0	10	0	17	3	0	20	52
% Buses	0.6	0	0	0	0.4	41.7	20.7	0	0	29.6	0	7.1	4.5	0	5.7	0	6.3	4.1	0	4.9	5.6

N/S: Ames Street
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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 R
Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	34	11	13	1	3	10	0	0	1	18	14	0	8	48	10	1	172
07:45 AM	36	3	13	1	6	3	0	0	4	17	16	0	8	41	10	0	158
Total	70	14	26	2	9	13	0	0	5	35	30	0	16	89	20	1	330
08:00 AM	39	6	11	4	8	6	2	0	2	23	16	0	16	61	17	0	211
08:15 AM	35	7	13	1	5	6	1	1	3	16	12	0	12	51	12	0	175
08:30 AM	32	10	18	2	5	3	1	0	3	20	11	0	16	51	20	0	192
08:45 AM	46	13	11	0	0	4	1	0	2	25	13	0	14	68	15	0	212
Total	152	36	53	7	18	19	5	1	10	84	52	0	58	231	64	0	790
09:00 AM	44	10	13	0	1	4	0	0	2	15	14	0	9	45	9	0	166
09:15 AM	50	17	14	2	2	5	0	0	3	28	13	0	11	55	17	2	219
Grand Total	316	77	106	11	30	41	5	1	20	162	109	0	94	420	110	3	1505
Apprch %	62	15.1	20.8	2.2	39	53.2	6.5	1.3	6.9	55.7	37.5	0	15	67	17.5	0.5	
Total %	21	5.1	7	0.7	2	2.7	0.3	0.1	1.3	10.8	7.2	0	6.2	27.9	7.3	0.2	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	39	6	11	4	60	8	6	2	0	16	2	23	16	0	41	16	61	17	0	94	211
08:15 AM	35	7	13	1	56	5	6	1	1	13	3	16	12	0	31	12	51	12	0	75	175
08:30 AM	32	10	18	2	62	5	3	1	0	9	3	20	11	0	34	16	51	20	0	87	192
08:45 AM	46	13	11	0	70	0	4	1	0	5	2	25	13	0	40	14	68	15	0	97	212
Total Volume	152	36	53	7	248	18	19	5	1	43	10	84	52	0	146	58	231	64	0	353	790
% App. Total	61.3	14.5	21.4	2.8		41.9	44.2	11.6	2.3		6.8	57.5	35.6	0		16.4	65.4	18.1	0		
PHF	.826	.692	.736	.438	.886	.563	.792	.625	.250	.672	.833	.840	.813	.000	.890	.906	.849	.800	.000	.910	.932

N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	0	0	0	3	0	4	0	0	3	0	0	11
07:45 AM	1	1	0	0	1	0	0	0	0	0	1	0	2	2	2	0	10
Total	2	1	0	0	1	0	0	0	3	0	5	0	2	5	2	0	21
08:00 AM	2	1	1	0	2	0	0	0	0	0	1	0	0	3	3	0	13
08:15 AM	3	0	1	0	0	1	0	0	0	3	4	0	3	3	3	0	21
08:30 AM	5	0	1	0	1	3	0	0	0	2	2	0	4	8	0	0	26
08:45 AM	4	0	4	0	0	0	0	0	0	2	4	0	4	6	1	0	25
Total	14	1	7	0	3	4	0	0	0	7	11	0	11	20	7	0	85
09:00 AM	1	0	1	0	0	1	0	0	1	2	1	0	0	4	2	0	13
09:15 AM	3	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	6
Grand Total	20	2	9	0	4	5	0	0	4	9	18	0	13	29	12	0	125
Apprch %	64.5	6.5	29	0	44.4	55.6	0	0	12.9	29	58.1	0	24.1	53.7	22.2	0	
Total %	16	1.6	7.2	0	3.2	4	0	0	3.2	7.2	14.4	0	10.4	23.2	9.6	0	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	1	1	0	4	2	0	0	0	2	0	0	1	0	1	0	3	3	0	6	13
08:15 AM	3	0	1	0	4	0	1	0	0	1	0	3	4	0	7	3	3	3	0	9	21
08:30 AM	5	0	1	0	6	1	3	0	0	4	0	2	2	0	4	4	8	0	0	12	26
08:45 AM	4	0	4	0	8	0	0	0	0	0	0	2	4	0	6	4	6	1	0	11	25
Total Volume	14	1	7	0	22	3	4	0	0	7	0	7	11	0	18	11	20	7	0	38	85
% App. Total	63.6	4.5	31.8	0		42.9	57.1	0	0		0	38.9	61.1	0		28.9	52.6	18.4	0		
PHF	.700	.250	.438	.000	.688	.375	.333	.000	.000	.438	.000	.583	.688	.000	.643	.688	.625	.583	.000	.792	.817

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	1	0	3	3	0	0	0	1	2	0	0	2	0	0	12
07:45 AM	0	0	1	0	5	1	0	0	0	2	0	0	0	7	1	0	17
Total	0	0	2	0	8	4	0	0	0	3	2	0	0	9	1	0	29
08:00 AM	1	0	0	0	3	2	0	0	0	2	3	0	0	5	1	0	17
08:15 AM	0	0	0	0	6	2	0	0	0	2	0	0	0	4	1	0	15
08:30 AM	0	0	0	0	4	1	0	0	0	1	0	0	0	4	1	0	11
08:45 AM	0	0	0	0	2	1	0	0	0	2	0	0	0	4	0	0	9
Total	1	0	0	0	15	6	0	0	0	7	3	0	0	17	3	0	52
09:00 AM	1	0	1	0	6	4	0	0	0	2	1	0	0	5	2	0	22
09:15 AM	0	0	0	0	2	2	0	0	0	2	1	0	0	8	1	0	16
Grand Total	2	0	3	0	31	16	0	0	0	14	7	0	0	39	7	0	119
Apprch %	40	0	60	0	66	34	0	0	0	66.7	33.3	0	0	84.8	15.2	0	
Total %	1.7	0	2.5	0	26.1	13.4	0	0	0	11.8	5.9	0	0	32.8	5.9	0	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	1	0	1	3	3	0	0	6	0	1	2	0	3	0	2	0	0	2	12
07:45 AM	0	0	1	0	1	5	1	0	0	6	0	2	0	0	2	0	7	1	0	8	17
08:00 AM	1	0	0	0	1	3	2	0	0	5	0	2	3	0	5	0	5	1	0	6	17
08:15 AM	0	0	0	0	0	6	2	0	0	8	0	2	0	0	2	0	4	1	0	5	15
Total Volume	1	0	2	0	3	17	8	0	0	25	0	7	5	0	12	0	18	3	0	21	61
% App. Total	33.3	0	66.7	0		68	32	0	0		0	58.3	41.7	0		0	85.7	14.3	0		
PHF	.250	.000	.500	.000	.750	.708	.667	.000	.000	.781	.000	.875	.417	.000	.600	.000	.643	.750	.000	.656	.897

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	1	0	13	70	0	3	0	12	10	0	1	0	47	20	0	16	1	9	9	212
07:45 AM	1	0	1	21	98	0	1	0	19	14	0	1	1	64	22	1	13	1	10	7	275
Total	1	1	1	34	168	0	4	0	31	24	0	2	1	111	42	1	29	2	19	16	487
08:00 AM	0	0	0	15	89	0	0	0	18	25	0	2	0	63	28	1	16	0	5	11	273
08:15 AM	1	0	2	13	143	0	1	0	32	14	1	2	0	84	30	5	20	1	10	22	381
08:30 AM	0	8	0	28	139	0	2	0	33	11	1	1	1	66	30	2	35	1	11	18	387
08:45 AM	1	3	1	30	110	1	2	0	19	27	1	3	1	126	46	3	29	0	22	19	444
Total	2	11	3	86	481	1	5	0	102	77	3	8	2	339	134	11	100	2	48	70	1485
09:00 AM	0	4	8	29	125	0	1	0	18	29	0	1	1	73	27	0	17	1	23	15	372
09:15 AM	1	2	2	25	137	0	2	0	27	26	0	4	0	154	31	0	27	1	29	23	491
Grand Total	4	18	14	174	911	1	12	0	178	156	3	15	4	677	234	12	173	6	119	124	2835
Apprch %	0.4	1.6	1.2	15.5	81.3	0.3	3.5	0	51.3	45	0.3	1.6	0.4	72.6	25.1	2.8	39.9	1.4	27.4	28.6	
Total %	0.1	0.6	0.5	6.1	32.1	0	0.4	0	6.3	5.5	0.1	0.5	0.1	23.9	8.3	0.4	6.1	0.2	4.2	4.4	

	Ames Street From North						Main Street From East						Ames Street From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:30 AM																									
08:30 AM	0	8	0	28	139	175	0	2	0	33	11	46	1	1	1	66	30	99	2	35	1	11	18	67	387
08:45 AM	1	3	1	30	110	145	1	2	0	19	27	49	1	3	1	126	46	177	3	29	0	22	19	73	444
09:00 AM	0	4	8	29	125	166	0	1	0	18	29	48	0	1	1	73	27	102	0	17	1	23	15	56	372
09:15 AM	1	2	2	25	137	167	0	2	0	27	26	55	0	4	0	154	31	189	0	27	1	29	23	80	491
Total Volume	2	17	11	112	511	653	1	7	0	97	93	198	2	9	3	419	134	567	5	108	3	85	75	276	1694
% App. Total	0.3	2.6	1.7	17.2	78.3		0.5	3.5	0	49	47		0.4	1.6	0.5	73.9	23.6		1.8	39.1	1.1	30.8	27.2		
PHF	.500	.531	.344	.933	.919	.933	.250	.875	.000	.735	.802	.900	.500	.563	.750	.680	.728	.750	.417	.771	.750	.733	.815	.863	.863

N/S: Ames Street
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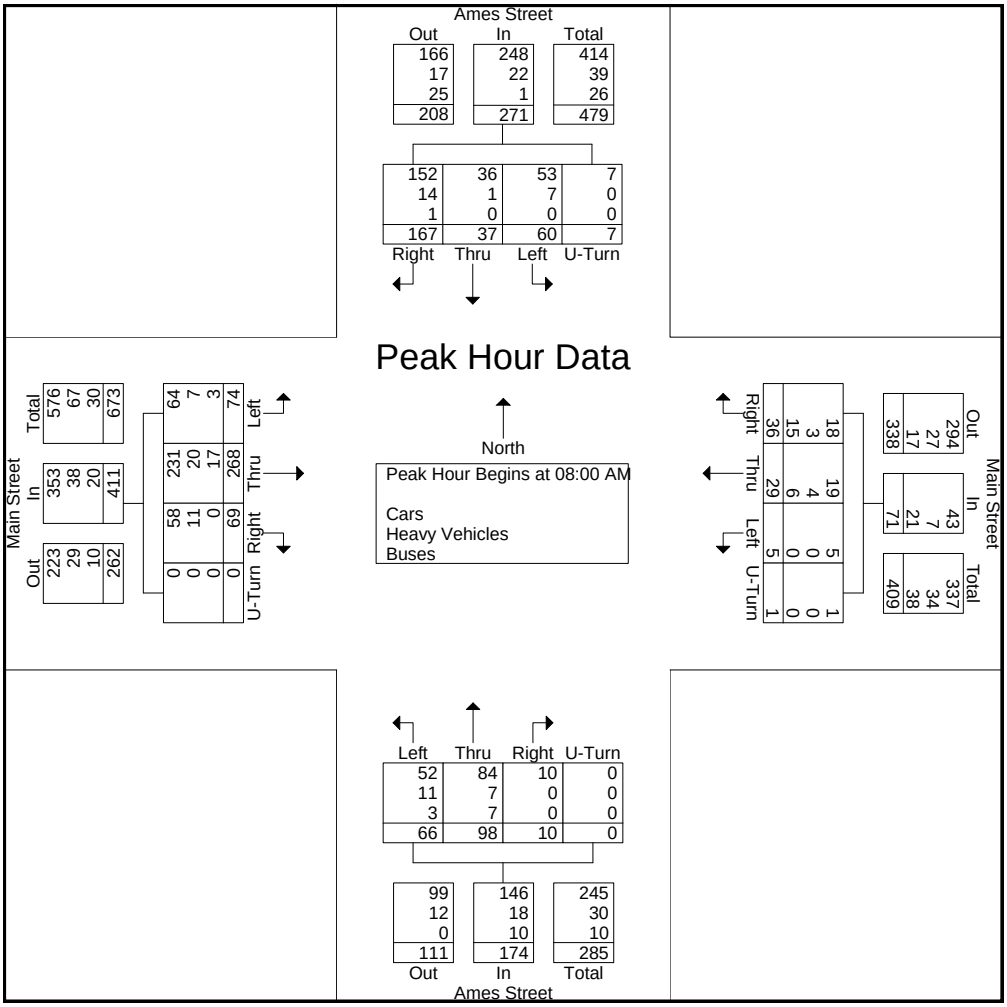
	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	42	7	12	4	65	13	8	2	0	23	2	25	20	0	47	16	69	21	0	106	241
08:15 AM	38	7	14	1	60	11	9	1	1	22	3	21	16	0	40	15	58	16	0	89	211
08:30 AM	37	10	19	2	68	10	7	1	0	18	3	23	13	0	39	20	63	21	0	104	229
08:45 AM	50	13	15	0	78	2	5	1	0	8	2	29	17	0	48	18	78	16	0	112	246
Total Volume	167	37	60	7	271	36	29	5	1	71	10	98	66	0	174	69	268	74	0	411	927
% App. Total	61.6	13.7	22.1	2.6		50.7	40.8	7	1.4		5.7	56.3	37.9	0		16.8	65.2	18	0		
PHF	.835	.712	.789	.438	.869	.692	.806	.625	.250	.772	.833	.845	.825	.000	.906	.863	.859	.881	.000	.917	.942
Cars	152	36	53	7	248	18	19	5	1	43	10	84	52	0	146	58	231	64	0	353	790
% Cars	91.0	97.3	88.3	100	91.5	50.0	65.5	100	100	60.6	100	85.7	78.8	0	83.9	84.1	86.2	86.5	0	85.9	85.2
Heavy Vehicles	14	1	7	0	22	3	4	0	0	7	0	7	11	0	18	11	20	7	0	38	85
% Heavy Vehicles	8.4	2.7	11.7	0	8.1	8.3	13.8	0	0	9.9	0	7.1	16.7	0	10.3	15.9	7.5	9.5	0	9.2	9.2
Buses	1	0	0	0	1	15	6	0	0	21	0	7	3	0	10	0	17	3	0	20	52
% Buses	0.6	0	0	0	0.4	41.7	20.7	0	0	29.6	0	7.1	4.5	0	5.7	0	6.3	4.1	0	4.9	5.6



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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	28	21	14	1	14	7	1	0	2	28	12	0	12	74	3	1	218
04:45 PM	11	12	10	0	7	13	4	0	1	35	10	0	18	95	10	0	226
Total	39	33	24	1	21	20	5	0	3	63	22	0	30	169	13	1	444
05:00 PM	24	20	10	1	12	11	1	0	3	42	24	0	18	87	8	0	261
05:15 PM	26	17	8	2	13	12	0	0	3	40	18	0	17	87	7	0	250
05:30 PM	27	23	14	2	5	8	0	0	5	31	17	0	23	71	11	1	238
05:45 PM	23	18	11	0	10	11	1	0	6	27	19	0	21	86	8	0	241
Total	100	78	43	5	40	42	2	0	17	140	78	0	79	331	34	1	990
06:00 PM	16	16	11	5	15	11	0	0	16	24	17	0	8	73	11	0	223
06:15 PM	15	15	8	2	15	6	1	0	10	22	5	0	19	86	6	0	210
Grand Total	170	142	86	13	91	79	8	0	46	249	122	0	136	659	64	2	1867
Apprch %	41.4	34.5	20.9	3.2	51.1	44.4	4.5	0	11	59.7	29.3	0	15.8	76.5	7.4	0.2	
Total %	9.1	7.6	4.6	0.7	4.9	4.2	0.4	0	2.5	13.3	6.5	0	7.3	35.3	3.4	0.1	
Cars	169	139	66	13	52	73	8	0	46	247	115	0	134	621	61	2	1746
% Cars	99.4	97.9	76.7	100	57.1	92.4	100	0	100	99.2	94.3	0	98.5	94.2	95.3	100	93.5
Heavy Vehicles	0	3	3	0	3	2	0	0	0	2	4	0	1	11	1	0	30
% Heavy Vehicles	0	2.1	3.5	0	3.3	2.5	0	0	0	0.8	3.3	0	0.7	1.7	1.6	0	1.6
Buses	1	0	17	0	36	4	0	0	0	0	3	0	1	27	2	0	91
% Buses	0.6	0	19.8	0	39.6	5.1	0	0	0	0	2.5	0	0.7	4.1	3.1	0	4.9

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	24	20	10	1	55	12	11	1	0	24	3	42	24	0	69	18	87	8	0	113	261
05:15 PM	26	17	8	2	53	13	12	0	0	25	3	40	18	0	61	17	87	7	0	111	250
05:30 PM	27	23	14	2	66	5	8	0	0	13	5	31	17	0	53	23	71	11	1	106	238
05:45 PM	23	18	11	0	52	10	11	1	0	22	6	27	19	0	52	21	86	8	0	115	241
Total Volume	100	78	43	5	226	40	42	2	0	84	17	140	78	0	235	79	331	34	1	445	990
% App. Total	44.2	34.5	19	2.2		47.6	50	2.4	0		7.2	59.6	33.2	0		17.8	74.4	7.6	0.2		
PHF	.926	.848	.768	.625	.856	.769	.875	.500	.000	.840	.708	.833	.813	.000	.851	.859	.951	.773	.250	.967	.948
Cars	100	77	34	5	216	19	38	2	0	59	17	140	73	0	230	78	315	33	1	427	932
% Cars	100	98.7	79.1	100	95.6	47.5	90.5	100	0	70.2	100	100	93.6	0	97.9	98.7	95.2	97.1	100	96.0	94.1
Heavy Vehicles	0	1	1	0	2	2	2	0	0	4	0	0	4	0	4	1	4	1	0	6	16
% Heavy Vehicles	0	1.3	2.3	0	0.9	5.0	4.8	0	0	4.8	0	0	5.1	0	1.7	1.3	1.2	2.9	0	1.3	1.6
Buses	0	0	8	0	8	19	2	0	0	21	0	0	1	0	1	0	12	0	0	12	42
% Buses	0	0	18.6	0	3.5	47.5	4.8	0	0	25.0	0	0	1.3	0	0.4	0	3.6	0	0	2.7	4.2

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Groups Printed- Cars

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	27	20	9	1	8	7	1	0	2	28	12	0	12	69	3	1	200
04:45 PM	11	12	9	0	4	12	4	0	1	35	10	0	18	88	9	0	213
Total	38	32	18	1	12	19	5	0	3	63	22	0	30	157	12	1	413
05:00 PM	24	19	7	1	7	11	1	0	3	42	22	0	18	84	8	0	247
05:15 PM	26	17	6	2	7	11	0	0	3	40	17	0	16	83	6	0	234
05:30 PM	27	23	12	2	1	7	0	0	5	31	17	0	23	67	11	1	227
05:45 PM	23	18	9	0	4	9	1	0	6	27	17	0	21	81	8	0	224
Total	100	77	34	5	19	38	2	0	17	140	73	0	78	315	33	1	932
06:00 PM	16	15	9	5	10	10	0	0	16	23	16	0	8	67	10	0	205
06:15 PM	15	15	5	2	11	6	1	0	10	21	4	0	18	82	6	0	196
Grand Total	169	139	66	13	52	73	8	0	46	247	115	0	134	621	61	2	1746
Apprch %	43.7	35.9	17.1	3.4	39.1	54.9	6	0	11.3	60.5	28.2	0	16.4	75.9	7.5	0.2	
Total %	9.7	8	3.8	0.7	3	4.2	0.5	0	2.6	14.1	6.6	0	7.7	35.6	3.5	0.1	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	24	19	7	1	51	7	11	1	0	19	3	42	22	0	67	18	84	8	0	110	247
05:15 PM	26	17	6	2	51	7	11	0	0	18	3	40	17	0	60	16	83	6	0	105	234
05:30 PM	27	23	12	2	64	1	7	0	0	8	5	31	17	0	53	23	67	11	1	102	227
05:45 PM	23	18	9	0	50	4	9	1	0	14	6	27	17	0	50	21	81	8	0	110	224
Total Volume	100	77	34	5	216	19	38	2	0	59	17	140	73	0	230	78	315	33	1	427	932
% App. Total	46.3	35.6	15.7	2.3		32.2	64.4	3.4	0		7.4	60.9	31.7	0		18.3	73.8	7.7	0.2		
PHF	.926	.837	.708	.625	.844	.679	.864	.500	.000	.776	.708	.833	.830	.000	.858	.848	.938	.750	.250	.970	.943

N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Heavy Vehicles

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	2	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	0	1	2	0	0	0	0	0	0	0	0	0	0	4	0	0	7
05:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3
05:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	1	1	1	0	5
05:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	3
05:45 PM	0	0	0	0	1	1	0	0	0	0	2	0	0	1	0	0	5
Total	0	1	1	0	2	2	0	0	0	0	4	0	1	4	1	0	16
06:00 PM	0	1	0	0	1	0	0	0	0	1	0	0	0	2	0	0	5
06:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
Grand Total	0	3	3	0	3	2	0	0	0	2	4	0	1	11	1	0	30
Apprch %	0	50	50	0	60	40	0	0	0	33.3	66.7	0	7.7	84.6	7.7	0	
Total %	0	10	10	0	10	6.7	0	0	0	6.7	13.3	0	3.3	36.7	3.3	0	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	1	1	1	0	3	5
05:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
05:45 PM	0	0	0	0	0	1	1	0	0	2	0	0	2	0	2	0	1	0	0	1	5
06:00 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	2	0	0	2	5
Total Volume	0	1	1	0	2	3	2	0	0	5	0	1	3	0	4	1	5	1	0	7	18
% App. Total	0	50	50	0		60	40	0	0		0	25	75	0		14.3	71.4	14.3	0		
PHF	.000	.250	.250	.000	.500	.750	.500	.000	.000	.625	.000	.250	.375	.000	.500	.250	.625	.250	.000	.583	.900

N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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Groups Printed- Buses

	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	3	0	6	0	0	0	0	0	0	0	0	3	0	0	13
04:45 PM	0	0	1	0	3	1	0	0	0	0	0	0	0	5	1	0	11
Total	1	0	4	0	9	1	0	0	0	0	0	0	0	8	1	0	24
05:00 PM	0	0	3	0	5	0	0	0	0	0	1	0	0	2	0	0	11
05:15 PM	0	0	2	0	5	1	0	0	0	0	0	0	0	3	0	0	11
05:30 PM	0	0	1	0	4	0	0	0	0	0	0	0	0	3	0	0	8
05:45 PM	0	0	2	0	5	1	0	0	0	0	0	0	0	4	0	0	12
Total	0	0	8	0	19	2	0	0	0	0	1	0	0	12	0	0	42
06:00 PM	0	0	2	0	4	1	0	0	0	0	1	0	0	4	1	0	13
06:15 PM	0	0	3	0	4	0	0	0	0	0	1	0	1	3	0	0	12
Grand Total	1	0	17	0	36	4	0	0	0	0	3	0	1	27	2	0	91
Apprch %	5.6	0	94.4	0	90	10	0	0	0	0	100	0	3.3	90	6.7	0	
Total %	1.1	0	18.7	0	39.6	4.4	0	0	0	0	3.3	0	1.1	29.7	2.2	0	

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	0	3	0	4	6	0	0	0	6	0	0	0	0	0	0	3	0	0	3	13
04:45 PM	0	0	1	0	1	3	1	0	0	4	0	0	0	0	0	0	5	1	0	6	11
05:00 PM	0	0	3	0	3	5	0	0	0	5	0	0	1	0	1	0	2	0	0	2	11
05:15 PM	0	0	2	0	2	5	1	0	0	6	0	0	0	0	0	0	3	0	0	3	11
Total Volume	1	0	9	0	10	19	2	0	0	21	0	0	1	0	1	0	13	1	0	14	46
% App. Total	10	0	90	0		90.5	9.5	0	0		0	0	100	0		0	92.9	7.1	0		
PHF	.250	.000	.750	.000	.625	.792	.500	.000	.000	.875	.000	.000	.250	.000	.250	.000	.650	.250	.000	.583	.885

N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Peds and Bicycles

	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	1	1	115	54	0	3	0	19	22	1	6	1	21	123	0	9	0	19	34	429
04:45 PM	0	1	1	79	43	1	7	0	37	19	0	3	0	32	107	1	12	0	24	33	400
Total	0	2	2	194	97	1	10	0	56	41	1	9	1	53	230	1	21	0	43	67	829
05:00 PM	0	0	0	124	62	0	14	1	31	27	2	8	4	57	178	4	4	0	26	38	580
05:15 PM	0	0	0	105	91	0	10	1	21	7	0	3	2	66	132	1	14	0	33	45	531
05:30 PM	2	3	1	117	57	0	11	1	37	37	1	5	3	68	141	0	9	0	37	24	554
05:45 PM	0	2	0	55	60	0	9	0	28	55	0	3	1	60	138	1	11	0	22	35	480
Total	2	5	1	401	270	0	44	3	117	126	3	19	10	251	589	6	38	0	118	142	2145
06:00 PM	0	2	1	39	35	0	7	1	38	38	0	6	3	59	124	0	7	0	29	20	409
06:15 PM	0	0	0	48	46	0	7	0	35	29	1	1	7	79	92	0	5	1	27	25	403
Grand Total	2	9	4	682	448	1	68	4	246	234	5	35	21	442	1035	7	71	1	217	254	3786
Apprch %	0.2	0.8	0.3	59.6	39.1	0.2	12.3	0.7	44.5	42.3	0.3	2.3	1.4	28.7	67.3	1.3	12.9	0.2	39.5	46.2	
Total %	0.1	0.2	0.1	18	11.8	0	1.8	0.1	6.5	6.2	0.1	0.9	0.6	11.7	27.3	0.2	1.9	0	5.7	6.7	

	Ames Street From North						Main Street From East						Ames Street From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	0	0	124	62	186	0	14	1	31	27	73	2	8	4	57	178	249	4	4	0	26	38	72	580
05:15 PM	0	0	0	105	91	196	0	10	1	21	7	39	0	3	2	66	132	203	1	14	0	33	45	93	531
05:30 PM	2	3	1	117	57	180	0	11	1	37	37	86	1	5	3	68	141	218	0	9	0	37	24	70	554
05:45 PM	0	2	0	55	60	117	0	9	0	28	55	92	0	3	1	60	138	202	1	11	0	22	35	69	480
Total Volume	2	5	1	401	270	679	0	44	3	117	126	290	3	19	10	251	589	872	6	38	0	118	142	304	2145
% App. Total	0.3	0.7	0.1	59.1	39.8		0	15.2	1	40.3	43.4		0.3	2.2	1.1	28.8	67.5		2	12.5	0	38.8	46.7		
PHF	.250	.417	.250	.808	.742	.866	.000	.786	.750	.791	.573	.788	.375	.594	.625	.923	.827	.876	.375	.679	.000	.797	.789	.817	.925

N/S: Ames Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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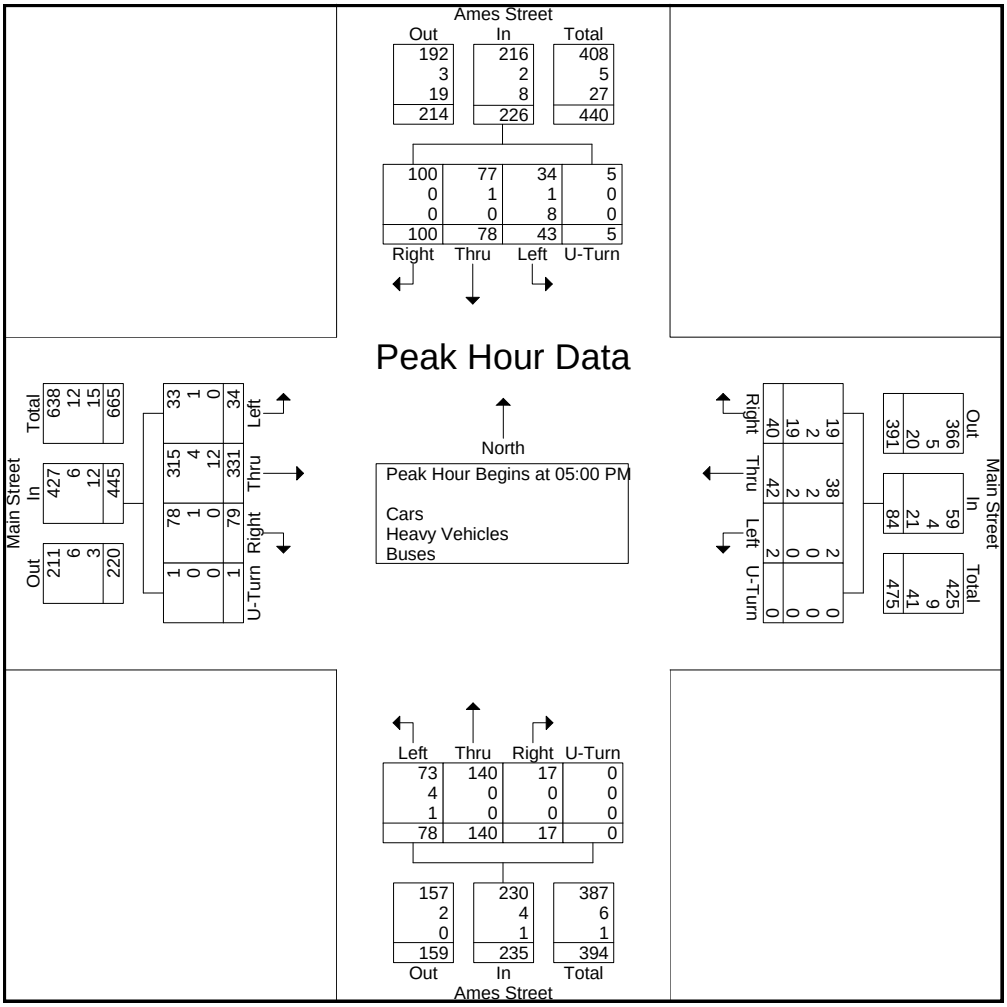
	Ames Street From North					Main Street From East					Ames Street From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	24	20	10	1	55	12	11	1	0	24	3	42	24	0	69	18	87	8	0	113	261
05:15 PM	26	17	8	2	53	13	12	0	0	25	3	40	18	0	61	17	87	7	0	111	250
05:30 PM	27	23	14	2	66	5	8	0	0	13	5	31	17	0	53	23	71	11	1	106	238
05:45 PM	23	18	11	0	52	10	11	1	0	22	6	27	19	0	52	21	86	8	0	115	241
Total Volume	100	78	43	5	226	40	42	2	0	84	17	140	78	0	235	79	331	34	1	445	990
% App. Total	44.2	34.5	19	2.2		47.6	50	2.4	0		7.2	59.6	33.2	0		17.8	74.4	7.6	0.2		
PHF	.926	.848	.768	.625	.856	.769	.875	.500	.000	.840	.708	.833	.813	.000	.851	.859	.951	.773	.250	.967	.948
Cars	100	77	34	5	216	19	38	2	0	59	17	140	73	0	230	78	315	33	1	427	932
% Cars	100	98.7	79.1	100	95.6	47.5	90.5	100	0	70.2	100	100	93.6	0	97.9	98.7	95.2	97.1	100	96.0	94.1
Heavy Vehicles	0	1	1	0	2	2	2	0	0	4	0	0	4	0	4	1	4	1	0	6	16
% Heavy Vehicles	0	1.3	2.3	0	0.9	5.0	4.8	0	0	4.8	0	0	5.1	0	1.7	1.3	1.2	2.9	0	1.3	1.6
Buses	0	0	8	0	8	19	2	0	0	21	0	0	1	0	1	0	12	0	0	12	42
% Buses	0	0	18.6	0	3.5	47.5	4.8	0	0	25.0	0	0	1.3	0	0.4	0	3.6	0	0	2.7	4.2



S: Hayward Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 S
Site Code : TBA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	17	0	0	2	0	0	16	56	0	91
07:45 AM	22	0	0	1	0	0	21	43	0	87
Total	39	0	0	3	0	0	37	99	0	178
08:00 AM	16	0	0	0	0	0	15	59	0	90
08:15 AM	21	0	0	1	0	0	13	53	0	88
08:30 AM	14	0	0	3	0	0	20	54	0	91
08:45 AM	10	0	0	4	0	0	16	65	0	95
Total	61	0	0	8	0	0	64	231	0	364
09:00 AM	14	0	0	2	0	0	18	42	0	76
09:15 AM	10	0	0	3	0	0	27	62	0	102
Grand Total	124	0	0	16	0	0	146	434	0	720
Apprch %	100	0	0	100	0	0	25.2	74.8	0	
Total %	17.2	0	0	2.2	0	0	20.3	60.3	0	
Cars	71	0	0	14	0	0	131	368	0	584
% Cars	57.3	0	0	87.5	0	0	89.7	84.8	0	81.1
Heavy Vehicles	8	0	0	2	0	0	12	27	0	49
% Heavy Vehicles	6.5	0	0	12.5	0	0	8.2	6.2	0	6.8
Buses	45	0	0	0	0	0	3	39	0	87
% Buses	36.3	0	0	0	0	0	2.1	9	0	12.1

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	16	0	0	16	0	0	0	0	15	59	0	74	90
08:15 AM	21	0	0	21	1	0	0	1	13	53	0	66	88
08:30 AM	14	0	0	14	3	0	0	3	20	54	0	74	91
08:45 AM	10	0	0	10	4	0	0	4	16	65	0	81	95
Total Volume	61	0	0	61	8	0	0	8	64	231	0	295	364
% App. Total	100	0	0		100	0	0		21.7	78.3	0		
PHF	.726	.000	.000	.726	.500	.000	.000	.500	.800	.888	.000	.910	.958
Cars	36	0	0	36	7	0	0	7	56	198	0	254	297
% Cars	59.0	0	0	59.0	87.5	0	0	87.5	87.5	85.7	0	86.1	81.6
Heavy Vehicles	5	0	0	5	1	0	0	1	6	17	0	23	29
% Heavy Vehicles	8.2	0	0	8.2	12.5	0	0	12.5	9.4	7.4	0	7.8	8.0
Buses	20	0	0	20	0	0	0	0	2	16	0	18	38
% Buses	32.8	0	0	32.8	0	0	0	0	3.1	6.9	0	6.1	10.4

S: Hayward Street
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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	12	0	0	2	0	0	14	48	0	76
07:45 AM	13	0	0	1	0	0	19	36	0	69
Total	25	0	0	3	0	0	33	84	0	145
08:00 AM	10	0	0	0	0	0	13	54	0	77
08:15 AM	12	0	0	1	0	0	12	41	0	66
08:30 AM	7	0	0	3	0	0	18	45	0	73
08:45 AM	7	0	0	3	0	0	13	58	0	81
Total	36	0	0	7	0	0	56	198	0	297
09:00 AM	5	0	0	2	0	0	15	33	0	55
09:15 AM	5	0	0	2	0	0	27	53	0	87
Grand Total	71	0	0	14	0	0	131	368	0	584
Apprch %	100	0	0	100	0	0	26.3	73.7	0	
Total %	12.2	0	0	2.4	0	0	22.4	63	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	10	0	0	10	0	0	0	0	13	54	0	67	77
08:15 AM	12	0	0	12	1	0	0	1	12	41	0	53	66
08:30 AM	7	0	0	7	3	0	0	3	18	45	0	63	73
08:45 AM	7	0	0	7	3	0	0	3	13	58	0	71	81
Total Volume	36	0	0	36	7	0	0	7	56	198	0	254	297
% App. Total	100	0	0		100	0	0		22	78	0		
PHF	.750	.000	.000	.750	.583	.000	.000	.583	.778	.853	.000	.894	.917

S: Hayward Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Heavy Vehicles

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	1	5	0	6
07:45 AM	2	0	0	0	0	0	2	0	0	4
Total	2	0	0	0	0	0	3	5	0	10
08:00 AM	2	0	0	0	0	0	0	2	0	4
08:15 AM	2	0	0	0	0	0	1	7	0	10
08:30 AM	1	0	0	0	0	0	2	4	0	7
08:45 AM	0	0	0	1	0	0	3	4	0	8
Total	5	0	0	1	0	0	6	17	0	29
09:00 AM	0	0	0	0	0	0	3	3	0	6
09:15 AM	1	0	0	1	0	0	0	2	0	4
Grand Total	8	0	0	2	0	0	12	27	0	49
Apprch %	100	0	0	100	0	0	30.8	69.2	0	
Total %	16.3	0	0	4.1	0	0	24.5	55.1	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:15 AM													
08:15 AM	2	0	0	2	0	0	0	0	1	7	0	8	10
08:30 AM	1	0	0	1	0	0	0	0	2	4	0	6	7
08:45 AM	0	0	0	0	1	0	0	1	3	4	0	7	8
09:00 AM	0	0	0	0	0	0	0	0	3	3	0	6	6
Total Volume	3	0	0	3	1	0	0	1	9	18	0	27	31
% App. Total	100	0	0		100	0	0		33.3	66.7	0		
PHF	.375	.000	.000	.375	.250	.000	.000	.250	.750	.643	.000	.844	.775

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Groups Printed- Buses

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	5	0	0	0	0	0	1	3	0	9
07:45 AM	7	0	0	0	0	0	0	7	0	14
Total	12	0	0	0	0	0	1	10	0	23
08:00 AM	4	0	0	0	0	0	2	3	0	9
08:15 AM	7	0	0	0	0	0	0	5	0	12
08:30 AM	6	0	0	0	0	0	0	5	0	11
08:45 AM	3	0	0	0	0	0	0	3	0	6
Total	20	0	0	0	0	0	2	16	0	38
09:00 AM	9	0	0	0	0	0	0	6	0	15
09:15 AM	4	0	0	0	0	0	0	7	0	11
Grand Total	45	0	0	0	0	0	3	39	0	87
Apprch %	100	0	0	0	0	0	7.1	92.9	0	
Total %	51.7	0	0	0	0	0	3.4	44.8	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	7	0	0	7	0	0	0	0	0	7	0	7	14
08:00 AM	4	0	0	4	0	0	0	0	2	3	0	5	9
08:15 AM	7	0	0	7	0	0	0	0	0	5	0	5	12
08:30 AM	6	0	0	6	0	0	0	0	0	5	0	5	11
Total Volume	24	0	0	24	0	0	0	0	2	20	0	22	46
% App. Total	100	0	0		0	0	0		9.1	90.9	0		
PHF	.857	.000	.000	.857	.000	.000	.000	.000	.250	.714	.000	.786	.821

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Groups Printed- Peds and Bicycles

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
07:30 AM	2	0	41	44	0	0	38	25	0	14	2	0	166
07:45 AM	3	0	59	48	0	0	41	33	0	10	0	0	194
Total	5	0	100	92	0	0	79	58	0	24	2	0	360
08:00 AM	2	0	66	71	0	0	34	39	0	15	0	0	227
08:15 AM	3	0	66	71	0	0	61	62	0	18	0	0	281
08:30 AM	5	0	95	59	1	0	48	68	0	23	6	1	306
08:45 AM	5	0	83	148	1	0	79	72	0	29	5	1	423
Total	15	0	310	349	2	0	222	241	0	85	11	2	1237
09:00 AM	2	0	74	104	0	0	60	60	1	14	9	11	335
09:15 AM	7	0	73	144	0	0	69	68	1	20	2	0	384
Grand Total	29	0	557	689	2	0	430	427	2	143	24	13	2316
Apprch %	2.3	0	43.7	54	0.2	0	50.1	49.7	1.1	78.6	13.2	7.1	
Total %	1.3	0	24.1	29.7	0.1	0	18.6	18.4	0.1	6.2	1	0.6	

	Main Street From East					Hayward Street From South					Main Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	5	0	95	59	159	1	0	48	68	117	0	23	6	1	30	306
08:45 AM	5	0	83	148	236	1	0	79	72	152	0	29	5	1	35	423
09:00 AM	2	0	74	104	180	0	0	60	60	120	1	14	9	11	35	335
09:15 AM	7	0	73	144	224	0	0	69	68	137	1	20	2	0	23	384
Total Volume	19	0	325	455	799	2	0	256	268	526	2	86	22	13	123	1448
% App. Total	2.4	0	40.7	56.9		0.4	0	48.7	51		1.6	69.9	17.9	10.6		
PHF	.679	.000	.855	.769	.846	.500	.000	.810	.931	.865	.500	.741	.611	.295	.879	.856

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Office: 508.481.3999 Fax: 508.545.1234
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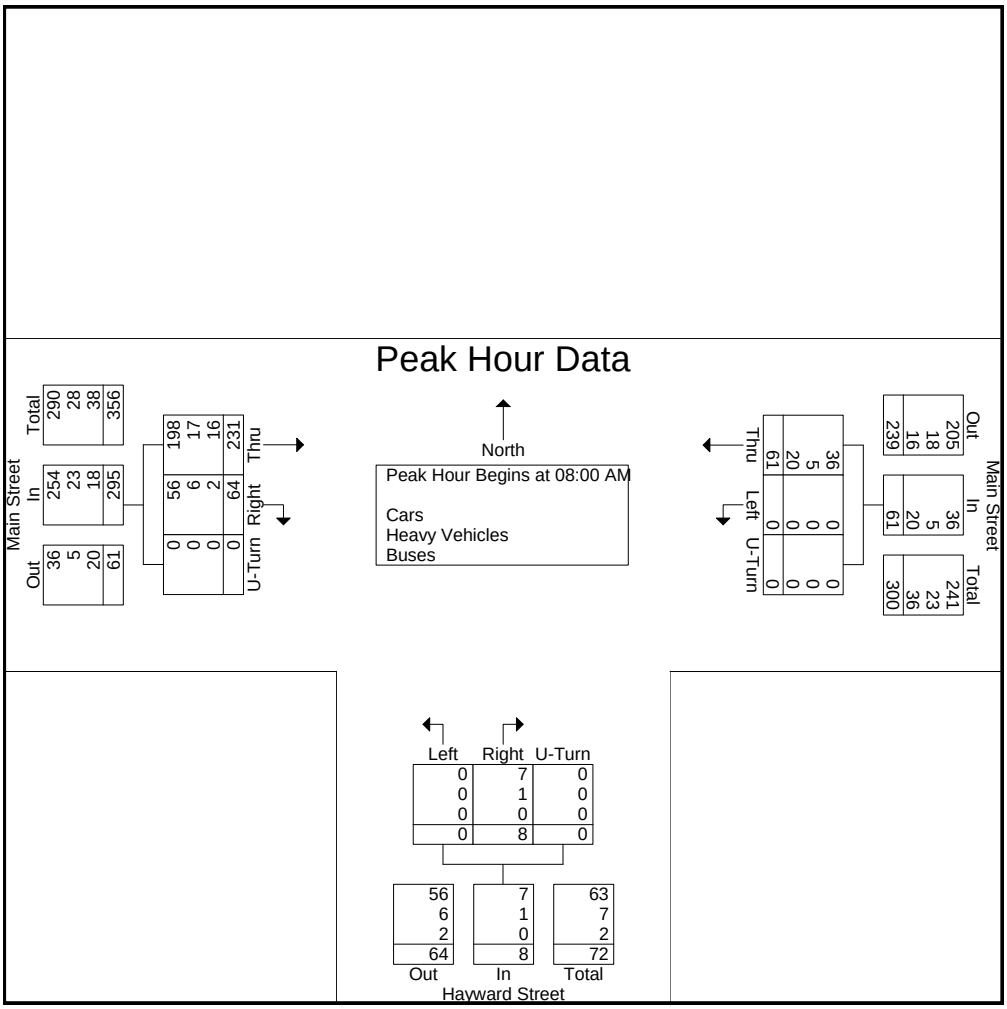
	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	16	0	0	16	0	0	0	0	15	59	0	74	90
08:15 AM	21	0	0	21	1	0	0	1	13	53	0	66	88
08:30 AM	14	0	0	14	3	0	0	3	20	54	0	74	91
08:45 AM	10	0	0	10	4	0	0	4	16	65	0	81	95
Total Volume	61	0	0	61	8	0	0	8	64	231	0	295	364
% App. Total	100	0	0		100	0	0		21.7	78.3	0		
PHF	.726	.000	.000	.726	.500	.000	.000	.500	.800	.888	.000	.910	.958
Cars	36	0	0	36	7	0	0	7	56	198	0	254	297
% Cars	59.0	0	0	59.0	87.5	0	0	87.5	87.5	85.7	0	86.1	81.6
Heavy Vehicles	5	0	0	5	1	0	0	1	6	17	0	23	29
% Heavy Vehicles	8.2	0	0	8.2	12.5	0	0	12.5	9.4	7.4	0	7.8	8.0
Buses	20	0	0	20	0	0	0	0	2	16	0	18	38
% Buses	32.8	0	0	32.8	0	0	0	0	3.1	6.9	0	6.1	10.4



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Groups Printed- Cars - Heavy Vehicles - Buses

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	17	0	0	4	0	0	13	74	0	108
04:45 PM	18	0	0	5	0	0	12	83	0	118
Total	35	0	0	9	0	0	25	157	0	226
05:00 PM	19	0	0	7	0	0	15	82	0	123
05:15 PM	19	0	0	7	0	0	14	90	0	130
05:30 PM	16	0	0	6	0	0	12	69	0	103
05:45 PM	18	0	0	9	0	0	13	85	0	125
Total	72	0	0	29	0	0	54	326	0	481
06:00 PM	27	0	0	6	0	0	15	93	0	141
06:15 PM	15	0	0	6	0	0	7	93	0	121
Grand Total	149	0	0	50	0	0	101	669	0	969
Apprch %	100	0	0	100	0	0	13.1	86.9	0	
Total %	15.4	0	0	5.2	0	0	10.4	69	0	
Cars	103	0	0	49	0	0	95	618	0	865
% Cars	69.1	0	0	98	0	0	94.1	92.4	0	89.3
Heavy Vehicles	4	0	0	1	0	0	4	7	0	16
% Heavy Vehicles	2.7	0	0	2	0	0	4	1	0	1.7
Buses	42	0	0	0	0	0	2	44	0	88
% Buses	28.2	0	0	0	0	0	2	6.6	0	9.1

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	19	0	0	19	7	0	0	7	14	90	0	104	130
05:30 PM	16	0	0	16	6	0	0	6	12	69	0	81	103
05:45 PM	18	0	0	18	9	0	0	9	13	85	0	98	125
06:00 PM	27	0	0	27	6	0	0	6	15	93	0	108	141
Total Volume	80	0	0	80	28	0	0	28	54	337	0	391	499
% App. Total	100	0	0		100	0	0		13.8	86.2	0		
PHF	.741	.000	.000	.741	.778	.000	.000	.778	.900	.906	.000	.905	.885
Cars	55	0	0	55	27	0	0	27	50	310	0	360	442
% Cars	68.8	0	0	68.8	96.4	0	0	96.4	92.6	92.0	0	92.1	88.6
Heavy Vehicles	4	0	0	4	1	0	0	1	3	4	0	7	12
% Heavy Vehicles	5.0	0	0	5.0	3.6	0	0	3.6	5.6	1.2	0	1.8	2.4
Buses	21	0	0	21	0	0	0	0	1	23	0	24	45
% Buses	26.3	0	0	26.3	0	0	0	0	1.9	6.8	0	6.1	9.0

S: Hayward Street
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Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Cars

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	11	0	0	4	0	0	12	68	0	95
04:45 PM	13	0	0	5	0	0	12	77	0	107
Total	24	0	0	9	0	0	24	145	0	202
05:00 PM	13	0	0	7	0	0	15	76	0	111
05:15 PM	12	0	0	7	0	0	12	82	0	113
05:30 PM	11	0	0	6	0	0	11	65	0	93
05:45 PM	12	0	0	8	0	0	13	78	0	111
Total	48	0	0	28	0	0	51	301	0	428
06:00 PM	20	0	0	6	0	0	14	85	0	125
06:15 PM	11	0	0	6	0	0	6	87	0	110
Grand Total	103	0	0	49	0	0	95	618	0	865
Apprch %	100	0	0	100	0	0	13.3	86.7	0	
Total %	11.9	0	0	5.7	0	0	11	71.4	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	12	0	0	12	7	0	0	7	12	82	0	94	113
05:30 PM	11	0	0	11	6	0	0	6	11	65	0	76	93
05:45 PM	12	0	0	12	8	0	0	8	13	78	0	91	111
06:00 PM	20	0	0	20	6	0	0	6	14	85	0	99	125
Total Volume	55	0	0	55	27	0	0	27	50	310	0	360	442
% App. Total	100	0	0		100	0	0		13.9	86.1	0		
PHF	.688	.000	.000	.688	.844	.000	.000	.844	.893	.912	.000	.909	.884

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Groups Printed- Heavy Vehicles

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	1	2	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	2	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	0	0	0	2	0	0	3
05:30 PM	1	0	0	0	0	0	1	1	0	3
05:45 PM	1	0	0	1	0	0	0	0	0	2
Total	3	0	0	1	0	0	3	1	0	8
06:00 PM	1	0	0	0	0	0	0	3	0	4
06:15 PM	0	0	0	0	0	0	0	1	0	1
Grand Total	4	0	0	1	0	0	4	7	0	16
Apprch %	100	0	0	100	0	0	36.4	63.6	0	
Total %	25	0	0	6.2	0	0	25	43.8	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	1	0	0	1	0	0	0	0	2	0	0	2	3
05:30 PM	1	0	0	1	0	0	0	0	1	1	0	2	3
05:45 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
06:00 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total Volume	4	0	0	4	1	0	0	1	3	4	0	7	12
% App. Total	100	0	0		100	0	0		42.9	57.1	0		
PHF	1.00	.000	.000	1.00	.250	.000	.000	.250	.375	.333	.000	.583	.750

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Groups Printed- Buses

	Main Street From East			Hayward Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	6	0	0	0	0	0	0	4	0	10
04:45 PM	5	0	0	0	0	0	0	6	0	11
Total	11	0	0	0	0	0	0	10	0	21
05:00 PM	6	0	0	0	0	0	0	6	0	12
05:15 PM	6	0	0	0	0	0	0	8	0	14
05:30 PM	4	0	0	0	0	0	0	3	0	7
05:45 PM	5	0	0	0	0	0	0	7	0	12
Total	21	0	0	0	0	0	0	24	0	45
06:00 PM	6	0	0	0	0	0	1	5	0	12
06:15 PM	4	0	0	0	0	0	1	5	0	10
Grand Total	42	0	0	0	0	0	2	44	0	88
Apprch %	100	0	0	0	0	0	4.3	95.7	0	
Total %	47.7	0	0	0	0	0	2.3	50	0	

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	6	0	0	6	0	0	0	0	0	4	0	4	10
04:45 PM	5	0	0	5	0	0	0	0	0	6	0	6	11
05:00 PM	6	0	0	6	0	0	0	0	0	6	0	6	12
05:15 PM	6	0	0	6	0	0	0	0	0	8	0	8	14
Total Volume	23	0	0	23	0	0	0	0	0	24	0	24	47
% App. Total	100	0	0		0	0	0		0	100	0		
PHF	.958	.000	.000	.958	.000	.000	.000	.000	.000	.750	.000	.750	.839

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Groups Printed- Peds and Bicycles

	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:30 PM	5	0	4	1	0	0	55	70	0	6	6	6	153
04:45 PM	4	0	10	7	1	0	60	80	0	9	1	9	181
Total	9	0	14	8	1	0	115	150	0	15	7	15	334
05:00 PM	6	0	6	8	1	0	70	99	0	6	1	20	217
05:15 PM	12	0	13	14	0	0	70	58	0	13	2	3	185
05:30 PM	10	0	80	42	1	0	70	74	0	10	3	6	296
05:45 PM	12	0	84	45	0	0	94	73	0	9	9	1	327
Total	40	0	183	109	2	0	304	304	0	38	15	30	1025
06:00 PM	12	0	63	37	0	0	60	63	0	4	7	5	251
06:15 PM	4	0	79	33	0	0	51	60	0	6	4	9	246
Grand Total	65	0	339	187	3	0	530	577	0	63	33	59	1856
Apprch %	11	0	57.4	31.6	0.3	0	47.7	52	0	40.6	21.3	38.1	
Total %	3.5	0	18.3	10.1	0.2	0	28.6	31.1	0	3.4	1.8	3.2	

	Main Street From East					Hayward Street From South					Main Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:30 PM																
05:30 PM	10	0	80	42	132	1	0	70	74	145	0	10	3	6	19	296
05:45 PM	12	0	84	45	141	0	0	94	73	167	0	9	9	1	19	327
06:00 PM	12	0	63	37	112	0	0	60	63	123	0	4	7	5	16	251
06:15 PM	4	0	79	33	116	0	0	51	60	111	0	6	4	9	19	246
Total Volume	38	0	306	157	501	1	0	275	270	546	0	29	23	21	73	1120
% App. Total	7.6	0	61.1	31.3		0.2	0	50.4	49.5		0	39.7	31.5	28.8		
PHF	.792	.000	.911	.872	.888	.250	.000	.731	.912	.817	.000	.725	.639	.583	.961	.856

S: Hayward Street
E/W: Main Street
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Client: VHB/ M. Houdlette

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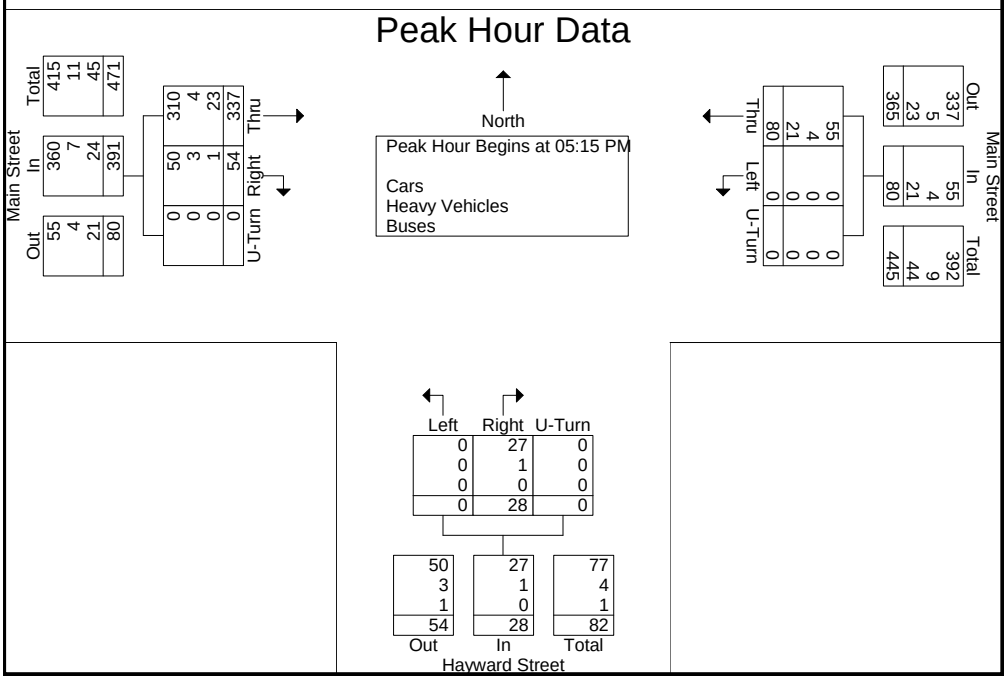
	Main Street From East				Hayward Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	19	0	0	19	7	0	0	7	14	90	0	104	130
05:30 PM	16	0	0	16	6	0	0	6	12	69	0	81	103
05:45 PM	18	0	0	18	9	0	0	9	13	85	0	98	125
06:00 PM	27	0	0	27	6	0	0	6	15	93	0	108	141
Total Volume	80	0	0	80	28	0	0	28	54	337	0	391	499
% App. Total	100	0	0		100	0	0		13.8	86.2	0		
PHF	.741	.000	.000	.741	.778	.000	.000	.778	.900	.906	.000	.905	.885
Cars	55	0	0	55	27	0	0	27	50	310	0	360	442
% Cars	68.8	0	0	68.8	96.4	0	0	96.4	92.6	92.0	0	92.1	88.6
Heavy Vehicles	4	0	0	4	1	0	0	1	3	4	0	7	12
% Heavy Vehicles	5.0	0	0	5.0	3.6	0	0	3.6	5.6	1.2	0	1.8	2.4
Buses	21	0	0	21	0	0	0	0	1	23	0	24	45
% Buses	26.3	0	0	26.3	0	0	0	0	1.9	6.8	0	6.1	9.0

Peak Hour Data



S: Wadsworth Street
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City, State: Cambridge, MA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	2	0	0	18	38	0	58
07:45 AM	0	0	0	8	0	0	13	31	0	52
Total	0	0	0	10	0	0	31	69	0	110
08:00 AM	0	0	0	10	0	0	16	43	0	69
08:15 AM	0	0	0	5	0	0	18	38	0	61
08:30 AM	0	0	0	14	0	0	11	47	0	72
08:45 AM	0	0	0	13	0	0	25	49	0	87
Total	0	0	0	42	0	0	70	177	0	289
09:00 AM	0	0	0	16	0	0	14	34	0	64
09:15 AM	0	0	0	10	0	0	22	43	0	75
Grand Total	0	0	0	78	0	0	137	323	0	538
Apprch %	0	0	0	100	0	0	29.8	70.2	0	
Total %	0	0	0	14.5	0	0	25.5	60	0	
Cars	0	0	0	76	0	0	91	300	0	467
% Cars	0	0	0	97.4	0	0	66.4	92.9	0	86.8
Heavy Vehicles	0	0	0	1	0	0	10	18	0	29
% Heavy Vehicles	0	0	0	1.3	0	0	7.3	5.6	0	5.4
Buses	0	0	0	1	0	0	36	5	0	42
% Buses	0	0	0	1.3	0	0	26.3	1.5	0	7.8

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	14	0	0	14	11	47	0	58	72
08:45 AM	0	0	0	0	13	0	0	13	25	49	0	74	87
09:00 AM	0	0	0	0	16	0	0	16	14	34	0	48	64
09:15 AM	0	0	0	0	10	0	0	10	22	43	0	65	75
Total Volume	0	0	0	0	53	0	0	53	72	173	0	245	298
% App. Total	0	0	0		100	0	0		29.4	70.6	0		
PHF	.000	.000	.000	.000	.828	.000	.000	.828	.720	.883	.000	.828	.856
Cars	0	0	0	0	51	0	0	51	50	160	0	210	261
% Cars	0	0	0	0	96.2	0	0	96.2	69.4	92.5	0	85.7	87.6
Heavy Vehicles	0	0	0	0	1	0	0	1	5	8	0	13	14
% Heavy Vehicles	0	0	0	0	1.9	0	0	1.9	6.9	4.6	0	5.3	4.7
Buses	0	0	0	0	1	0	0	1	17	5	0	22	23
% Buses	0	0	0	0	1.9	0	0	1.9	23.6	2.9	0	9.0	7.7

S: Wadsworth Street
E/W: Main Street
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Groups Printed- Cars

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	2	0	0	14	33	0	49
07:45 AM	0	0	0	8	0	0	6	31	0	45
Total	0	0	0	10	0	0	20	64	0	94
08:00 AM	0	0	0	10	0	0	10	43	0	63
08:15 AM	0	0	0	5	0	0	11	33	0	49
08:30 AM	0	0	0	14	0	0	7	43	0	64
08:45 AM	0	0	0	13	0	0	19	47	0	79
Total	0	0	0	42	0	0	47	166	0	255
09:00 AM	0	0	0	16	0	0	10	30	0	56
09:15 AM	0	0	0	8	0	0	14	40	0	62
Grand Total	0	0	0	76	0	0	91	300	0	467
Apprch %	0	0	0	100	0	0	23.3	76.7	0	
Total %	0	0	0	16.3	0	0	19.5	64.2	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	14	0	0	14	7	43	0	50	64
08:45 AM	0	0	0	0	13	0	0	13	19	47	0	66	79
09:00 AM	0	0	0	0	16	0	0	16	10	30	0	40	56
09:15 AM	0	0	0	0	8	0	0	8	14	40	0	54	62
Total Volume	0	0	0	0	51	0	0	51	50	160	0	210	261
% App. Total	0	0	0		100	0	0		23.8	76.2	0		
PHF	.000	.000	.000	.000	.797	.000	.000	.797	.658	.851	.000	.795	.826

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Groups Printed- Heavy Vehicles

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	1	5	0	6
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	5	0	6
08:00 AM	0	0	0	0	0	0	2	0	0	2
08:15 AM	0	0	0	0	0	0	2	5	0	7
08:30 AM	0	0	0	0	0	0	0	3	0	3
08:45 AM	0	0	0	0	0	0	3	2	0	5
Total	0	0	0	0	0	0	7	10	0	17
09:00 AM	0	0	0	0	0	0	0	2	0	2
09:15 AM	0	0	0	1	0	0	2	1	0	4
Grand Total	0	0	0	1	0	0	10	18	0	29
Apprch %	0	0	0	100	0	0	35.7	64.3	0	
Total %	0	0	0	3.4	0	0	34.5	62.1	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	2	5	0	7	7
08:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	3
08:45 AM	0	0	0	0	0	0	0	0	3	2	0	5	5
Total Volume	0	0	0	0	0	0	0	0	7	10	0	17	17
% App. Total	0	0	0		0	0	0		41.2	58.8	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.583	.500	.000	.607	.607

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Groups Printed- Buses

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	3	0	0	3
07:45 AM	0	0	0	0	0	0	7	0	0	7
Total	0	0	0	0	0	0	10	0	0	10
08:00 AM	0	0	0	0	0	0	4	0	0	4
08:15 AM	0	0	0	0	0	0	5	0	0	5
08:30 AM	0	0	0	0	0	0	4	1	0	5
08:45 AM	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	16	1	0	17
09:00 AM	0	0	0	0	0	0	4	2	0	6
09:15 AM	0	0	0	1	0	0	6	2	0	9
Grand Total	0	0	0	1	0	0	36	5	0	42
Apprch %	0	0	0	100	0	0	87.8	12.2	0	
Total %	0	0	0	2.4	0	0	85.7	11.9	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	0	0	0	0	4	1	0	5	5
08:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	3
09:00 AM	0	0	0	0	0	0	0	0	4	2	0	6	6
09:15 AM	0	0	0	0	1	0	0	1	6	2	0	8	9
Total Volume	0	0	0	0	1	0	0	1	17	5	0	22	23
% App. Total	0	0	0		100	0	0		77.3	22.7	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.708	.625	.000	.688	.639

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Groups Printed- Peds and Bicycles

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	0	0	0	17	26	0	8	10	7	68
07:45 AM	0	0	0	0	0	0	23	47	0	7	7	19	103
Total	0	0	0	0	0	0	40	73	0	15	17	26	171
08:00 AM	0	0	0	0	0	0	13	44	2	9	12	12	92
08:15 AM	0	0	0	0	0	0	18	58	2	12	14	13	117
08:30 AM	0	0	0	0	1	0	25	66	1	14	24	21	152
08:45 AM	0	0	0	0	0	0	19	61	5	23	14	12	134
Total	0	0	0	0	1	0	75	229	10	58	64	58	495
09:00 AM	0	0	0	0	1	0	18	47	3	7	9	10	95
09:15 AM	0	0	0	0	0	0	22	69	3	10	11	12	127
Grand Total	0	0	0	0	2	0	155	418	16	90	101	106	888
Apprch %	0	0	0	0	0.3	0	27	72.7	5.1	28.8	32.3	33.9	
Total %	0	0	0	0	0.2	0	17.5	47.1	1.8	10.1	11.4	11.9	

	Main Street From East					Wadsworth Street From South					Main Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	0	0	0	0	0	1	0	25	66	92	1	14	24	21	60	152
08:45 AM	0	0	0	0	0	0	0	19	61	80	5	23	14	12	54	134
09:00 AM	0	0	0	0	0	1	0	18	47	66	3	7	9	10	29	95
09:15 AM	0	0	0	0	0	0	0	22	69	91	3	10	11	12	36	127
Total Volume	0	0	0	0	0	2	0	84	243	329	12	54	58	55	179	508
% App. Total	0	0	0	0		0.6	0	25.5	73.9		6.7	30.2	32.4	30.7		
PHF	.000	.000	.000	.000	.000	.500	.000	.840	.880	.894	.600	.587	.604	.655	.746	.836

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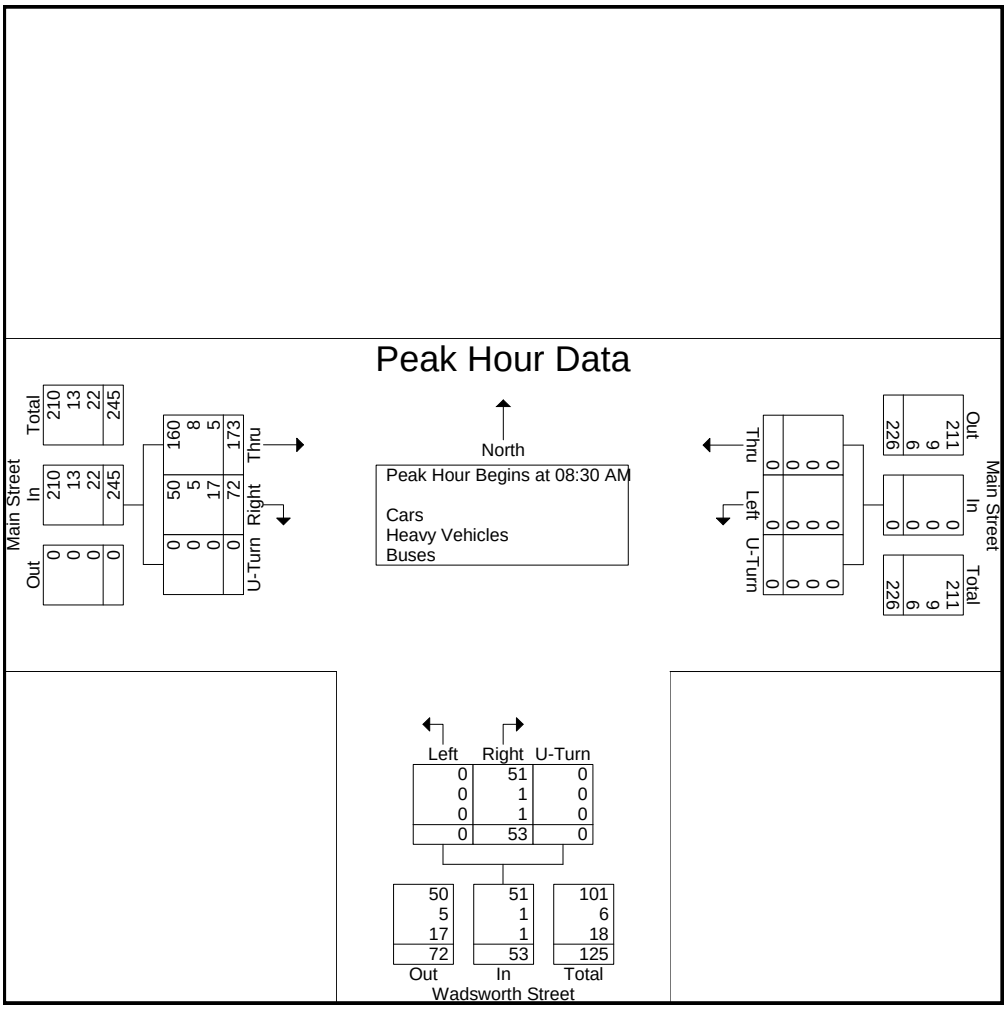
	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	14	0	0	14	11	47	0	58	72
08:45 AM	0	0	0	0	13	0	0	13	25	49	0	74	87
09:00 AM	0	0	0	0	16	0	0	16	14	34	0	48	64
09:15 AM	0	0	0	0	10	0	0	10	22	43	0	65	75
Total Volume	0	0	0	0	53	0	0	53	72	173	0	245	298
% App. Total	0	0	0		100	0	0		29.4	70.6	0		
PHF	.000	.000	.000	.000	.828	.000	.000	.828	.720	.883	.000	.828	.856
Cars	0	0	0	0	51	0	0	51	50	160	0	210	261
% Cars	0	0	0	0	96.2	0	0	96.2	69.4	92.5	0	85.7	87.6
Heavy Vehicles	0	0	0	0	1	0	0	1	5	8	0	13	14
% Heavy Vehicles	0	0	0	0	1.9	0	0	1.9	6.9	4.6	0	5.3	4.7
Buses	0	0	0	0	1	0	0	1	17	5	0	22	23
% Buses	0	0	0	0	1.9	0	0	1.9	23.6	2.9	0	9.0	7.7



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Groups Printed- Cars - Heavy Vehicles - Buses

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	8	0	0	11	68	0	87
04:45 PM	0	0	0	9	0	0	12	81	0	102
Total	0	0	0	17	0	0	23	149	0	189
05:00 PM	0	0	0	16	0	0	10	77	0	103
05:15 PM	0	0	0	17	0	0	9	86	0	112
05:30 PM	0	0	0	8	0	0	10	70	0	88
05:45 PM	0	0	0	9	0	0	13	77	0	99
Total	0	0	0	50	0	0	42	310	0	402
06:00 PM	0	0	0	8	0	0	25	71	0	104
06:15 PM	0	0	0	10	0	0	17	84	0	111
Grand Total	0	0	0	85	0	0	107	614	0	806
Apprch %	0	0	0	100	0	0	14.8	85.2	0	
Total %	0	0	0	10.5	0	0	13.3	76.2	0	
Cars	0	0	0	83	0	0	81	589	0	753
% Cars	0	0	0	97.6	0	0	75.7	95.9	0	93.4
Heavy Vehicles	0	0	0	1	0	0	1	7	0	9
% Heavy Vehicles	0	0	0	1.2	0	0	0.9	1.1	0	1.1
Buses	0	0	0	1	0	0	25	18	0	44
% Buses	0	0	0	1.2	0	0	23.4	2.9	0	5.5

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	9	0	0	9	12	81	0	93	102
05:00 PM	0	0	0	0	16	0	0	16	10	77	0	87	103
05:15 PM	0	0	0	0	17	0	0	17	9	86	0	95	112
05:30 PM	0	0	0	0	8	0	0	8	10	70	0	80	88
Total Volume	0	0	0	0	50	0	0	50	41	314	0	355	405
% App. Total	0	0	0		100	0	0		11.5	88.5	0		
PHF	.000	.000	.000	.000	.735	.000	.000	.735	.854	.913	.000	.934	.904
Cars	0	0	0	0	49	0	0	49	29	301	0	330	379
% Cars	0	0	0	0	98.0	0	0	98.0	70.7	95.9	0	93.0	93.6
Heavy Vehicles	0	0	0	0	1	0	0	1	0	2	0	2	3
% Heavy Vehicles	0	0	0	0	2.0	0	0	2.0	0	0.6	0	0.6	0.7
Buses	0	0	0	0	0	0	0	0	12	11	0	23	23
% Buses	0	0	0	0	0	0	0	0	29.3	3.5	0	6.5	5.7

S: Wadsworth Street
E/W: Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	8	0	0	8	66	0	82
04:45 PM	0	0	0	9	0	0	9	77	0	95
Total	0	0	0	17	0	0	17	143	0	177
05:00 PM	0	0	0	15	0	0	7	74	0	96
05:15 PM	0	0	0	17	0	0	6	81	0	104
05:30 PM	0	0	0	8	0	0	7	69	0	84
05:45 PM	0	0	0	8	0	0	9	73	0	90
Total	0	0	0	48	0	0	29	297	0	374
06:00 PM	0	0	0	8	0	0	23	66	0	97
06:15 PM	0	0	0	10	0	0	12	83	0	105
Grand Total	0	0	0	83	0	0	81	589	0	753
Apprch %	0	0	0	100	0	0	12.1	87.9	0	
Total %	0	0	0	11	0	0	10.8	78.2	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	9	0	0	9	9	77	0	86	95
05:00 PM	0	0	0	0	15	0	0	15	7	74	0	81	96
05:15 PM	0	0	0	0	17	0	0	17	6	81	0	87	104
05:30 PM	0	0	0	0	8	0	0	8	7	69	0	76	84
Total Volume	0	0	0	0	49	0	0	49	29	301	0	330	379
% App. Total	0	0	0		100	0	0		8.8	91.2	0		
PHF	.000	.000	.000	.000	.721	.000	.000	.721	.806	.929	.000	.948	.911

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Groups Printed- Heavy Vehicles

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	2	0	2
05:00 PM	0	0	0	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	2	0	3
06:00 PM	0	0	0	0	0	0	0	2	0	2
06:15 PM	0	0	0	0	0	0	1	1	0	2
Grand Total	0	0	0	1	0	0	1	7	0	9
Apprch %	0	0	0	100	0	0	12.5	87.5	0	
Total %	0	0	0	11.1	0	0	11.1	77.8	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
06:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
06:15 PM	0	0	0	0	0	0	0	0	1	1	0	2	2
Total Volume	0	0	0	0	0	0	0	0	1	4	0	5	5
% App. Total	0	0	0		0	0	0		20	80	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.000	.625	.625

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Groups Printed- Buses

	Main Street From East			Wadsworth Street From South			Main Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	3	1	0	4
04:45 PM	0	0	0	0	0	0	3	3	0	6
Total	0	0	0	0	0	0	6	4	0	10
05:00 PM	0	0	0	0	0	0	3	3	0	6
05:15 PM	0	0	0	0	0	0	3	4	0	7
05:30 PM	0	0	0	0	0	0	3	1	0	4
05:45 PM	0	0	0	1	0	0	4	3	0	8
Total	0	0	0	1	0	0	13	11	0	25
06:00 PM	0	0	0	0	0	0	2	3	0	5
06:15 PM	0	0	0	0	0	0	4	0	0	4
Grand Total	0	0	0	1	0	0	25	18	0	44
Apprch %	0	0	0	100	0	0	58.1	41.9	0	
Total %	0	0	0	2.3	0	0	56.8	40.9	0	

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	3	3	0	6	6
05:15 PM	0	0	0	0	0	0	0	0	3	4	0	7	7
05:30 PM	0	0	0	0	0	0	0	0	3	1	0	4	4
05:45 PM	0	0	0	0	1	0	0	1	4	3	0	7	8
Total Volume	0	0	0	0	1	0	0	1	13	11	0	24	25
% App. Total	0	0	0		100	0	0		54.2	45.8	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.813	.688	.000	.857	.781

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Groups Printed- Peds and Bicycles

	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	1	0	0	70	40	2	5	43	17	178
04:45 PM	0	0	0	0	1	0	58	55	4	10	42	24	194
Total	0	0	0	1	1	0	128	95	6	15	85	41	372
05:00 PM	0	0	0	3	0	0	128	65	5	7	63	28	299
05:15 PM	0	0	0	1	0	0	80	75	5	11	51	20	243
05:30 PM	0	0	0	1	0	0	66	68	3	9	40	20	207
05:45 PM	0	0	0	1	0	0	61	74	4	5	38	29	212
Total	0	0	0	6	0	0	335	282	17	32	192	97	961
06:00 PM	0	0	1	1	0	0	58	53	3	1	56	45	218
06:15 PM	0	0	0	3	0	0	25	43	2	3	23	14	113
Grand Total	0	0	1	11	1	0	546	473	28	51	356	197	1664
Apprch %	0	0	8.3	91.7	0.1	0	53.5	46.4	4.4	8.1	56.3	31.2	
Total %	0	0	0.1	0.7	0.1	0	32.8	28.4	1.7	3.1	21.4	11.8	

	Main Street From East					Wadsworth Street From South					Main Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	0	0	0	3	3	0	0	128	65	193	5	7	63	28	103	299
05:15 PM	0	0	0	1	1	0	0	80	75	155	5	11	51	20	87	243
05:30 PM	0	0	0	1	1	0	0	66	68	134	3	9	40	20	72	207
05:45 PM	0	0	0	1	1	0	0	61	74	135	4	5	38	29	76	212
Total Volume	0	0	0	6	6	0	0	335	282	617	17	32	192	97	338	961
% App. Total	0	0	0	100		0	0	54.3	45.7		5	9.5	56.8	28.7		
PHF	.000	.000	.000	.500	.500	.000	.000	.654	.940	.799	.850	.727	.762	.836	.820	.804

S: Wadsworth Street
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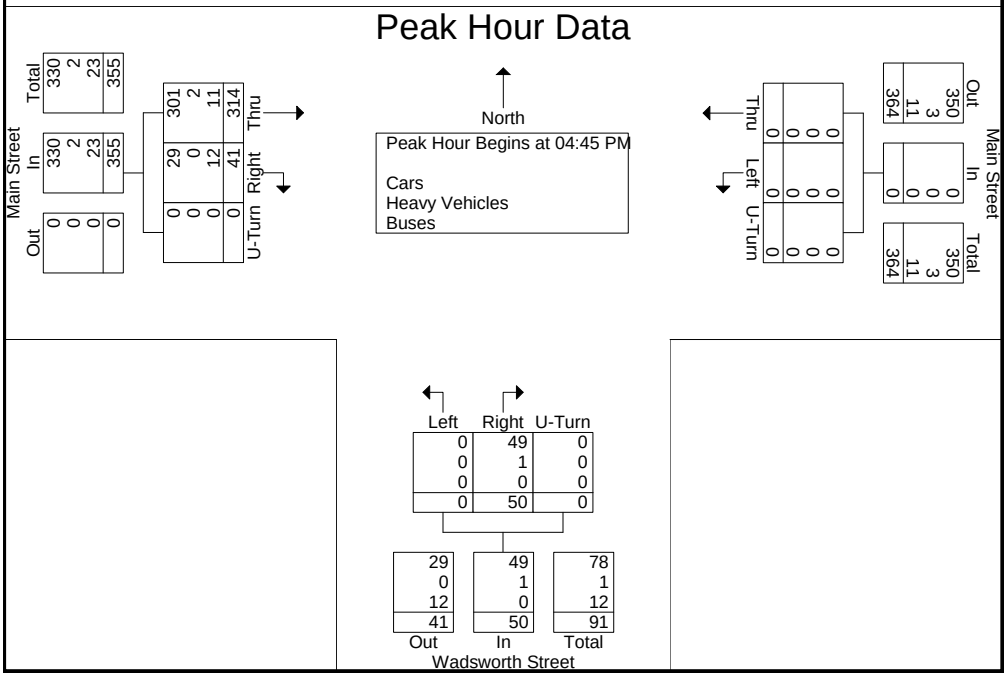
	Main Street From East				Wadsworth Street From South				Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	0	0	0	9	0	0	9	12	81	0	93	102
05:00 PM	0	0	0	0	16	0	0	16	10	77	0	87	103
05:15 PM	0	0	0	0	17	0	0	17	9	86	0	95	112
05:30 PM	0	0	0	0	8	0	0	8	10	70	0	80	88
Total Volume	0	0	0	0	50	0	0	50	41	314	0	355	405
% App. Total	0	0	0		100	0	0		11.5	88.5	0		
PHF	.000	.000	.000	.000	.735	.000	.000	.735	.854	.913	.000	.934	.904
Cars	0	0	0	0	49	0	0	49	29	301	0	330	379
% Cars	0	0	0	0	98.0	0	0	98.0	70.7	95.9	0	93.0	93.6
Heavy Vehicles	0	0	0	0	1	0	0	1	0	2	0	2	3
% Heavy Vehicles	0	0	0	0	2.0	0	0	2.0	0	0.6	0	0.6	0.7
Buses	0	0	0	0	0	0	0	0	12	11	0	23	23
% Buses	0	0	0	0	0	0	0	0	29.3	3.5	0	6.5	5.7

Peak Hour Data



N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars - Heavy Vehicles - Buses

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	14	194	0	0	0	0	208
07:45 AM	2	0	0	20	205	0	0	0	0	227
Total	2	0	0	34	399	0	0	0	0	435
08:00 AM	1	0	0	25	218	0	0	0	0	244
08:15 AM	1	0	0	23	231	0	0	0	0	255
08:30 AM	6	0	0	33	214	0	0	0	0	253
08:45 AM	2	0	0	24	204	0	0	0	0	230
Total	10	0	0	105	867	0	0	0	0	982
09:00 AM	3	0	0	18	215	0	0	0	0	236
09:15 AM	6	0	0	22	192	0	0	0	0	220
Grand Total	21	0	0	179	1673	0	0	0	0	1873
Apprch %	100	0	0	9.7	90.3	0	0	0	0	
Total %	1.1	0	0	9.6	89.3	0	0	0	0	
Cars	18	0	0	175	1634	0	0	0	0	1827
% Cars	85.7	0	0	97.8	97.7	0	0	0	0	97.5
Heavy Vehicles	3	0	0	4	34	0	0	0	0	41
% Heavy Vehicles	14.3	0	0	2.2	2	0	0	0	0	2.2
Buses	0	0	0	0	5	0	0	0	0	5
% Buses	0	0	0	0	0.3	0	0	0	0	0.3

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	1	0	0	1	25	218	0	243	0	0	0	0	244
08:15 AM	1	0	0	1	23	231	0	254	0	0	0	0	255
08:30 AM	6	0	0	6	33	214	0	247	0	0	0	0	253
08:45 AM	2	0	0	2	24	204	0	228	0	0	0	0	230
Total Volume	10	0	0	10	105	867	0	972	0	0	0	0	982
% App. Total	100	0	0		10.8	89.2	0		0	0	0		
PHF	.417	.000	.000	.417	.795	.938	.000	.957	.000	.000	.000	.000	.963
Cars	9	0	0	9	101	848	0	949	0	0	0	0	958
% Cars	90.0	0	0	90.0	96.2	97.8	0	97.6	0	0	0	0	97.6
Heavy Vehicles	1	0	0	1	4	19	0	23	0	0	0	0	24
% Heavy Vehicles	10.0	0	0	10.0	3.8	2.2	0	2.4	0	0	0	0	2.4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0

N: Broad Canal Way
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Groups Printed- Cars

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	14	190	0	0	0	0	204
07:45 AM	2	0	0	20	202	0	0	0	0	224
Total	2	0	0	34	392	0	0	0	0	428
08:00 AM	0	0	0	25	214	0	0	0	0	239
08:15 AM	1	0	0	23	229	0	0	0	0	253
08:30 AM	6	0	0	30	203	0	0	0	0	239
08:45 AM	2	0	0	23	202	0	0	0	0	227
Total	9	0	0	101	848	0	0	0	0	958
09:00 AM	2	0	0	18	209	0	0	0	0	229
09:15 AM	5	0	0	22	185	0	0	0	0	212
Grand Total	18	0	0	175	1634	0	0	0	0	1827
Apprch %	100	0	0	9.7	90.3	0	0	0	0	
Total %	1	0	0	9.6	89.4	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	25	214	0	239	0	0	0	0	239
08:15 AM	1	0	0	1	23	229	0	252	0	0	0	0	253
08:30 AM	6	0	0	6	30	203	0	233	0	0	0	0	239
08:45 AM	2	0	0	2	23	202	0	225	0	0	0	0	227
Total Volume	9	0	0	9	101	848	0	949	0	0	0	0	958
% App. Total	100	0	0		10.6	89.4	0		0	0	0		
PHF	.375	.000	.000	.375	.842	.926	.000	.941	.000	.000	.000	.000	.947

N: Broad Canal Way
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Groups Printed- Heavy Vehicles

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	4	0	0	0	0	4
07:45 AM	0	0	0	0	3	0	0	0	0	3
Total	0	0	0	0	7	0	0	0	0	7
08:00 AM	1	0	0	0	4	0	0	0	0	5
08:15 AM	0	0	0	0	2	0	0	0	0	2
08:30 AM	0	0	0	3	11	0	0	0	0	14
08:45 AM	0	0	0	1	2	0	0	0	0	3
Total	1	0	0	4	19	0	0	0	0	24
09:00 AM	1	0	0	0	4	0	0	0	0	5
09:15 AM	1	0	0	0	4	0	0	0	0	5
Grand Total	3	0	0	4	34	0	0	0	0	41
Apprch %	100	0	0	10.5	89.5	0	0	0	0	
Total %	7.3	0	0	9.8	82.9	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	3	11	0	14	0	0	0	0	14
08:45 AM	0	0	0	0	1	2	0	3	0	0	0	0	3
09:00 AM	1	0	0	1	0	4	0	4	0	0	0	0	5
09:15 AM	1	0	0	1	0	4	0	4	0	0	0	0	5
Total Volume	2	0	0	2	4	21	0	25	0	0	0	0	27
% App. Total	100	0	0		16	84	0		0	0	0		
PHF	.500	.000	.000	.500	.333	.477	.000	.446	.000	.000	.000	.000	.482

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Groups Printed- Buses

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	2	0	0	0	0	2
09:15 AM	0	0	0	0	3	0	0	0	0	3
Grand Total	0	0	0	0	5	0	0	0	0	5
Apprch %	0	0	0	0	100	0	0	0	0	
Total %	0	0	0	0	100	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
09:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	5
% App. Total	0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.417

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Peds and Bicycles

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	7	0	0	0	0	0	0	7
Total	0	0	0	0	0	11	0	0	0	0	0	0	11
08:00 AM	0	0	0	0	1	5	0	0	0	0	0	0	6
08:15 AM	0	0	0	0	0	19	0	0	0	0	0	0	19
08:30 AM	0	0	0	0	1	8	0	0	0	0	0	0	9
08:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	6
Total	0	0	0	0	2	38	0	0	0	0	0	0	40
09:00 AM	0	0	0	0	0	21	0	0	0	0	0	0	21
09:15 AM	0	0	0	0	0	12	0	0	0	0	0	0	12
Grand Total	0	0	0	0	2	82	0	0	0	0	0	0	84
Apprch %	0	0	0	0	2.4	97.6	0	0	0	0	0	0	
Total %	0	0	0	0	2.4	97.6	0	0	0	0	0	0	

	Broad Canal Way From North					Main Street WB From East					Main Street WB From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:15 AM																
08:15 AM	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	19
08:30 AM	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	9
08:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	6
09:00 AM	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	21
Total Volume	0	0	0	0	0	1	54	0	0	55	0	0	0	0	0	55
% App. Total	0	0	0	0		1.8	98.2	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.643	.000	.000	.655	.000	.000	.000	.000	.000	.655

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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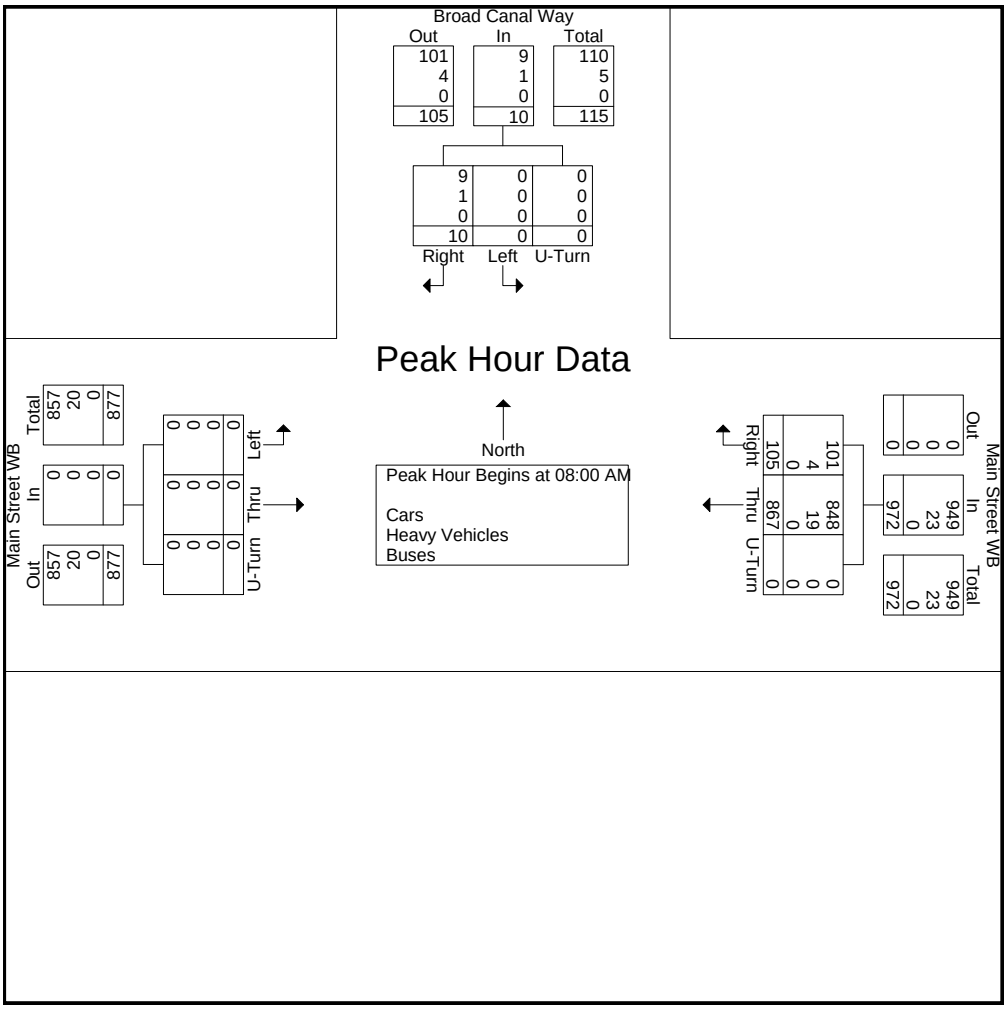
	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	1	0	0	1	25	218	0	243	0	0	0	0	244
08:15 AM	1	0	0	1	23	231	0	254	0	0	0	0	255
08:30 AM	6	0	0	6	33	214	0	247	0	0	0	0	253
08:45 AM	2	0	0	2	24	204	0	228	0	0	0	0	230
Total Volume	10	0	0	10	105	867	0	972	0	0	0	0	982
% App. Total	100	0	0		10.8	89.2	0		0	0	0		
PHF	.417	.000	.000	.417	.795	.938	.000	.957	.000	.000	.000	.000	.963
Cars	9	0	0	9	101	848	0	949	0	0	0	0	958
% Cars	90.0	0	0	90.0	96.2	97.8	0	97.6	0	0	0	0	97.6
Heavy Vehicles	1	0	0	1	4	19	0	23	0	0	0	0	24
% Heavy Vehicles	10.0	0	0	10.0	3.8	2.2	0	2.4	0	0	0	0	2.4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0



N: Broad Canal Way
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Groups Printed- Cars - Heavy Vehicles - Buses

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	4	0	0	2	140	0	0	0	0	146
04:45 PM	8	0	0	6	132	0	0	0	0	146
Total	12	0	0	8	272	0	0	0	0	292
05:00 PM	10	0	0	3	136	0	0	0	0	149
05:15 PM	2	0	0	2	133	0	0	0	0	137
05:30 PM	4	0	0	4	133	0	0	0	0	141
05:45 PM	3	0	0	2	132	0	0	0	0	137
Total	19	0	0	11	534	0	0	0	0	564
06:00 PM	5	0	0	3	159	0	0	0	0	167
06:15 PM	6	0	0	2	156	0	0	0	0	164
Grand Total	42	0	0	24	1121	0	0	0	0	1187
Apprch %	100	0	0	2.1	97.9	0	0	0	0	
Total %	3.5	0	0	2	94.4	0	0	0	0	
Cars	41	0	0	22	1100	0	0	0	0	1163
% Cars	97.6	0	0	91.7	98.1	0	0	0	0	98
Heavy Vehicles	1	0	0	1	12	0	0	0	0	14
% Heavy Vehicles	2.4	0	0	4.2	1.1	0	0	0	0	1.2
Buses	0	0	0	1	9	0	0	0	0	10
% Buses	0	0	0	4.2	0.8	0	0	0	0	0.8

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	4	0	0	4	4	133	0	137	0	0	0	0	141
05:45 PM	3	0	0	3	2	132	0	134	0	0	0	0	137
06:00 PM	5	0	0	5	3	159	0	162	0	0	0	0	167
06:15 PM	6	0	0	6	2	156	0	158	0	0	0	0	164
Total Volume	18	0	0	18	11	580	0	591	0	0	0	0	609
% App. Total	100	0	0		1.9	98.1	0		0	0	0		
PHF	.750	.000	.000	.750	.688	.912	.000	.912	.000	.000	.000	.000	.912
Cars	18	0	0	18	10	574	0	584	0	0	0	0	602
% Cars	100	0	0	100	90.9	99.0	0	98.8	0	0	0	0	98.9
Heavy Vehicles	0	0	0	0	1	2	0	3	0	0	0	0	3
% Heavy Vehicles	0	0	0	0	9.1	0.3	0	0.5	0	0	0	0	0.5
Buses	0	0	0	0	0	4	0	4	0	0	0	0	4
% Buses	0	0	0	0	0	0.7	0	0.7	0	0	0	0	0.7

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	4	0	0	2	136	0	0	0	0	142
04:45 PM	8	0	0	5	127	0	0	0	0	140
Total	12	0	0	7	263	0	0	0	0	282
05:00 PM	9	0	0	3	133	0	0	0	0	145
05:15 PM	2	0	0	2	130	0	0	0	0	134
05:30 PM	4	0	0	4	131	0	0	0	0	139
05:45 PM	3	0	0	1	131	0	0	0	0	135
Total	18	0	0	10	525	0	0	0	0	553
06:00 PM	5	0	0	3	158	0	0	0	0	166
06:15 PM	6	0	0	2	154	0	0	0	0	162
Grand Total	41	0	0	22	1100	0	0	0	0	1163
Apprch %	100	0	0	2	98	0	0	0	0	
Total %	3.5	0	0	1.9	94.6	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	4	0	0	4	4	131	0	135	0	0	0	0	139
05:45 PM	3	0	0	3	1	131	0	132	0	0	0	0	135
06:00 PM	5	0	0	5	3	158	0	161	0	0	0	0	166
06:15 PM	6	0	0	6	2	154	0	156	0	0	0	0	162
Total Volume	18	0	0	18	10	574	0	584	0	0	0	0	602
% App. Total	100	0	0		1.7	98.3	0		0	0	0		
PHF	.750	.000	.000	.750	.625	.908	.000	.907	.000	.000	.000	.000	.907

N: Broad Canal Way
E/W: Main Street WB
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Client: VHB/ M. Houdlette

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Groups Printed- Heavy Vehicles

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	3	0	0	0	0	3
04:45 PM	0	0	0	0	3	0	0	0	0	3
Total	0	0	0	0	6	0	0	0	0	6
05:00 PM	1	0	0	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	3	0	0	0	0	3
05:30 PM	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	1	0	0	0	0	0	1
Total	1	0	0	1	5	0	0	0	0	7
06:00 PM	0	0	0	0	1	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	1	12	0	0	0	0	14
Apprch %	100	0	0	7.7	92.3	0	0	0	0	
Total %	7.1	0	0	7.1	85.7	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	1	0	0	1	0	10	0	10	0	0	0	0	11
% App. Total	100	0	0		0	100	0		0	0	0		
PHF	.250	.000	.000	.250	.000	.833	.000	.833	.000	.000	.000	.000	.917

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Site Code : TBA
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Groups Printed- Buses

	Broad Canal Way From North			Main Street WB From East			Main Street WB From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	1	0	0	0	0	1
04:45 PM	0	0	0	1	2	0	0	0	0	3
Total	0	0	0	1	3	0	0	0	0	4
05:00 PM	0	0	0	0	2	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	4	0	0	0	0	4
06:00 PM	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	2	0	0	0	0	2
Grand Total	0	0	0	1	9	0	0	0	0	10
Apprch %	0	0	0	10	90	0	0	0	0	
Total %	0	0	0	10	90	0	0	0	0	

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	1	2	0	3	0	0	0	0	3
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	5	0	6	0	0	0	0	6
% App. Total	0	0	0		16.7	83.3	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.625	.000	.500	.000	.000	.000	.000	.500

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Site Code : TBA
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Groups Printed- Peds and Bicycles

	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	1	0	0	0	0	21	0	0	0	0	0	0	22
04:45 PM	0	0	0	0	0	29	0	0	0	0	0	0	29
Total	1	0	0	0	0	50	0	0	0	0	0	0	51
05:00 PM	0	0	0	0	0	43	0	0	0	0	0	0	43
05:15 PM	2	0	0	0	0	63	0	0	0	0	0	0	65
05:30 PM	0	0	0	0	0	70	0	0	0	0	0	0	70
05:45 PM	1	0	0	0	0	63	0	0	0	0	0	0	64
Total	3	0	0	0	0	239	0	0	0	0	0	0	242
06:00 PM	0	0	0	0	0	51	0	0	0	0	0	0	51
06:15 PM	0	0	0	0	0	56	0	0	0	0	0	0	56
Grand Total	4	0	0	0	0	396	0	0	0	0	0	0	400
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	
Total %	1	0	0	0	0	99	0	0	0	0	0	0	

	Broad Canal Way From North					Main Street WB From East					Main Street WB From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:15 PM																
05:15 PM	2	0	0	0	2	0	63	0	0	63	0	0	0	0	0	65
05:30 PM	0	0	0	0	0	0	70	0	0	70	0	0	0	0	0	70
05:45 PM	1	0	0	0	1	0	63	0	0	63	0	0	0	0	0	64
06:00 PM	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	51
Total Volume	3	0	0	0	3	0	247	0	0	247	0	0	0	0	0	250
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		
PHF	.375	.000	.000	.000	.375	.000	.882	.000	.000	.882	.000	.000	.000	.000	.000	.893

N: Broad Canal Way
E/W: Main Street WB
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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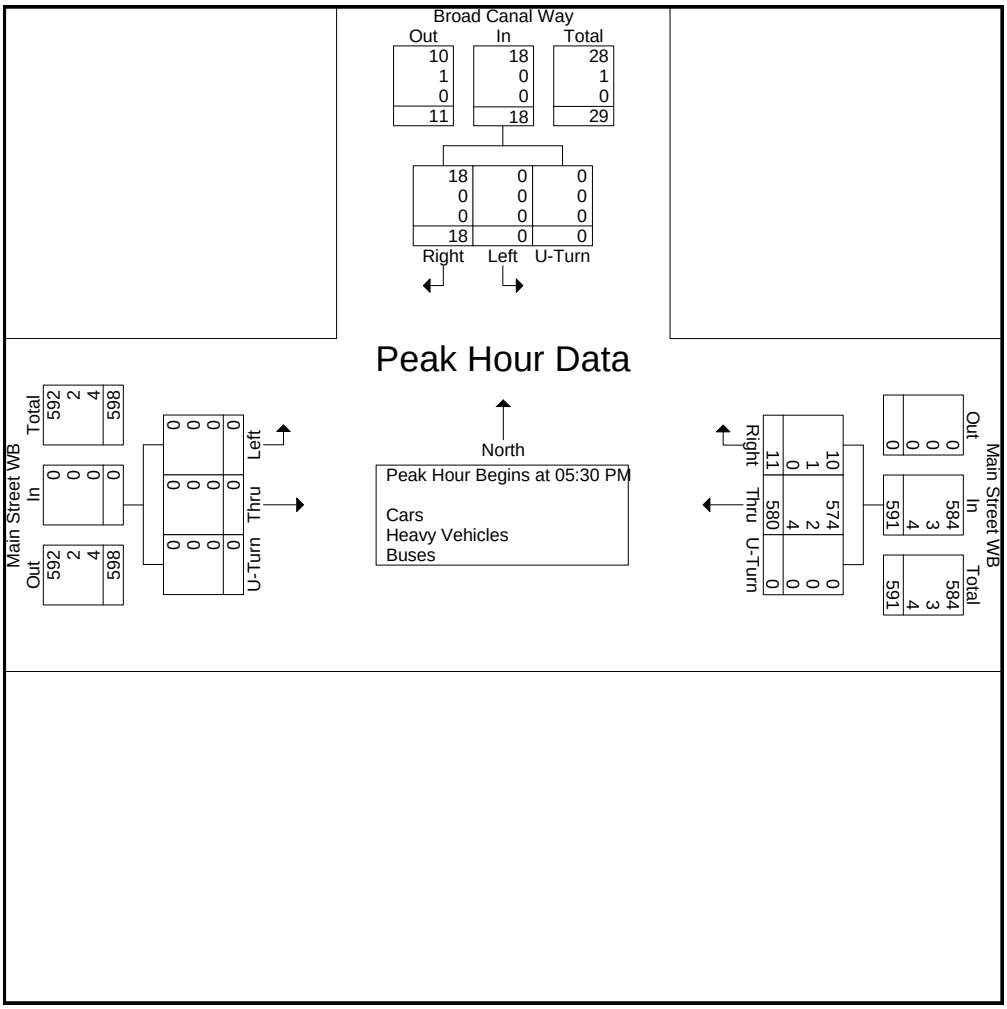
	Broad Canal Way From North				Main Street WB From East				Main Street WB From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	4	0	0	4	4	133	0	137	0	0	0	0	141
05:45 PM	3	0	0	3	2	132	0	134	0	0	0	0	137
06:00 PM	5	0	0	5	3	159	0	162	0	0	0	0	167
06:15 PM	6	0	0	6	2	156	0	158	0	0	0	0	164
Total Volume	18	0	0	18	11	580	0	591	0	0	0	0	609
% App. Total	100	0	0		1.9	98.1	0		0	0	0		
PHF	.750	.000	.000	.750	.688	.912	.000	.912	.000	.000	.000	.000	.912
Cars	18	0	0	18	10	574	0	584	0	0	0	0	602
% Cars	100	0	0	100	90.9	99.0	0	98.8	0	0	0	0	98.9
Heavy Vehicles	0	0	0	0	1	2	0	3	0	0	0	0	3
% Heavy Vehicles	0	0	0	0	9.1	0.3	0	0.5	0	0	0	0	0.5
Buses	0	0	0	0	0	4	0	4	0	0	0	0	4
% Buses	0	0	0	0	0	0.7	0	0.7	0	0	0	0	0.7



N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars - Heavy Vehicles - Buses

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	13	0	0	0	51	199	0	0	44	0	0	0	19	121	0	0	447
07:45 AM	27	0	0	0	48	196	0	0	47	0	0	0	18	134	0	0	470
Total	40	0	0	0	99	395	0	0	91	0	0	0	37	255	0	0	917
08:00 AM	26	0	0	0	57	218	0	0	46	0	0	0	26	138	0	0	511
08:15 AM	25	0	0	0	78	233	0	0	65	0	0	0	19	143	0	0	563
08:30 AM	25	0	0	0	60	219	0	0	59	0	0	0	26	159	0	0	548
08:45 AM	18	0	0	0	57	209	0	0	37	0	0	0	25	152	0	0	498
Total	94	0	0	0	252	879	0	0	207	0	0	0	96	592	0	0	2120
09:00 AM	12	0	0	0	58	222	0	0	45	0	0	0	23	141	0	0	501
09:15 AM	23	0	0	0	60	195	0	0	45	0	0	0	19	132	0	0	474
Grand Total	169	0	0	0	469	1691	0	0	388	0	0	0	175	1120	0	0	4012
Apprch %	100	0	0	0	21.7	78.3	0	0	100	0	0	0	13.5	86.5	0	0	
Total %	4.2	0	0	0	11.7	42.1	0	0	9.7	0	0	0	4.4	27.9	0	0	
Cars	163	0	0	0	469	1654	0	0	386	0	0	0	173	1073	0	0	3918
% Cars	96.4	0	0	0	100	97.8	0	0	99.5	0	0	0	98.9	95.8	0	0	97.7
Heavy Vehicles	5	0	0	0	0	31	0	0	2	0	0	0	1	41	0	0	80
% Heavy Vehicles	3	0	0	0	0	1.8	0	0	0.5	0	0	0	0.6	3.7	0	0	2
Buses	1	0	0	0	0	6	0	0	0	0	0	0	1	6	0	0	14
% Buses	0.6	0	0	0	0	0.4	0	0	0	0	0	0	0.6	0.5	0	0	0.3

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	26	0	0	0	26	57	218	0	0	275	46	0	0	0	46	26	138	0	0	164	511
08:15 AM	25	0	0	0	25	78	233	0	0	311	65	0	0	0	65	19	143	0	0	162	563
08:30 AM	25	0	0	0	25	60	219	0	0	279	59	0	0	0	59	26	159	0	0	185	548
08:45 AM	18	0	0	0	18	57	209	0	0	266	37	0	0	0	37	25	152	0	0	177	498
Total Volume	94	0	0	0	94	252	879	0	0	1131	207	0	0	0	207	96	592	0	0	688	2120
% App. Total	100	0	0	0		22.3	77.7	0	0		100	0	0	0		14	86	0	0		
PHF	.904	.000	.000	.000	.904	.808	.943	.000	.000	.909	.796	.000	.000	.000	.796	.923	.931	.000	.000	.930	.941
Cars	90	0	0	0	90	252	858	0	0	1110	207	0	0	0	207	96	567	0	0	663	2070
% Cars	95.7	0	0	0	95.7	100	97.6	0	0	98.1	100	0	0	0	100	100	95.8	0	0	96.4	97.6
Heavy Vehicles	4	0	0	0	4	0	19	0	0	19	0	0	0	0	0	0	24	0	0	24	47
% Heavy Vehicles	4.3	0	0	0	4.3	0	2.2	0	0	1.7	0	0	0	0	0	0	4.1	0	0	3.5	2.2
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% Buses	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.1	0.1

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 V
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	12	0	0	0	51	196	0	0	44	0	0	0	18	114	0	0	435
07:45 AM	27	0	0	0	48	194	0	0	47	0	0	0	18	132	0	0	466
Total	39	0	0	0	99	390	0	0	91	0	0	0	36	246	0	0	901
08:00 AM	23	0	0	0	57	215	0	0	46	0	0	0	26	135	0	0	502
08:15 AM	25	0	0	0	78	230	0	0	65	0	0	0	19	133	0	0	550
08:30 AM	24	0	0	0	60	207	0	0	59	0	0	0	26	152	0	0	528
08:45 AM	18	0	0	0	57	206	0	0	37	0	0	0	25	147	0	0	490
Total	90	0	0	0	252	858	0	0	207	0	0	0	96	567	0	0	2070
09:00 AM	12	0	0	0	58	217	0	0	44	0	0	0	23	133	0	0	487
09:15 AM	22	0	0	0	60	189	0	0	44	0	0	0	18	127	0	0	460
Grand Total	163	0	0	0	469	1654	0	0	386	0	0	0	173	1073	0	0	3918
Apprch %	100	0	0	0	22.1	77.9	0	0	100	0	0	0	13.9	86.1	0	0	
Total %	4.2	0	0	0	12	42.2	0	0	9.9	0	0	0	4.4	27.4	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	23	0	0	0	23	57	215	0	0	272	46	0	0	0	46	26	135	0	0	161	502
08:15 AM	25	0	0	0	25	78	230	0	0	308	65	0	0	0	65	19	133	0	0	152	550
08:30 AM	24	0	0	0	24	60	207	0	0	267	59	0	0	0	59	26	152	0	0	178	528
08:45 AM	18	0	0	0	18	57	206	0	0	263	37	0	0	0	37	25	147	0	0	172	490
Total Volume	90	0	0	0	90	252	858	0	0	1110	207	0	0	0	207	96	567	0	0	663	2070
% App. Total	100	0	0	0		22.7	77.3	0	0		100	0	0	0		14.5	85.5	0	0		
PHF	.900	.000	.000	.000	.900	.808	.933	.000	.000	.901	.796	.000	.000	.000	.796	.923	.933	.000	.000	.931	.941

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	3	0	0	0	0	0	0	1	7	0	0	12
07:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
Total	1	0	0	0	0	5	0	0	0	0	0	0	1	9	0	0	16
08:00 AM	3	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	8
08:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	10	0	0	12
08:30 AM	1	0	0	0	0	12	0	0	0	0	0	0	0	6	0	0	19
08:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8
Total	4	0	0	0	0	19	0	0	0	0	0	0	0	24	0	0	47
09:00 AM	0	0	0	0	0	3	0	0	1	0	0	0	0	6	0	0	10
09:15 AM	0	0	0	0	0	4	0	0	1	0	0	0	0	2	0	0	7
Grand Total	5	0	0	0	0	31	0	0	2	0	0	0	1	41	0	0	80
Apprch %	100	0	0	0	0	100	0	0	100	0	0	0	2.4	97.6	0	0	
Total %	6.2	0	0	0	0	38.8	0	0	2.5	0	0	0	1.2	51.2	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	10	0	0	10	12
08:30 AM	1	0	0	0	1	0	12	0	0	12	0	0	0	0	0	0	6	0	0	6	19
08:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8
09:00 AM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	6	0	0	6	10
Total Volume	1	0	0	0	1	0	20	0	0	20	1	0	0	0	1	0	27	0	0	27	49
% App. Total	100	0	0	0		0	100	0	0		100	0	0	0		0	100	0	0		
PHF	.250	.000	.000	.000	.250	.000	.417	.000	.000	.417	.250	.000	.000	.000	.250	.000	.675	.000	.000	.675	.645

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Groups Printed- Buses

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	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
08:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
09:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
09:15 AM	1	0	0	0	0	2	0	0	0	0	0	0	1	3	0	0	7
Grand Total	1	0	0	0	0	6	0	0	0	0	0	0	1	6	0	0	14
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	14.3	85.7	0	0	
Total %	7.1	0	0	0	0	42.9	0	0	0	0	0	0	7.1	42.9	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:30 AM																					
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
09:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	7
Total Volume	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	1	6	0	0	7	12
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		14.3	85.7	0	0		
PHF	.250	.000	.000	.000	.250	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.250	.500	.000	.000	.438	.429

N/S: Memorial Drive Ramps
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Groups Printed- Peds and Bicycles

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	0	5	8	0	4	0	0	0	0	0	0	12	12	0	42	0	0	0	83
07:45 AM	0	0	0	7	14	4	7	0	0	0	0	0	0	19	23	0	46	0	0	0	120
Total	0	0	0	12	22	4	11	0	0	0	0	0	0	31	35	0	88	0	0	0	203
08:00 AM	0	0	0	4	16	3	7	0	0	0	2	0	0	16	14	0	51	0	0	0	113
08:15 AM	0	0	0	4	37	0	14	0	0	0	4	0	0	21	17	1	74	0	0	0	172
08:30 AM	0	0	0	10	27	0	8	0	0	0	0	0	0	30	15	0	78	0	0	0	168
08:45 AM	0	0	0	6	24	2	8	0	0	0	2	0	0	28	18	0	91	0	0	0	179
Total	0	0	0	24	104	5	37	0	0	0	8	0	0	95	64	1	294	0	0	0	632
09:00 AM	0	0	0	6	19	2	21	0	0	0	0	0	0	18	11	0	57	0	0	0	134
09:15 AM	0	0	0	4	18	1	10	0	0	0	1	0	0	16	10	0	58	0	0	0	118
Grand Total	0	0	0	46	163	12	79	0	0	0	9	0	0	160	120	1	497	0	0	0	1087
Apprch %	0	0	0	22	78	13.2	86.8	0	0	0	3.1	0	0	55.4	41.5	0.2	99.8	0	0	0	
Total %	0	0	0	4.2	15	1.1	7.3	0	0	0	0.8	0	0	14.7	11	0.1	45.7	0	0	0	

	Memorial Drive WB Ramp From North						Longfellow Bridge From East						Memorial Drive EB/WB Ramp From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:15 AM																									
08:15 AM	0	0	0	4	37	41	0	14	0	0	0	14	4	0	0	21	17	42	1	74	0	0	0	75	172
08:30 AM	0	0	0	10	27	37	0	8	0	0	0	8	0	0	0	30	15	45	0	78	0	0	0	78	168
08:45 AM	0	0	0	6	24	30	2	8	0	0	0	10	2	0	0	28	18	48	0	91	0	0	0	91	179
09:00 AM	0	0	0	6	19	25	2	21	0	0	0	23	0	0	0	18	11	29	0	57	0	0	0	57	134
Total Volume	0	0	0	26	107	133	4	51	0	0	0	55	6	0	0	97	61	164	1	300	0	0	0	301	653
% App. Total	0	0	0	19.5	80.5		7.3	92.7	0	0	0		3.7	0	0	59.1	37.2		0.3	99.7	0	0	0		
PHF	.000	.000	.000	.650	.723	.811	.500	.607	.000	.000	.000	.598	.375	.000	.000	.808	.847	.854	.250	.824	.000	.000	.000	.827	.912

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
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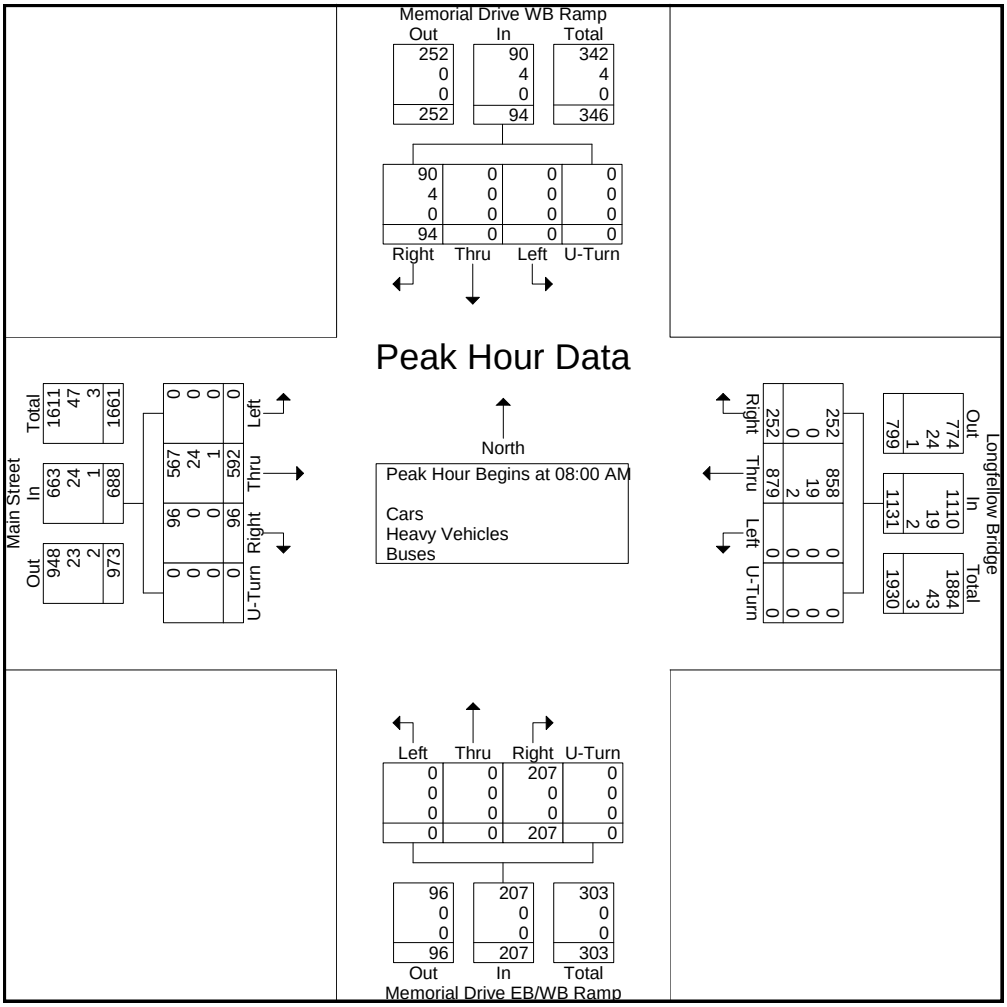
	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	26	0	0	0	26	57	218	0	0	275	46	0	0	0	46	26	138	0	0	164	511
08:15 AM	25	0	0	0	25	78	233	0	0	311	65	0	0	0	65	19	143	0	0	162	563
08:30 AM	25	0	0	0	25	60	219	0	0	279	59	0	0	0	59	26	159	0	0	185	548
08:45 AM	18	0	0	0	18	57	209	0	0	266	37	0	0	0	37	25	152	0	0	177	498
Total Volume	94	0	0	0	94	252	879	0	0	1131	207	0	0	0	207	96	592	0	0	688	2120
% App. Total	100	0	0	0		22.3	77.7	0	0		100	0	0	0		14	86	0	0		
PHF	.904	.000	.000	.000	.904	.808	.943	.000	.000	.909	.796	.000	.000	.000	.796	.923	.931	.000	.000	.930	.941
Cars	90	0	0	0	90	252	858	0	0	1110	207	0	0	0	207	96	567	0	0	663	2070
% Cars	95.7	0	0	0	95.7	100	97.6	0	0	98.1	100	0	0	0	100	100	95.8	0	0	96.4	97.6
Heavy Vehicles	4	0	0	0	4	0	19	0	0	19	0	0	0	0	0	0	24	0	0	24	47
% Heavy Vehicles	4.3	0	0	0	4.3	0	2.2	0	0	1.7	0	0	0	0	0	0	4.1	0	0	3.5	2.2
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% Buses	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.1	0.1



N/S: Memorial Drive Ramps
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P.O. Box 301 Berlin, MA 01503
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File Name : 133347 VV
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Buses

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	19	0	0	0	36	124	0	0	105	0	0	0	51	261	0	0	596
04:45 PM	11	0	0	0	37	122	0	0	83	0	0	0	41	271	0	0	565
Total	30	0	0	0	73	246	0	0	188	0	0	0	92	532	0	0	1161
05:00 PM	14	0	0	0	32	130	0	0	116	0	0	0	54	290	0	0	636
05:15 PM	15	0	0	0	31	112	0	0	75	0	0	0	64	291	0	0	588
05:30 PM	28	0	0	0	34	115	0	0	98	0	0	0	65	267	0	0	607
05:45 PM	16	0	0	0	28	114	0	0	121	0	0	0	47	234	0	0	560
Total	73	0	0	0	125	471	0	0	410	0	0	0	230	1082	0	0	2391
06:00 PM	16	0	0	0	35	149	0	0	99	0	0	0	38	234	0	0	571
06:15 PM	12	0	0	0	30	145	0	0	107	0	0	0	48	236	0	0	578
Grand Total	131	0	0	0	263	1011	0	0	804	0	0	0	408	2084	0	0	4701
Apprch %	100	0	0	0	20.6	79.4	0	0	100	0	0	0	16.4	83.6	0	0	
Total %	2.8	0	0	0	5.6	21.5	0	0	17.1	0	0	0	8.7	44.3	0	0	
Cars	123	0	0	0	262	997	0	0	801	0	0	0	406	2035	0	0	4624
% Cars	93.9	0	0	0	99.6	98.6	0	0	99.6	0	0	0	99.5	97.6	0	0	98.4
Heavy Vehicles	6	0	0	0	1	7	0	0	0	0	0	0	1	23	0	0	38
% Heavy Vehicles	4.6	0	0	0	0.4	0.7	0	0	0	0	0	0	0.2	1.1	0	0	0.8
Buses	2	0	0	0	0	7	0	0	3	0	0	0	1	26	0	0	39
% Buses	1.5	0	0	0	0	0.7	0	0	0.4	0	0	0	0.2	1.2	0	0	0.8

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total

Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	11	0	0	0	11	37	122	0	0	159	83	0	0	0	83	41	271	0	0	312	565
05:00 PM	14	0	0	0	14	32	130	0	0	162	116	0	0	0	116	54	290	0	0	344	636
05:15 PM	15	0	0	0	15	31	112	0	0	143	75	0	0	0	75	64	291	0	0	355	588
05:30 PM	28	0	0	0	28	34	115	0	0	149	98	0	0	0	98	65	267	0	0	332	607
Total Volume	68	0	0	0	68	134	479	0	0	613	372	0	0	0	372	224	1119	0	0	1343	2396
% App. Total																					
PHF	.607	.000	.000	.000	.607	.905	.921	.000	.000	.946	.802	.000	.000	.000	.802	.862	.961	.000	.000	.946	.942
Cars	63	0	0	0	63	133	472	0	0	605	369	0	0	0	369	224	1092	0	0	1316	2353
% Cars	92.6	0	0	0	92.6	99.3	98.5	0	0	98.7	99.2	0	0	0	99.2	100	97.6	0	0	98.0	98.2
Heavy Vehicles																					
% Heavy Vehicles	5.9	0	0	0	5.9	0.7	0.6	0	0	0.7	0	0	0	0	0	0	1.0	0	0	0.8	0.8
Buses	1	0	0	0	1	0	4	0	0	4	3	0	0	0	3	0	16	0	0	16	24
% Buses	1.5	0	0	0	1.5	0	0.8	0	0	0.7	0.8	0	0	0	0.8	0	1.4	0	0	1.2	1.0

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 133347 VV
Site Code : TBA
Start Date : 5/16/2013
Page No : 1

Groups Printed- Cars

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	16	0	0	0	36	122	0	0	105	0	0	0	50	257	0	0	586
04:45 PM	11	0	0	0	37	118	0	0	83	0	0	0	41	265	0	0	555
Total	27	0	0	0	73	240	0	0	188	0	0	0	91	522	0	0	1141
05:00 PM	12	0	0	0	31	129	0	0	116	0	0	0	54	285	0	0	627
05:15 PM	13	0	0	0	31	111	0	0	74	0	0	0	64	283	0	0	576
05:30 PM	27	0	0	0	34	114	0	0	96	0	0	0	65	259	0	0	595
05:45 PM	16	0	0	0	28	112	0	0	121	0	0	0	46	227	0	0	550
Total	68	0	0	0	124	466	0	0	407	0	0	0	229	1054	0	0	2348
06:00 PM	16	0	0	0	35	148	0	0	99	0	0	0	38	226	0	0	562
06:15 PM	12	0	0	0	30	143	0	0	107	0	0	0	48	233	0	0	573
Grand Total	123	0	0	0	262	997	0	0	801	0	0	0	406	2035	0	0	4624
Apprch %	100	0	0	0	20.8	79.2	0	0	100	0	0	0	16.6	83.4	0	0	
Total %	2.7	0	0	0	5.7	21.6	0	0	17.3	0	0	0	8.8	44	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	11	0	0	0	11	37	118	0	0	155	83	0	0	0	83	41	265	0	0	306	555
05:00 PM	12	0	0	0	12	31	129	0	0	160	116	0	0	0	116	54	285	0	0	339	627
05:15 PM	13	0	0	0	13	31	111	0	0	142	74	0	0	0	74	64	283	0	0	347	576
05:30 PM	27	0	0	0	27	34	114	0	0	148	96	0	0	0	96	65	259	0	0	324	595
Total Volume	63	0	0	0	63	133	472	0	0	605	369	0	0	0	369	224	1092	0	0	1316	2353
% App. Total																					
PHF	.583	.000	.000	.000	.583	.899	.915	.000	.000	.945	.795	.000	.000	.000	.795	.862	.958	.000	.000	.948	.938

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
City, State: Cambridge, MA
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	2	0	0	0	0	2	0	0	0	0	0	0	1	2	0	0	7
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
Total	2	0	0	0	0	4	0	0	0	0	0	0	1	5	0	0	12
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	4
05:15 PM	2	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	6
05:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	4
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
Total	4	0	0	0	1	2	0	0	0	0	0	0	0	11	0	0	18
06:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	6
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Grand Total	6	0	0	0	1	7	0	0	0	0	0	0	1	23	0	0	38
Apprch %	100	0	0	0	12.5	87.5	0	0	0	0	0	0	4.2	95.8	0	0	
Total %	15.8	0	0	0	2.6	18.4	0	0	0	0	0	0	2.6	60.5	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	7
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
05:00 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	4
05:15 PM	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	6
Total Volume	5	0	0	0	5	1	5	0	0	6	0	0	0	0	0	1	10	0	0	11	22
% App. Total	100	0	0	0		16.7	83.3	0	0		0	0	0	0		9.1	90.9	0	0		
PHF	.625	.000	.000	.000	.625	.250	.625	.000	.000	.750	.000	.000	.000	.000	.000	.250	.833	.000	.000	.917	.786

N/S: Memorial Drive Ramps
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Buses

	Memorial Drive WB Ramp From North				Longfellow Bridge From East				Memorial Drive EB/WB Ramp From South				Main Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
Total	1	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	8
05:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	5
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	6
05:30 PM	0	0	0	0	0	1	0	0	2	0	0	0	0	5	0	0	8
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	4	0	0	6
Total	1	0	0	0	0	3	0	0	3	0	0	0	1	17	0	0	25
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
06:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
Grand Total	2	0	0	0	0	7	0	0	3	0	0	0	1	26	0	0	39
Apprch %	100	0	0	0	0	100	0	0	100	0	0	0	3.7	96.3	0	0	
Total %	5.1	0	0	0	0	17.9	0	0	7.7	0	0	0	2.6	66.7	0	0	

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	5	0	0	5	6
05:30 PM	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	5	0	0	5	8
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	6
Total Volume	1	0	0	0	1	0	3	0	0	3	3	0	0	0	3	1	17	0	0	18	25
% App. Total	100	0	0	0		0	100	0	0		100	0	0	0		5.6	94.4	0	0		
PHF	.250	.000	.000	.000	.250	.000	.750	.000	.000	.750	.375	.000	.000	.000	.375	.250	.850	.000	.000	.900	.781

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bicycles

	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	0	18	8	0	18	0	0	0	0	0	0	12	35	0	16	0	0	0	107
04:45 PM	0	0	0	15	21	2	29	0	0	0	0	0	0	24	53	3	20	0	0	0	167
Total	0	0	0	33	29	2	47	0	0	0	0	0	0	36	88	3	36	0	0	0	274
05:00 PM	0	0	0	46	13	2	43	0	0	0	0	0	0	19	39	3	17	0	0	0	182
05:15 PM	0	0	0	26	18	3	62	0	0	0	0	0	0	24	67	0	29	0	0	0	229
05:30 PM	0	0	0	17	31	5	67	0	0	0	0	0	0	22	66	0	17	0	0	0	225
05:45 PM	0	0	0	15	37	3	65	0	0	0	0	0	0	40	63	0	29	0	0	0	252
Total	0	0	0	104	99	13	237	0	0	0	0	0	0	105	235	3	92	0	0	0	888
06:00 PM	0	0	0	21	14	1	53	0	0	0	1	0	0	19	46	1	11	0	0	0	167
06:15 PM	0	0	0	10	14	3	49	0	0	0	1	0	0	24	45	1	12	0	0	0	159
Grand Total	0	0	0	168	156	19	386	0	0	0	2	0	0	184	414	8	151	0	0	0	1488
Apprch %	0	0	0	51.9	48.1	4.7	95.3	0	0	0	0.3	0	0	30.7	69	5	95	0	0	0	
Total %	0	0	0	11.3	10.5	1.3	25.9	0	0	0	0.1	0	0	12.4	27.8	0.5	10.1	0	0	0	

	Memorial Drive WB Ramp From North						Longfellow Bridge From East						Memorial Drive EB/WB Ramp From South						Main Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	0	0	0	46	13	59	2	43	0	0	0	45	0	0	0	19	39	58	3	17	0	0	0	20	182
05:15 PM	0	0	0	26	18	44	3	62	0	0	0	65	0	0	0	24	67	91	0	29	0	0	0	29	229
05:30 PM	0	0	0	17	31	48	5	67	0	0	0	72	0	0	0	22	66	88	0	17	0	0	0	17	225
05:45 PM	0	0	0	15	37	52	3	65	0	0	0	68	0	0	0	40	63	103	0	29	0	0	0	29	252
Total Volume	0	0	0	104	99	203	13	237	0	0	0	250	0	0	0	105	235	340	3	92	0	0	0	95	888
% App. Total	0	0	0	51.2	48.8		5.2	94.8	0	0	0		0	0	0	30.9	69.1		3.2	96.8	0	0	0		
PHF	.000	.000	.000	.565	.669	.860	.650	.884	.000	.000	.000	.868	.000	.000	.000	.656	.877	.825	.250	.793	.000	.000	.000	.819	.881

N/S: Memorial Drive Ramps
E/W: Longfellow Bridge/ Main Street
City, State: Cambridge, MA
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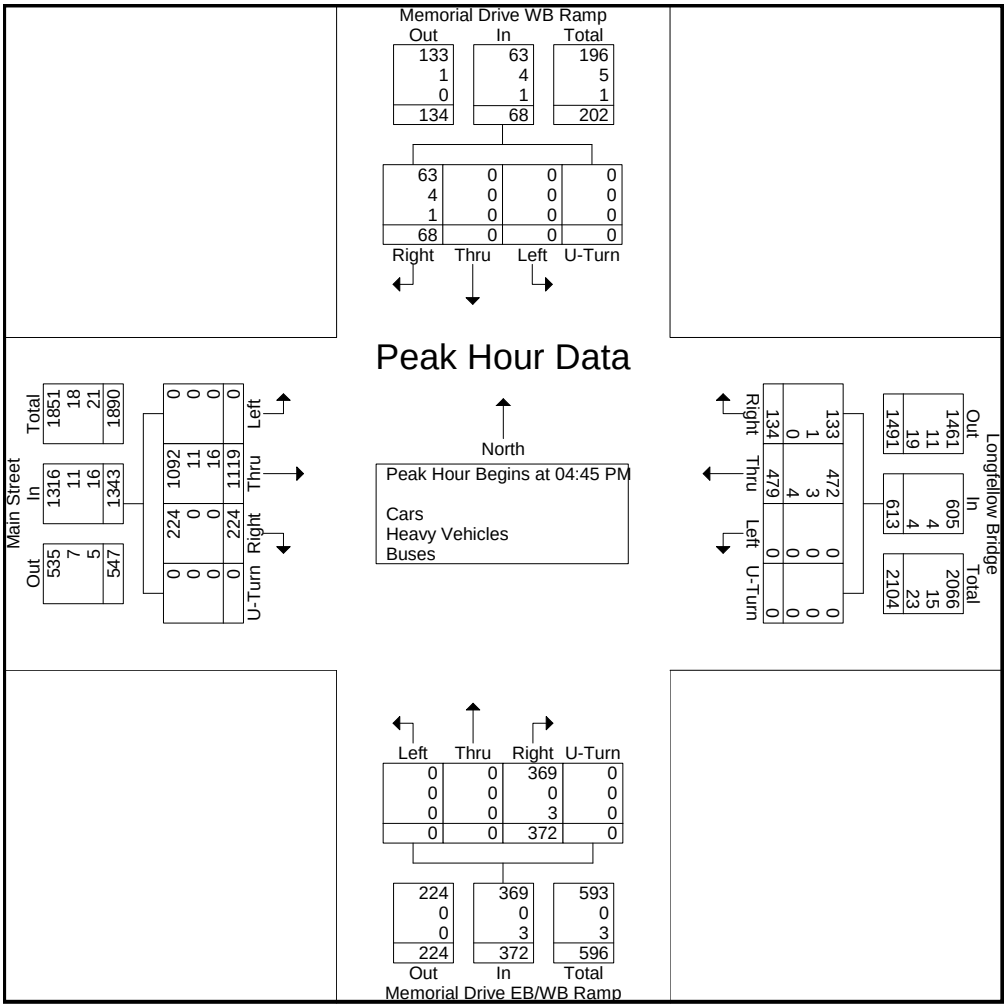
	Memorial Drive WB Ramp From North					Longfellow Bridge From East					Memorial Drive EB/WB Ramp From South					Main Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	11	0	0	0	11	37	122	0	0	159	83	0	0	0	83	41	271	0	0	312	565
05:00 PM	14	0	0	0	14	32	130	0	0	162	116	0	0	0	116	54	290	0	0	344	636
05:15 PM	15	0	0	0	15	31	112	0	0	143	75	0	0	0	75	64	291	0	0	355	588
05:30 PM	28	0	0	0	28	34	115	0	0	149	98	0	0	0	98	65	267	0	0	332	607
Total Volume	68	0	0	0	68	134	479	0	0	613	372	0	0	0	372	224	1119	0	0	1343	2396
% App. Total																					
PHF	.607	.000	.000	.000	.607	.905	.921	.000	.000	.946	.802	.000	.000	.000	.802	.862	.961	.000	.000	.946	.942
Cars	63	0	0	0	63	133	472	0	0	605	369	0	0	0	369	224	1092	0	0	1316	2353
% Cars	92.6	0	0	0	92.6	99.3	98.5	0	0	98.7	99.2	0	0	0	99.2	100	97.6	0	0	98.0	98.2
Heavy Vehicles																					
% Heavy Vehicles	5.9	0	0	0	5.9	0.7	0.6	0	0	0.7	0	0	0	0	0	0	1.0	0	0	0.8	0.8
Buses	1	0	0	0	1	0	4	0	0	4	3	0	0	0	3	0	16	0	0	16	24
% Buses	1.5	0	0	0	1.5	0	0.8	0	0	0.7	0.8	0	0	0	0.8	0	1.4	0	0	1.2	1.0



N/S: Ames Street
E: Amherst Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	5	8	0	42	9	0	0	0	0	64
07:45 AM	4	7	0	37	12	0	0	0	0	60
Total	9	15	0	79	21	0	0	0	0	124
08:00 AM	12	7	1	43	10	0	1	0	0	74
08:15 AM	10	8	0	39	11	0	0	0	0	68
08:30 AM	12	13	0	35	13	1	0	0	0	74
08:45 AM	11	10	2	46	9	0	1	0	0	79
Total	45	38	3	163	43	1	2	0	0	295
09:00 AM	8	9	0	32	11	0	0	0	0	60
09:15 AM	14	8	0	46	20	0	0	0	0	88
Grand Total	76	70	3	320	95	1	2	0	0	567
Apprch %	51	47	2	76.9	22.8	0.2	100	0	0	
Total %	13.4	12.3	0.5	56.4	16.8	0.2	0.4	0	0	
Cars	72	67	3	277	78	1	0	0	0	498
% Cars	94.7	95.7	100	86.6	82.1	100	0	0	0	87.8
Heavy Vehicles	4	3	0	23	3	0	1	0	0	34
% Heavy Vehicles	5.3	4.3	0	7.2	3.2	0	50	0	0	6
Buses	0	0	0	20	14	0	1	0	0	35
% Buses	0	0	0	6.2	14.7	0	50	0	0	6.2

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	12	13	0	25	35	13	1	49	0	0	0	0	74
08:45 AM	11	10	2	23	46	9	0	55	1	0	0	1	79
09:00 AM	8	9	0	17	32	11	0	43	0	0	0	0	60
09:15 AM	14	8	0	22	46	20	0	66	0	0	0	0	88
Total Volume	45	40	2	87	159	53	1	213	1	0	0	1	301
% App. Total	51.7	46	2.3		74.6	24.9	0.5		100	0	0		
PHF	.804	.769	.250	.870	.864	.663	.250	.807	.250	.000	.000	.250	.855
Cars	43	38	2	83	139	46	1	186	0	0	0	0	269
% Cars	95.6	95.0	100	95.4	87.4	86.8	100	87.3	0	0	0	0	89.4
Heavy Vehicles	2	2	0	4	13	1	0	14	1	0	0	1	19
% Heavy Vehicles	4.4	5.0	0	4.6	8.2	1.9	0	6.6	100	0	0	100	6.3
Buses	0	0	0	0	7	6	0	13	0	0	0	0	13
% Buses	0	0	0	0	4.4	11.3	0	6.1	0	0	0	0	4.3

N/S: Ames Street
E: Amherst Street
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Groups Printed- Cars

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	5	8	0	36	8	0	0	0	0	57
07:45 AM	4	7	0	34	9	0	0	0	0	54
Total	9	15	0	70	17	0	0	0	0	111
08:00 AM	11	7	1	37	7	0	0	0	0	63
08:15 AM	9	7	0	31	8	0	0	0	0	55
08:30 AM	11	12	0	31	11	1	0	0	0	66
08:45 AM	11	9	2	38	7	0	0	0	0	67
Total	42	35	3	137	33	1	0	0	0	251
09:00 AM	8	9	0	28	10	0	0	0	0	55
09:15 AM	13	8	0	42	18	0	0	0	0	81
Grand Total	72	67	3	277	78	1	0	0	0	498
Apprch %	50.7	47.2	2.1	77.8	21.9	0.3	0	0	0	
Total %	14.5	13.5	0.6	55.6	15.7	0.2	0	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	11	12	0	23	31	11	1	43	0	0	0	0	66
08:45 AM	11	9	2	22	38	7	0	45	0	0	0	0	67
09:00 AM	8	9	0	17	28	10	0	38	0	0	0	0	55
09:15 AM	13	8	0	21	42	18	0	60	0	0	0	0	81
Total Volume	43	38	2	83	139	46	1	186	0	0	0	0	269
% App. Total	51.8	45.8	2.4		74.7	24.7	0.5		0	0	0		
PHF	.827	.792	.250	.902	.827	.639	.250	.775	.000	.000	.000	.000	.830

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Groups Printed- Heavy Vehicles

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	3	0	0	0	0	0	3
07:45 AM	0	0	0	1	1	0	0	0	0	2
Total	0	0	0	4	1	0	0	0	0	5
08:00 AM	1	0	0	1	1	0	0	0	0	3
08:15 AM	1	1	0	5	0	0	0	0	0	7
08:30 AM	1	1	0	3	0	0	0	0	0	5
08:45 AM	0	1	0	6	1	0	1	0	0	9
Total	3	3	0	15	2	0	1	0	0	24
09:00 AM	0	0	0	3	0	0	0	0	0	3
09:15 AM	1	0	0	1	0	0	0	0	0	2
Grand Total	4	3	0	23	3	0	1	0	0	34
Apprch %	57.1	42.9	0	88.5	11.5	0	100	0	0	
Total %	11.8	8.8	0	67.6	8.8	0	2.9	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	1	0	0	1	1	1	0	2	0	0	0	0	3
08:15 AM	1	1	0	2	5	0	0	5	0	0	0	0	7
08:30 AM	1	1	0	2	3	0	0	3	0	0	0	0	5
08:45 AM	0	1	0	1	6	1	0	7	1	0	0	1	9
Total Volume	3	3	0	6	15	2	0	17	1	0	0	1	24
% App. Total	50	50	0		88.2	11.8	0		100	0	0		
PHF	.750	.750	.000	.750	.625	.500	.000	.607	.250	.000	.000	.250	.667

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Groups Printed- Buses

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
07:30 AM	0	0	0	3	1	0	0	0	0	4
07:45 AM	0	0	0	2	2	0	0	0	0	4
Total	0	0	0	5	3	0	0	0	0	8
08:00 AM	0	0	0	5	2	0	1	0	0	8
08:15 AM	0	0	0	3	3	0	0	0	0	6
08:30 AM	0	0	0	1	2	0	0	0	0	3
08:45 AM	0	0	0	2	1	0	0	0	0	3
Total	0	0	0	11	8	0	1	0	0	20
09:00 AM	0	0	0	1	1	0	0	0	0	2
09:15 AM	0	0	0	3	2	0	0	0	0	5
Grand Total	0	0	0	20	14	0	1	0	0	35
Apprch %	0	0	0	58.8	41.2	0	100	0	0	
Total %	0	0	0	57.1	40	0	2.9	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	0	0	0	3	1	0	4	0	0	0	0	4
07:45 AM	0	0	0	0	2	2	0	4	0	0	0	0	4
08:00 AM	0	0	0	0	5	2	0	7	1	0	0	1	8
08:15 AM	0	0	0	0	3	3	0	6	0	0	0	0	6
Total Volume	0	0	0	0	13	8	0	21	1	0	0	1	22
% App. Total	0	0	0		61.9	38.1	0		100	0	0		
PHF	.000	.000	.000	.000	.650	.667	.000	.750	.250	.000	.000	.250	.688

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Groups Printed- Peds and Bicycles

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
07:30 AM	0	2	2	5	0	0	1	0	0	2	1	2	15
07:45 AM	0	1	3	10	2	0	4	2	3	1	4	4	34
Total	0	3	5	15	2	0	5	2	3	3	5	6	49
08:00 AM	0	0	0	6	0	0	2	1	2	2	2	2	17
08:15 AM	1	4	0	9	0	1	2	2	4	0	6	6	35
08:30 AM	0	1	7	11	3	0	3	2	6	2	11	4	50
08:45 AM	0	2	1	13	1	1	2	2	4	6	16	13	61
Total	1	7	8	39	4	2	9	7	16	10	35	25	163
09:00 AM	0	3	10	14	5	1	0	7	3	2	10	15	70
09:15 AM	0	1	4	15	1	0	2	3	3	6	14	6	55
Grand Total	1	14	27	83	12	3	16	19	25	21	64	52	337
Apprch %	0.8	11.2	21.6	66.4	24	6	32	38	15.4	13	39.5	32.1	
Total %	0.3	4.2	8	24.6	3.6	0.9	4.7	5.6	7.4	6.2	19	15.4	

	Ames Street From North					Amherst Street From East					Ames Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	0	1	7	11	19	3	0	3	2	8	6	2	11	4	23	50
08:45 AM	0	2	1	13	16	1	1	2	2	6	4	6	16	13	39	61
09:00 AM	0	3	10	14	27	5	1	0	7	13	3	2	10	15	30	70
09:15 AM	0	1	4	15	20	1	0	2	3	6	3	6	14	6	29	55
Total Volume	0	7	22	53	82	10	2	7	14	33	16	16	51	38	121	236
% App. Total	0	8.5	26.8	64.6		30.3	6.1	21.2	42.4		13.2	13.2	42.1	31.4		
PHF	.000	.583	.550	.883	.759	.500	.500	.583	.500	.635	.667	.667	.797	.633	.776	.843

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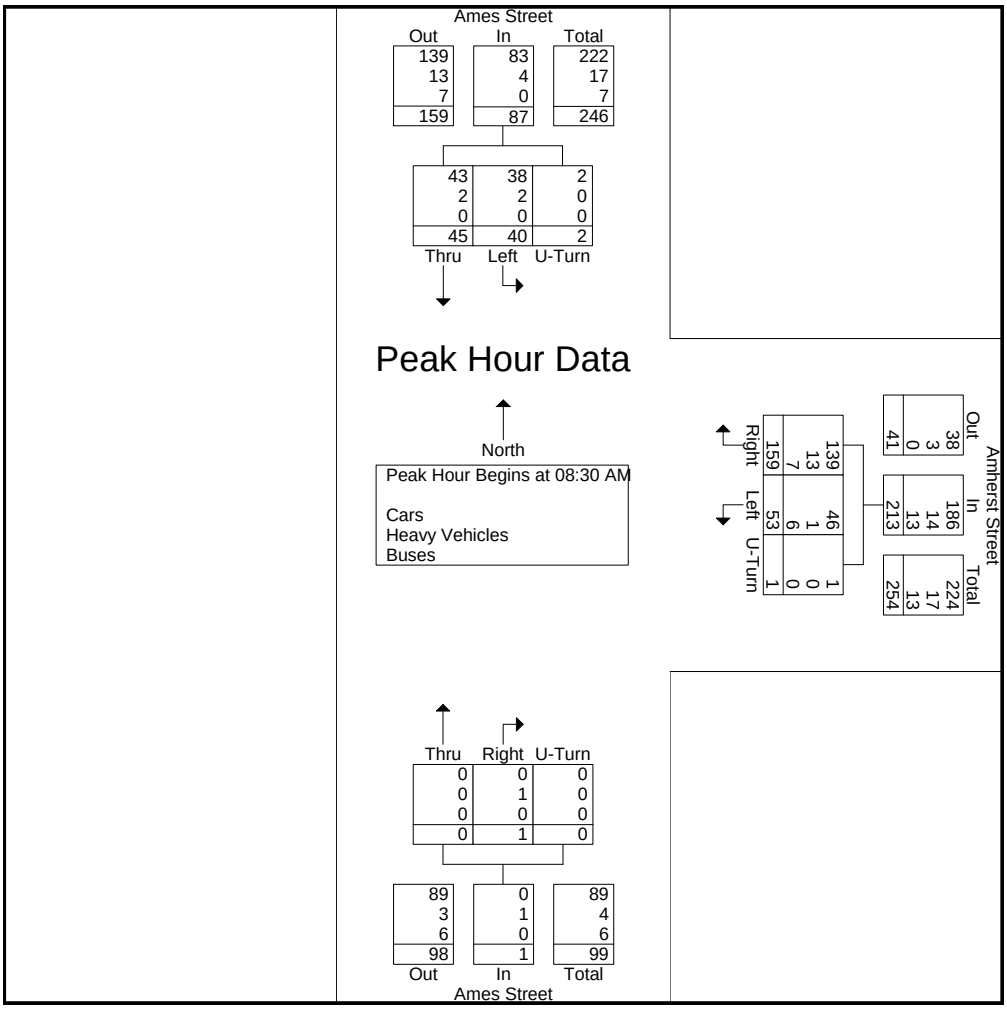
	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	12	13	0	25	35	13	1	49	0	0	0	0	74
08:45 AM	11	10	2	23	46	9	0	55	1	0	0	1	79
09:00 AM	8	9	0	17	32	11	0	43	0	0	0	0	60
09:15 AM	14	8	0	22	46	20	0	66	0	0	0	0	88
Total Volume	45	40	2	87	159	53	1	213	1	0	0	1	301
% App. Total	51.7	46	2.3		74.6	24.9	0.5		100	0	0		
PHF	.804	.769	.250	.870	.864	.663	.250	.807	.250	.000	.000	.250	.855
Cars	43	38	2	83	139	46	1	186	0	0	0	0	269
% Cars	95.6	95.0	100	95.4	87.4	86.8	100	87.3	0	0	0	0	89.4
Heavy Vehicles	2	2	0	4	13	1	0	14	1	0	0	1	19
% Heavy Vehicles	4.4	5.0	0	4.6	8.2	1.9	0	6.6	100	0	0	100	6.3
Buses	0	0	0	0	7	6	0	13	0	0	0	0	13
% Buses	0	0	0	0	4.4	11.3	0	6.1	0	0	0	0	4.3



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Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	27	6	0	42	20	0	0	0	0	95
04:45 PM	26	10	0	42	21	0	0	0	0	99
Total	53	16	0	84	41	0	0	0	0	194
05:00 PM	23	9	1	68	19	0	0	0	0	120
05:15 PM	22	9	0	65	24	0	0	0	0	120
05:30 PM	30	9	3	42	18	1	0	0	0	103
05:45 PM	26	7	0	53	21	0	0	0	0	107
Total	101	34	4	228	82	1	0	0	0	450
06:00 PM	18	5	1	58	24	1	0	0	0	107
06:15 PM	18	8	0	37	21	0	0	0	0	84
Grand Total	190	63	5	407	168	2	0	0	0	835
Apprch %	73.6	24.4	1.9	70.5	29.1	0.3	0	0	0	
Total %	22.8	7.5	0.6	48.7	20.1	0.2	0	0	0	
Cars	188	60	5	397	141	2	0	0	0	793
% Cars	98.9	95.2	100	97.5	83.9	100	0	0	0	95
Heavy Vehicles	2	2	0	8	2	0	0	0	0	14
% Heavy Vehicles	1.1	3.2	0	2	1.2	0	0	0	0	1.7
Buses	0	1	0	2	25	0	0	0	0	28
% Buses	0	1.6	0	0.5	14.9	0	0	0	0	3.4

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	23	9	1	33	68	19	0	87	0	0	0	0	120
05:15 PM	22	9	0	31	65	24	0	89	0	0	0	0	120
05:30 PM	30	9	3	42	42	18	1	61	0	0	0	0	103
05:45 PM	26	7	0	33	53	21	0	74	0	0	0	0	107
Total Volume	101	34	4	139	228	82	1	311	0	0	0	0	450
% App. Total	72.7	24.5	2.9		73.3	26.4	0.3		0	0	0		
PHF	.842	.944	.333	.827	.838	.854	.250	.874	.000	.000	.000	.000	.938
Cars	99	34	4	137	223	69	1	293	0	0	0	0	430
% Cars	98.0	100	100	98.6	97.8	84.1	100	94.2	0	0	0	0	95.6
Heavy Vehicles	2	0	0	2	5	1	0	6	0	0	0	0	8
% Heavy Vehicles	2.0	0	0	1.4	2.2	1.2	0	1.9	0	0	0	0	1.8
Buses	0	0	0	0	0	12	0	12	0	0	0	0	12
% Buses	0	0	0	0	0	14.6	0	3.9	0	0	0	0	2.7

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Groups Printed- Cars

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	27	5	0	42	16	0	0	0	0	90
04:45 PM	26	10	0	42	18	0	0	0	0	96
Total	53	15	0	84	34	0	0	0	0	186
05:00 PM	22	9	1	66	16	0	0	0	0	114
05:15 PM	22	9	0	64	21	0	0	0	0	116
05:30 PM	29	9	3	41	15	1	0	0	0	98
05:45 PM	26	7	0	52	17	0	0	0	0	102
Total	99	34	4	223	69	1	0	0	0	430
06:00 PM	18	4	1	55	20	1	0	0	0	99
06:15 PM	18	7	0	35	18	0	0	0	0	78
Grand Total	188	60	5	397	141	2	0	0	0	793
Apprch %	74.3	23.7	2	73.5	26.1	0.4	0	0	0	
Total %	23.7	7.6	0.6	50.1	17.8	0.3	0	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	22	9	1	32	66	16	0	82	0	0	0	0	114
05:15 PM	22	9	0	31	64	21	0	85	0	0	0	0	116
05:30 PM	29	9	3	41	41	15	1	57	0	0	0	0	98
05:45 PM	26	7	0	33	52	17	0	69	0	0	0	0	102
Total Volume	99	34	4	137	223	69	1	293	0	0	0	0	430
% App. Total	72.3	24.8	2.9		76.1	23.5	0.3		0	0	0		
PHF	.853	.944	.333	.835	.845	.821	.250	.862	.000	.000	.000	.000	.927

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Groups Printed- Heavy Vehicles

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	1	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	1
05:00 PM	1	0	0	2	1	0	0	0	0	4
05:15 PM	0	0	0	1	0	0	0	0	0	1
05:30 PM	1	0	0	1	0	0	0	0	0	2
05:45 PM	0	0	0	1	0	0	0	0	0	1
Total	2	0	0	5	1	0	0	0	0	8
06:00 PM	0	1	0	2	1	0	0	0	0	4
06:15 PM	0	0	0	1	0	0	0	0	0	1
Grand Total	2	2	0	8	2	0	0	0	0	14
Apprch %	50	50	0	80	20	0	0	0	0	
Total %	14.3	14.3	0	57.1	14.3	0	0	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	1	0	0	1	2	1	0	3	0	0	0	0	4
05:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
05:30 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	2	0	0	2	5	1	0	6	0	0	0	0	8
% App. Total	100	0	0		83.3	16.7	0		0	0	0		
PHF	.500	.000	.000	.500	.625	.250	.000	.500	.000	.000	.000	.000	.500

N/S: Ames Street
E: Amherst Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Buses

	Ames Street From North			Amherst Street From East			Ames Street From South			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:30 PM	0	0	0	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	3	0	0	0	0	3
Total	0	0	0	0	7	0	0	0	0	7
05:00 PM	0	0	0	0	2	0	0	0	0	2
05:15 PM	0	0	0	0	3	0	0	0	0	3
05:30 PM	0	0	0	0	3	0	0	0	0	3
05:45 PM	0	0	0	0	4	0	0	0	0	4
Total	0	0	0	0	12	0	0	0	0	12
06:00 PM	0	0	0	1	3	0	0	0	0	4
06:15 PM	0	1	0	1	3	0	0	0	0	5
Grand Total	0	1	0	2	25	0	0	0	0	28
Apprch %	0	100	0	7.4	92.6	0	0	0	0	
Total %	0	3.6	0	7.1	89.3	0	0	0	0	

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	3
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	4
06:00 PM	0	0	0	0	1	3	0	4	0	0	0	0	4
06:15 PM	0	1	0	1	1	3	0	4	0	0	0	0	5
Total Volume	0	1	0	1	2	13	0	15	0	0	0	0	16
% App. Total	0	100	0		13.3	86.7	0		0	0	0		
PHF	.000	.250	.000	.250	.500	.813	.000	.938	.000	.000	.000	.000	.800

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Groups Printed- Peds and Bicycles

	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	Peds EB	Peds WB	Right	Left	Peds SB	Peds NB	Right	Thru	Peds WB	Peds EB	Int. Total
04:30 PM	3	5	10	22	4	2	18	1	1	1	19	15	101
04:45 PM	2	2	42	21	6	4	13	2	2	1	10	20	125
Total	5	7	52	43	10	6	31	3	3	2	29	35	226
05:00 PM	4	4	31	22	7	5	11	14	2	6	26	17	149
05:15 PM	4	4	18	19	3	8	17	23	2	1	30	10	139
05:30 PM	6	3	21	21	6	3	10	7	2	1	14	23	117
05:45 PM	4	1	19	43	4	8	13	16	0	1	15	12	136
Total	18	12	89	105	20	24	51	60	6	9	85	62	541
06:00 PM	3	2	16	37	7	5	11	4	0	0	10	28	123
06:15 PM	1	0	19	28	12	7	11	9	0	1	22	18	128
Grand Total	27	21	176	213	49	42	104	76	9	12	146	143	1018
Apprch %	6.2	4.8	40.3	48.7	18.1	15.5	38.4	28	2.9	3.9	47.1	46.1	
Total %	2.7	2.1	17.3	20.9	4.8	4.1	10.2	7.5	0.9	1.2	14.3	14	

	Ames Street From North					Amherst Street From East					Ames Street From South					
Start Time	Thru	Left	Peds EB	Peds WB	App. Total	Right	Left	Peds SB	Peds NB	App. Total	Right	Thru	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:00 PM																
05:00 PM	4	4	31	22	61	7	5	11	14	37	2	6	26	17	51	149
05:15 PM	4	4	18	19	45	3	8	17	23	51	2	1	30	10	43	139
05:30 PM	6	3	21	21	51	6	3	10	7	26	2	1	14	23	40	117
05:45 PM	4	1	19	43	67	4	8	13	16	41	0	1	15	12	28	136
Total Volume	18	12	89	105	224	20	24	51	60	155	6	9	85	62	162	541
% App. Total	8	5.4	39.7	46.9		12.9	15.5	32.9	38.7		3.7	5.6	52.5	38.3		
PHF	.750	.750	.718	.610	.836	.714	.750	.750	.652	.760	.750	.375	.708	.674	.794	.908

N/S: Ames Street
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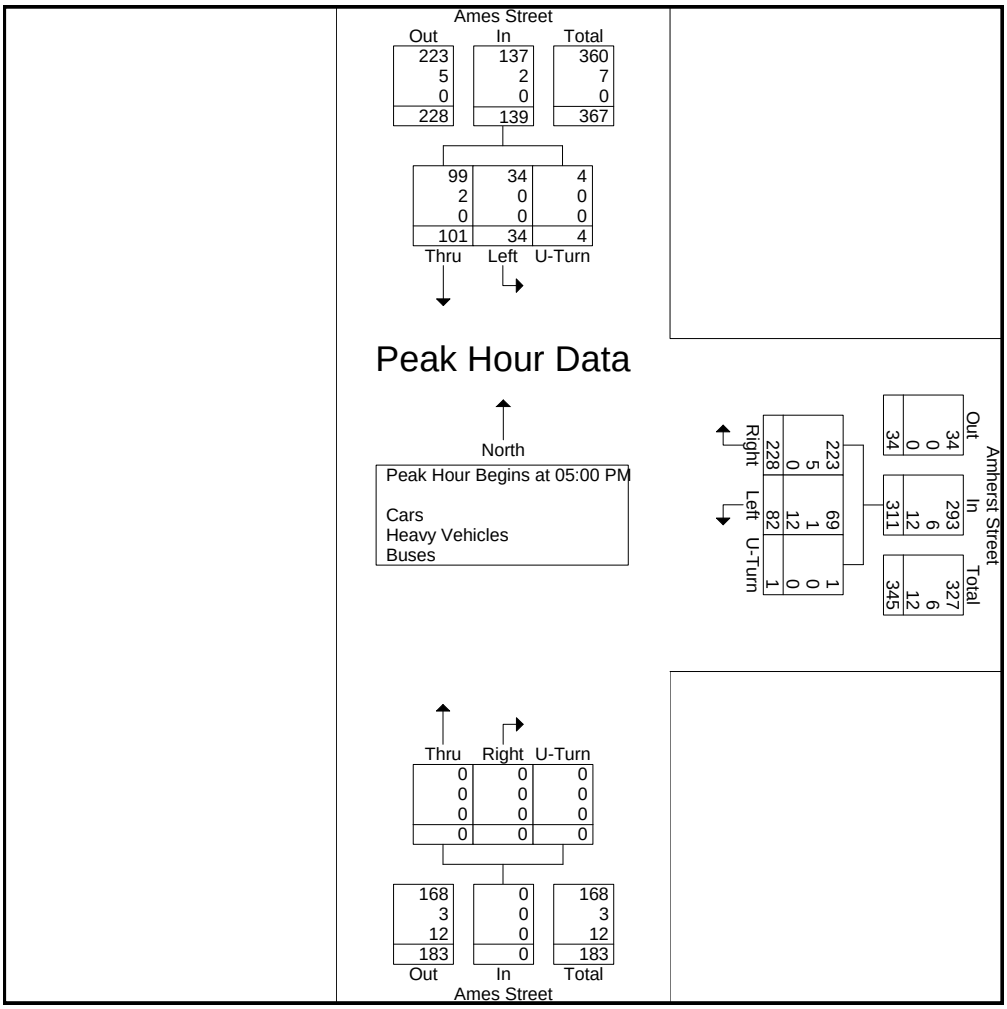
	Ames Street From North				Amherst Street From East				Ames Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	23	9	1	33	68	19	0	87	0	0	0	0	120
05:15 PM	22	9	0	31	65	24	0	89	0	0	0	0	120
05:30 PM	30	9	3	42	42	18	1	61	0	0	0	0	103
05:45 PM	26	7	0	33	53	21	0	74	0	0	0	0	107
Total Volume	101	34	4	139	228	82	1	311	0	0	0	0	450
% App. Total	72.7	24.5	2.9		73.3	26.4	0.3		0	0	0		
PHF	.842	.944	.333	.827	.838	.854	.250	.874	.000	.000	.000	.000	.938
Cars	99	34	4	137	223	69	1	293	0	0	0	0	430
% Cars	98.0	100	100	98.6	97.8	84.1	100	94.2	0	0	0	0	95.6
Heavy Vehicles	2	0	0	2	5	1	0	6	0	0	0	0	8
% Heavy Vehicles	2.0	0	0	1.4	2.2	1.2	0	1.9	0	0	0	0	1.8
Buses	0	0	0	0	0	12	0	12	0	0	0	0	12
% Buses	0	0	0	0	0	14.6	0	3.9	0	0	0	0	2.7



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W: Ames Street
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Groups Printed- Cars - Heavy Vehicles - Buses

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	10	7	0	18	45	0	2	0	3	85
07:45 AM	9	5	0	24	50	0	2	3	1	94
Total	19	12	0	42	95	0	4	3	4	179
08:00 AM	13	4	0	37	43	0	0	1	0	98
08:15 AM	14	1	0	23	43	0	1	1	1	84
08:30 AM	9	4	0	33	42	0	0	3	2	93
08:45 AM	18	5	0	38	37	0	1	7	0	106
Total	54	14	0	131	165	0	2	12	3	381
09:00 AM	20	4	0	27	40	0	3	2	1	97
09:15 AM	17	6	0	22	46	0	2	5	1	99
Grand Total	110	36	0	222	346	0	11	22	9	756
Apprch %	75.3	24.7	0	39.1	60.9	0	26.2	52.4	21.4	
Total %	14.6	4.8	0	29.4	45.8	0	1.5	2.9	1.2	
Cars	70	34	0	222	342	0	11	19	7	705
% Cars	63.6	94.4	0	100	98.8	0	100	86.4	77.8	93.3
Heavy Vehicles	6	1	0	0	4	0	0	3	2	16
% Heavy Vehicles	5.5	2.8	0	0	1.2	0	0	13.6	22.2	2.1
Buses	34	1	0	0	0	0	0	0	0	35
% Buses	30.9	2.8	0	0	0	0	0	0	0	4.6

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	9	4	0	13	33	42	0	75	0	3	2	5	93
08:45 AM	18	5	0	23	38	37	0	75	1	7	0	8	106
09:00 AM	20	4	0	24	27	40	0	67	3	2	1	6	97
09:15 AM	17	6	0	23	22	46	0	68	2	5	1	8	99
Total Volume	64	19	0	83	120	165	0	285	6	17	4	27	395
% App. Total	77.1	22.9	0		42.1	57.9	0		22.2	63	14.8		
PHF	.800	.792	.000	.865	.789	.897	.000	.950	.500	.607	.500	.844	.932
Cars	43	19	0	62	120	164	0	284	6	14	4	24	370
% Cars	67.2	100	0	74.7	100	99.4	0	99.6	100	82.4	100	88.9	93.7
Heavy Vehicles	4	0	0	4	0	1	0	1	0	3	0	3	8
% Heavy Vehicles	6.3	0	0	4.8	0	0.6	0	0.4	0	17.6	0	11.1	2.0
Buses	17	0	0	17	0	0	0	0	0	0	0	0	17
% Buses	26.6	0	0	20.5	0	0	0	0	0	0	0	0	4.3

N/S: Wadsworth Street
W: Ames Street
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Groups Printed- Cars

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	5	6	0	18	43	0	2	0	1	75
07:45 AM	5	4	0	24	49	0	2	3	1	88
Total	10	10	0	42	92	0	4	3	2	163
08:00 AM	8	4	0	37	43	0	0	1	0	93
08:15 AM	9	1	0	23	43	0	1	1	1	79
08:30 AM	5	4	0	33	42	0	0	3	2	89
08:45 AM	13	5	0	38	37	0	1	6	0	100
Total	35	14	0	131	165	0	2	11	3	361
09:00 AM	15	4	0	27	40	0	3	2	1	92
09:15 AM	10	6	0	22	45	0	2	3	1	89
Grand Total	70	34	0	222	342	0	11	19	7	705
Apprch %	67.3	32.7	0	39.4	60.6	0	29.7	51.4	18.9	
Total %	9.9	4.8	0	31.5	48.5	0	1.6	2.7	1	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	5	4	0	9	33	42	0	75	0	3	2	5	89
08:45 AM	13	5	0	18	38	37	0	75	1	6	0	7	100
09:00 AM	15	4	0	19	27	40	0	67	3	2	1	6	92
09:15 AM	10	6	0	16	22	45	0	67	2	3	1	6	89
Total Volume	43	19	0	62	120	164	0	284	6	14	4	24	370
% App. Total	69.4	30.6	0		42.3	57.7	0		25	58.3	16.7		
PHF	.717	.792	.000	.816	.789	.911	.000	.947	.500	.583	.500	.857	.925

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Groups Printed- Heavy Vehicles

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	1	1	0	0	2	0	0	0	2	6
07:45 AM	0	0	0	0	1	0	0	0	0	1
Total	1	1	0	0	3	0	0	0	2	7
08:00 AM	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	0	0	0	0	0	1	0	2
Total	2	0	0	0	0	0	0	1	0	3
09:00 AM	1	0	0	0	0	0	0	0	0	1
09:15 AM	2	0	0	0	1	0	0	2	0	5
Grand Total	6	1	0	0	4	0	0	3	2	16
Apprch %	85.7	14.3	0	0	100	0	0	60	40	
Total %	37.5	6.2	0	0	25	0	0	18.8	12.5	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	1	1	0	2	0	2	0	2	0	0	2	2	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	1	0	3	0	3	0	3	0	0	2	2	8
% App. Total	66.7	33.3	0		0	100	0		0	0	100		
PHF	.500	.250	.000	.375	.000	.375	.000	.375	.000	.000	.250	.250	.333

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Groups Printed- Buses

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
07:30 AM	4	0	0	0	0	0	0	0	0	4
07:45 AM	4	1	0	0	0	0	0	0	0	5
Total	8	1	0	0	0	0	0	0	0	9
08:00 AM	4	0	0	0	0	0	0	0	0	4
08:15 AM	5	0	0	0	0	0	0	0	0	5
08:30 AM	4	0	0	0	0	0	0	0	0	4
08:45 AM	4	0	0	0	0	0	0	0	0	4
Total	17	0	0	0	0	0	0	0	0	17
09:00 AM	4	0	0	0	0	0	0	0	0	4
09:15 AM	5	0	0	0	0	0	0	0	0	5
Grand Total	34	1	0	0	0	0	0	0	0	35
Apprch %	97.1	2.9	0	0	0	0	0	0	0	
Total %	97.1	2.9	0	0	0	0	0	0	0	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
07:45 AM	4	1	0	5	0	0	0	0	0	0	0	0	5
08:00 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
08:15 AM	5	0	0	5	0	0	0	0	0	0	0	0	5
Total Volume	17	1	0	18	0	0	0	0	0	0	0	0	18
% App. Total	94.4	5.6	0		0	0	0		0	0	0		
PHF	.850	.250	.000	.900	.000	.000	.000	.000	.000	.000	.000	.000	.900

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Groups Printed- Peds and Bicycles

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	3	0	3	1	0	8	0	1	1	1	18
07:45 AM	0	1	2	4	1	0	0	8	1	0	1	4	22
Total	0	1	5	4	4	1	0	16	1	1	2	5	40
08:00 AM	1	1	3	3	1	0	3	9	2	1	2	6	32
08:15 AM	0	1	4	4	2	1	2	14	0	1	2	11	42
08:30 AM	2	5	3	3	2	0	16	22	0	2	1	38	94
08:45 AM	4	4	12	9	5	0	17	11	2	2	8	49	123
Total	7	11	22	19	10	1	38	56	4	6	13	104	291
09:00 AM	0	4	2	10	1	0	16	7	4	2	3	11	60
09:15 AM	1	2	3	20	2	2	13	9	0	1	1	7	61
Grand Total	8	18	32	53	17	4	67	88	9	10	19	127	452
Apprch %	7.2	16.2	28.8	47.7	9.7	2.3	38.1	50	5.5	6.1	11.5	77	
Total %	1.8	4	7.1	11.7	3.8	0.9	14.8	19.5	2	2.2	4.2	28.1	

	Wadsworth Street From North					Wadsworth Street From South					Ames Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:30 AM																
08:30 AM	2	5	3	3	13	2	0	16	22	40	0	2	1	38	41	94
08:45 AM	4	4	12	9	29	5	0	17	11	33	2	2	8	49	61	123
09:00 AM	0	4	2	10	16	1	0	16	7	24	4	2	3	11	20	60
09:15 AM	1	2	3	20	26	2	2	13	9	26	0	1	1	7	9	61
Total Volume	7	15	20	42	84	10	2	62	49	123	6	7	13	105	131	338
% App. Total	8.3	17.9	23.8	50		8.1	1.6	50.4	39.8		4.6	5.3	9.9	80.2		
PHF	.438	.750	.417	.525	.724	.500	.250	.912	.557	.769	.375	.875	.406	.536	.537	.687

N/S: Wadsworth Street
W: Ames Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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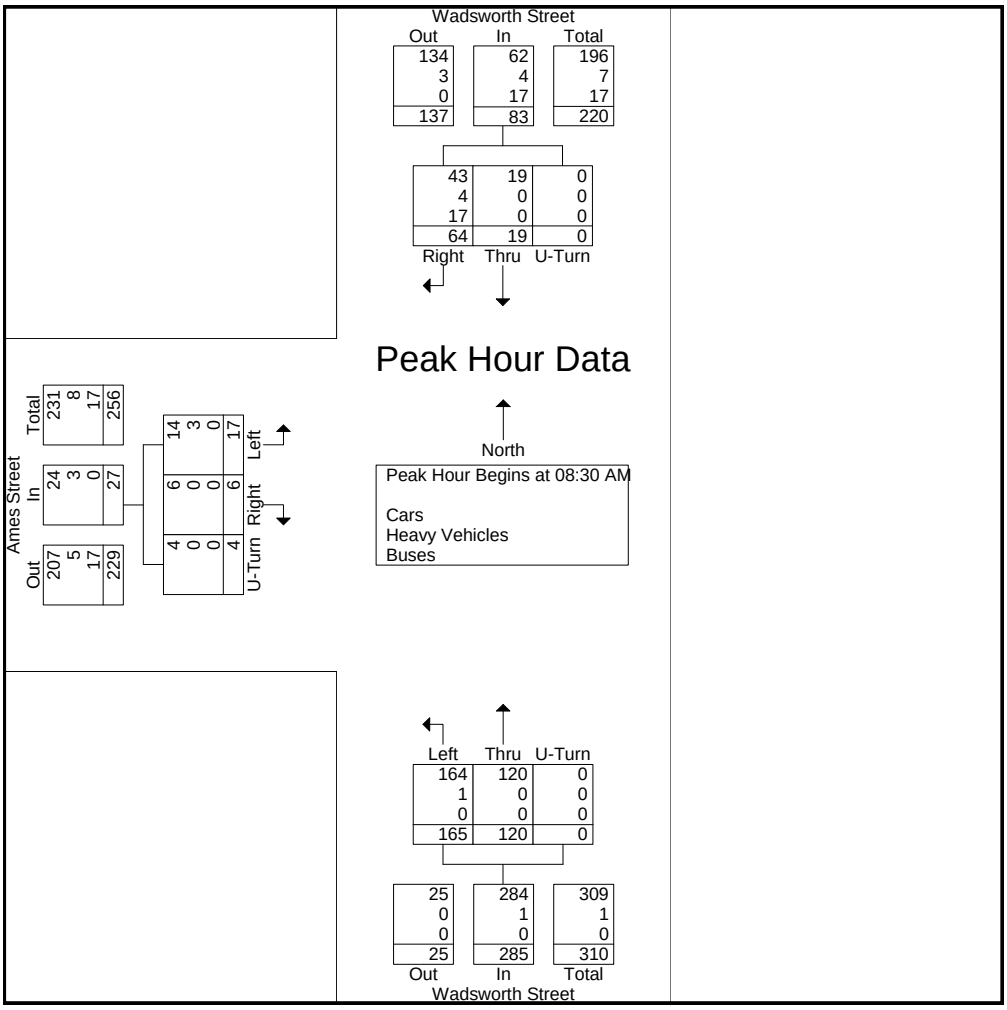
	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	9	4	0	13	33	42	0	75	0	3	2	5	93
08:45 AM	18	5	0	23	38	37	0	75	1	7	0	8	106
09:00 AM	20	4	0	24	27	40	0	67	3	2	1	6	97
09:15 AM	17	6	0	23	22	46	0	68	2	5	1	8	99
Total Volume	64	19	0	83	120	165	0	285	6	17	4	27	395
% App. Total	77.1	22.9	0		42.1	57.9	0		22.2	63	14.8		
PHF	.800	.792	.000	.865	.789	.897	.000	.950	.500	.607	.500	.844	.932
Cars	43	19	0	62	120	164	0	284	6	14	4	24	370
% Cars	67.2	100	0	74.7	100	99.4	0	99.6	100	82.4	100	88.9	93.7
Heavy Vehicles	4	0	0	4	0	1	0	1	0	3	0	3	8
% Heavy Vehicles	6.3	0	0	4.8	0	0.6	0	0.4	0	17.6	0	11.1	2.0
Buses	17	0	0	17	0	0	0	0	0	0	0	0	17
% Buses	26.6	0	0	20.5	0	0	0	0	0	0	0	0	4.3



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W: Ames Street
City, State: Cambridge, MA
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Groups Printed- Cars - Heavy Vehicles - Buses

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	33	19	0	6	22	0	8	6	0	94
04:45 PM	31	15	0	16	26	0	3	6	0	97
Total	64	34	0	22	48	0	11	12	0	191
05:00 PM	24	11	1	17	28	0	10	4	0	95
05:15 PM	26	14	0	12	23	0	4	7	0	86
05:30 PM	26	9	0	11	42	0	1	5	0	94
05:45 PM	26	8	1	9	27	0	2	4	0	77
Total	102	42	2	49	120	0	17	20	0	352
06:00 PM	19	10	0	15	27	0	1	0	0	72
06:15 PM	19	6	0	9	21	0	1	3	1	60
Grand Total	204	92	2	95	216	0	30	35	1	675
Apprch %	68.5	30.9	0.7	30.5	69.5	0	45.5	53	1.5	
Total %	30.2	13.6	0.3	14.1	32	0	4.4	5.2	0.1	
Cars	171	92	2	92	214	0	29	35	1	636
% Cars	83.8	100	100	96.8	99.1	0	96.7	100	100	94.2
Heavy Vehicles	5	0	0	3	2	0	1	0	0	11
% Heavy Vehicles	2.5	0	0	3.2	0.9	0	3.3	0	0	1.6
Buses	28	0	0	0	0	0	0	0	0	28
% Buses	13.7	0	0	0	0	0	0	0	0	4.1

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	33	19	0	52	6	22	0	28	8	6	0	14	94
04:45 PM	31	15	0	46	16	26	0	42	3	6	0	9	97
05:00 PM	24	11	1	36	17	28	0	45	10	4	0	14	95
05:15 PM	26	14	0	40	12	23	0	35	4	7	0	11	86
Total Volume	114	59	1	174	51	99	0	150	25	23	0	48	372
% App. Total	65.5	33.9	0.6		34	66	0		52.1	47.9	0		
PHF	.864	.776	.250	.837	.750	.884	.000	.833	.625	.821	.000	.857	.959
Cars	98	59	1	158	48	99	0	147	24	23	0	47	352
% Cars	86.0	100	100	90.8	94.1	100	0	98.0	96.0	100	0	97.9	94.6
Heavy Vehicles	1	0	0	1	3	0	0	3	1	0	0	1	5
% Heavy Vehicles	0.9	0	0	0.6	5.9	0	0	2.0	4.0	0	0	2.1	1.3
Buses	15	0	0	15	0	0	0	0	0	0	0	0	15
% Buses	13.2	0	0	8.6	0	0	0	0	0	0	0	0	4.0

N/S: Wadsworth Street
W: Ames Street
City, State: Cambridge, MA
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Groups Printed- Cars

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	29	19	0	6	22	0	8	6	0	90
04:45 PM	27	15	0	16	26	0	3	6	0	93
Total	56	34	0	22	48	0	11	12	0	183
05:00 PM	19	11	1	15	28	0	9	4	0	87
05:15 PM	23	14	0	11	23	0	4	7	0	82
05:30 PM	22	9	0	11	41	0	1	5	0	89
05:45 PM	22	8	1	9	26	0	2	4	0	72
Total	86	42	2	46	118	0	16	20	0	330
06:00 PM	16	10	0	15	27	0	1	0	0	69
06:15 PM	13	6	0	9	21	0	1	3	1	54
Grand Total	171	92	2	92	214	0	29	35	1	636
Apprch %	64.5	34.7	0.8	30.1	69.9	0	44.6	53.8	1.5	
Total %	26.9	14.5	0.3	14.5	33.6	0	4.6	5.5	0.2	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	29	19	0	48	6	22	0	28	8	6	0	14	90
04:45 PM	27	15	0	42	16	26	0	42	3	6	0	9	93
05:00 PM	19	11	1	31	15	28	0	43	9	4	0	13	87
05:15 PM	23	14	0	37	11	23	0	34	4	7	0	11	82
Total Volume	98	59	1	158	48	99	0	147	24	23	0	47	352
% App. Total	62	37.3	0.6		32.7	67.3	0		51.1	48.9	0		
PHF	.845	.776	.250	.823	.750	.884	.000	.855	.667	.821	.000	.839	.946

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Groups Printed- Heavy Vehicles

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	0	0	2	0	0	1	0	0	4
05:15 PM	0	0	0	1	0	0	0	0	0	1
05:30 PM	2	0	0	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	1	0	0	0	0	1
Total	3	0	0	3	2	0	1	0	0	9
06:00 PM	0	0	0	0	0	0	0	0	0	0
06:15 PM	2	0	0	0	0	0	0	0	0	2
Grand Total	5	0	0	3	2	0	1	0	0	11
Apprch %	100	0	0	60	40	0	100	0	0	
Total %	45.5	0	0	27.3	18.2	0	9.1	0	0	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	1	0	0	1	2	0	0	2	1	0	0	1	4
05:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
05:30 PM	2	0	0	2	0	1	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	3	0	0	3	3	2	0	5	1	0	0	1	9
% App. Total	100	0	0		60	40	0		100	0	0		
PHF	.375	.000	.000	.375	.375	.500	.000	.625	.250	.000	.000	.250	.563

N/S: Wadsworth Street
W: Ames Street
City, State: Cambridge, MA
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Groups Printed- Buses

	Wadsworth Street From North			Wadsworth Street From South			Ames Street From West			
Start Time	Right	Thru	U-Turn	Thru	Left	U-Turn	Right	Left	U-Turn	Int. Total
04:30 PM	4	0	0	0	0	0	0	0	0	4
04:45 PM	4	0	0	0	0	0	0	0	0	4
Total	8	0	0	0	0	0	0	0	0	8
05:00 PM	4	0	0	0	0	0	0	0	0	4
05:15 PM	3	0	0	0	0	0	0	0	0	3
05:30 PM	2	0	0	0	0	0	0	0	0	2
05:45 PM	4	0	0	0	0	0	0	0	0	4
Total	13	0	0	0	0	0	0	0	0	13
06:00 PM	3	0	0	0	0	0	0	0	0	3
06:15 PM	4	0	0	0	0	0	0	0	0	4
Grand Total	28	0	0	0	0	0	0	0	0	28
Apprch %	100	0	0	0	0	0	0	0	0	
Total %	100	0	0	0	0	0	0	0	0	

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
04:45 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
05:00 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
05:15 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
Total Volume	15	0	0	15	0	0	0	0	0	0	0	0	15
% App. Total	100	0	0		0	0	0		0	0	0		
PHF	.938	.000	.000	.938	.000	.000	.000	.000	.000	.000	.000	.000	.938

N/S: Wadsworth Street
W: Ames Street
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Peds and Bicycles

	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	Peds EB	Peds WB	Thru	Left	Peds WB	Peds EB	Right	Left	Peds NB	Peds SB	Int. Total
04:30 PM	1	1	12	9	1	2	11	10	0	0	2	6	55
04:45 PM	1	2	14	12	2	1	12	8	1	2	4	8	67
Total	2	3	26	21	3	3	23	18	1	2	6	14	122
05:00 PM	1	1	13	11	2	2	10	8	0	2	7	1	58
05:15 PM	1	3	10	7	2	3	13	12	1	0	5	9	66
05:30 PM	2	1	6	12	1	3	6	1	1	3	3	5	44
05:45 PM	1	1	6	5	2	1	9	13	0	3	1	7	49
Total	5	6	35	35	7	9	38	34	2	8	16	22	217
06:00 PM	3	2	3	2	2	1	2	11	0	1	7	11	45
06:15 PM	5	2	5	4	1	0	5	0	0	0	3	2	27
Grand Total	15	13	69	62	13	13	68	63	3	11	32	49	411
Apprch %	9.4	8.2	43.4	39	8.3	8.3	43.3	40.1	3.2	11.6	33.7	51.6	
Total %	3.6	3.2	16.8	15.1	3.2	3.2	16.5	15.3	0.7	2.7	7.8	11.9	

	Wadsworth Street From North					Wadsworth Street From South					Ames Street From West					
Start Time	Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Peds WB	Peds EB	App. Total	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	1	1	12	9	23	1	2	11	10	24	0	0	2	6	8	55
04:45 PM	1	2	14	12	29	2	1	12	8	23	1	2	4	8	15	67
05:00 PM	1	1	13	11	26	2	2	10	8	22	0	2	7	1	10	58
05:15 PM	1	3	10	7	21	2	3	13	12	30	1	0	5	9	15	66
Total Volume	4	7	49	39	99	7	8	46	38	99	2	4	18	24	48	246
% App. Total	4	7.1	49.5	39.4		7.1	8.1	46.5	38.4		4.2	8.3	37.5	50		
PHF	1.00	.583	.875	.813	.853	.875	.667	.885	.792	.825	.500	.500	.643	.667	.800	.918

N/S: Wadsworth Street
W: Ames Street
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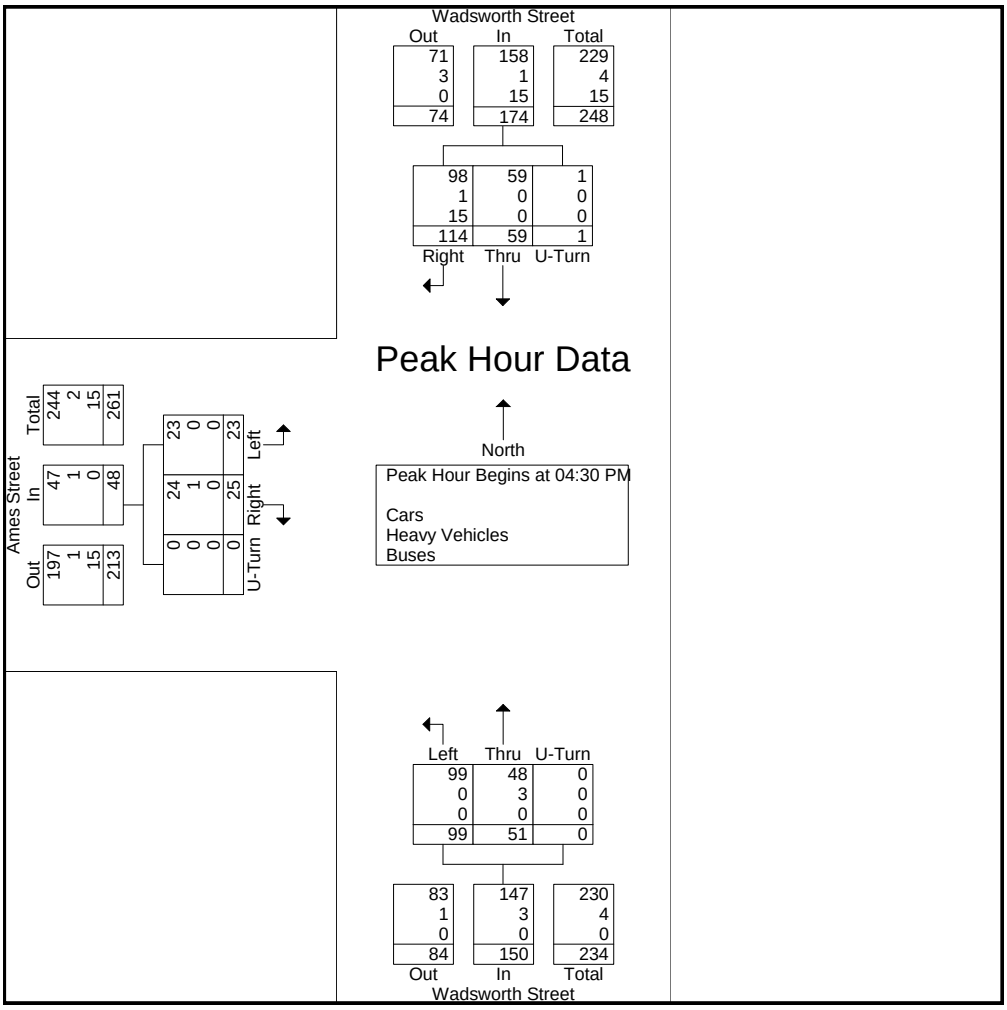
	Wadsworth Street From North				Wadsworth Street From South				Ames Street From West				
Start Time	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	33	19	0	52	6	22	0	28	8	6	0	14	94
04:45 PM	31	15	0	46	16	26	0	42	3	6	0	9	97
05:00 PM	24	11	1	36	17	28	0	45	10	4	0	14	95
05:15 PM	26	14	0	40	12	23	0	35	4	7	0	11	86
Total Volume	114	59	1	174	51	99	0	150	25	23	0	48	372
% App. Total	65.5	33.9	0.6		34	66	0		52.1	47.9	0		
PHF	.864	.776	.250	.837	.750	.884	.000	.833	.625	.821	.000	.857	.959
Cars	98	59	1	158	48	99	0	147	24	23	0	47	352
% Cars	86.0	100	100	90.8	94.1	100	0	98.0	96.0	100	0	97.9	94.6
Heavy Vehicles	1	0	0	1	3	0	0	3	1	0	0	1	5
% Heavy Vehicles	0.9	0	0	0.6	5.9	0	0	2.0	4.0	0	0	2.1	1.3
Buses	15	0	0	15	0	0	0	0	0	0	0	0	15
% Buses	13.2	0	0	8.6	0	0	0	0	0	0	0	0	4.0



N: Ames Street
E/W: Memorial Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	10	4	0	0	277	4	214	0	0	509
07:45 AM	10	4	0	0	283	2	281	0	5	585
Total	20	8	0	0	560	6	495	0	5	1094
08:00 AM	23	2	0	0	311	3	311	0	6	656
08:15 AM	18	2	0	0	296	6	314	0	4	640
08:30 AM	14	5	0	0	236	2	290	0	6	553
08:45 AM	19	5	0	0	218	3	276	0	7	528
Total	74	14	0	0	1061	14	1191	0	23	2377
09:00 AM	21	5	0	0	202	0	265	0	2	495
09:15 AM	27	4	0	0	227	3	238	0	7	506
Grand Total	142	31	0	0	2050	23	2189	0	37	4472
Apprch %	82.1	17.9	0	0	98.9	1.1	98.3	0	1.7	
Total %	3.2	0.7	0	0	45.8	0.5	48.9	0	0.8	
Cars	127	30	0	0	2042	23	2184	0	36	4442
% Cars	89.4	96.8	0	0	99.6	100	99.8	0	97.3	99.3
Heavy Vehicles	4	1	0	0	7	0	4	0	1	17
% Heavy Vehicles	2.8	3.2	0	0	0.3	0	0.2	0	2.7	0.4
Buses	11	0	0	0	1	0	1	0	0	13
% Buses	7.7	0	0	0	0	0	0	0	0	0.3

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	10	4	0	14	0	283	2	285	281	0	5	286	585
08:00 AM	23	2	0	25	0	311	3	314	311	0	6	317	656
08:15 AM	18	2	0	20	0	296	6	302	314	0	4	318	640
08:30 AM	14	5	0	19	0	236	2	238	290	0	6	296	553
Total Volume	65	13	0	78	0	1126	13	1139	1196	0	21	1217	2434
% App. Total	83.3	16.7	0		0	98.9	1.1		98.3	0	1.7		
PHF	.707	.650	.000	.780	.000	.905	.542	.907	.952	.000	.875	.957	.928
Cars	53	12	0	65	0	1123	13	1136	1195	0	20	1215	2416
% Cars	81.5	92.3	0	83.3	0	99.7	100	99.7	99.9	0	95.2	99.8	99.3
Heavy Vehicles	3	1	0	4	0	2	0	2	1	0	1	2	8
% Heavy Vehicles	4.6	7.7	0	5.1	0	0.2	0	0.2	0.1	0	4.8	0.2	0.3
Buses	9	0	0	9	0	1	0	1	0	0	0	0	10
% Buses	13.8	0	0	11.5	0	0.1	0	0.1	0	0	0	0	0.4

N: Ames Street
E/W: Memorial Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Groups Printed- Cars

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	9	4	0	0	277	4	214	0	0	508
07:45 AM	8	3	0	0	282	2	281	0	5	581
Total	17	7	0	0	559	6	495	0	5	1089
08:00 AM	20	2	0	0	311	3	311	0	5	652
08:15 AM	14	2	0	0	294	6	314	0	4	634
08:30 AM	11	5	0	0	236	2	289	0	6	549
08:45 AM	18	5	0	0	218	3	274	0	7	525
Total	63	14	0	0	1059	14	1188	0	22	2360
09:00 AM	20	5	0	0	199	0	265	0	2	491
09:15 AM	27	4	0	0	225	3	236	0	7	502
Grand Total	127	30	0	0	2042	23	2184	0	36	4442
Apprch %	80.9	19.1	0	0	98.9	1.1	98.4	0	1.6	
Total %	2.9	0.7	0	0	46	0.5	49.2	0	0.8	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	8	3	0	11	0	282	2	284	281	0	5	286	581
08:00 AM	20	2	0	22	0	311	3	314	311	0	5	316	652
08:15 AM	14	2	0	16	0	294	6	300	314	0	4	318	634
08:30 AM	11	5	0	16	0	236	2	238	289	0	6	295	549
Total Volume	53	12	0	65	0	1123	13	1136	1195	0	20	1215	2416
% App. Total	81.5	18.5	0		0	98.9	1.1		98.4	0	1.6		
PHF	.663	.600	.000	.739	.000	.903	.542	.904	.951	.000	.833	.955	.926

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Groups Printed- Heavy Vehicles

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	0	0	1
08:00 AM	1	0	0	0	0	0	0	0	1	2
08:15 AM	1	0	0	0	2	0	0	0	0	3
08:30 AM	1	0	0	0	0	0	1	0	0	2
08:45 AM	1	0	0	0	0	0	2	0	0	3
Total	4	0	0	0	2	0	3	0	1	10
09:00 AM	0	0	0	0	3	0	0	0	0	3
09:15 AM	0	0	0	0	2	0	1	0	0	3
Grand Total	4	1	0	0	7	0	4	0	1	17
Apprch %	80	20	0	0	100	0	80	0	20	
Total %	23.5	5.9	0	0	41.2	0	23.5	0	5.9	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:15 AM													
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	3
08:30 AM	1	0	0	1	0	0	0	0	1	0	0	1	2
08:45 AM	1	0	0	1	0	0	0	0	2	0	0	2	3
09:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	3
Total Volume	3	0	0	3	0	5	0	5	3	0	0	3	11
% App. Total	100	0	0		0	100	0		100	0	0		
PHF	.750	.000	.000	.750	.000	.417	.000	.417	.375	.000	.000	.375	.917

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Groups Printed- Buses

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	1	0	0	0	0	0	0	0	0	1
07:45 AM	2	0	0	0	1	0	0	0	0	3
Total	3	0	0	0	1	0	0	0	0	4
08:00 AM	2	0	0	0	0	0	0	0	0	2
08:15 AM	3	0	0	0	0	0	0	0	0	3
08:30 AM	2	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	7	0	0	0	0	0	0	0	0	7
09:00 AM	1	0	0	0	0	0	0	0	0	1
09:15 AM	0	0	0	0	0	0	1	0	0	1
Grand Total	11	0	0	0	1	0	1	0	0	13
Apprch %	100	0	0	0	100	0	100	0	0	
Total %	84.6	0	0	0	7.7	0	7.7	0	0	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	2	0	0	2	0	1	0	1	0	0	0	0	3
08:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
08:15 AM	3	0	0	3	0	0	0	0	0	0	0	0	3
08:30 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total Volume	9	0	0	9	0	1	0	1	0	0	0	0	10
% App. Total	100	0	0		0	100	0		0	0	0		
PHF	.750	.000	.000	.750	.000	.250	.000	.250	.000	.000	.000	.000	.833

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Groups Printed- Peds and Bicycles

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	5	3	0	0	5	1	0	0	0	1	15
07:45 AM	0	0	8	3	0	0	0	4	1	0	0	0	16
Total	0	0	13	6	0	0	5	5	1	0	0	1	31
08:00 AM	0	0	10	8	0	0	2	0	2	0	0	0	22
08:15 AM	0	0	8	4	0	0	1	1	2	0	1	2	19
08:30 AM	0	0	5	1	0	0	0	0	0	0	1	1	8
08:45 AM	0	0	12	2	0	0	0	5	2	0	1	2	24
Total	0	0	35	15	0	0	3	6	6	0	3	5	73
09:00 AM	0	0	12	3	0	0	0	1	2	0	1	1	20
09:15 AM	0	0	6	5	0	1	0	2	1	0	0	1	16
Grand Total	0	0	66	29	0	1	8	14	10	0	4	8	140
Apprch %	0	0	69.5	30.5	0	4.3	34.8	60.9	45.5	0	18.2	36.4	
Total %	0	0	47.1	20.7	0	0.7	5.7	10	7.1	0	2.9	5.7	

	Ames Street From North					Memorial Drive From East					Memorial Drive From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:00 AM																
08:00 AM	0	0	10	8	18	0	0	2	0	2	2	0	0	0	2	22
08:15 AM	0	0	8	4	12	0	0	1	1	2	2	0	1	2	5	19
08:30 AM	0	0	5	1	6	0	0	0	0	0	0	0	1	1	2	8
08:45 AM	0	0	12	2	14	0	0	0	5	5	2	0	1	2	5	24
Total Volume	0	0	35	15	50	0	0	3	6	9	6	0	3	5	14	73
% App. Total	0	0	70	30		0	0	33.3	66.7		42.9	0	21.4	35.7		
PHF	.000	.000	.729	.469	.694	.000	.000	.375	.300	.450	.750	.000	.750	.625	.700	.760

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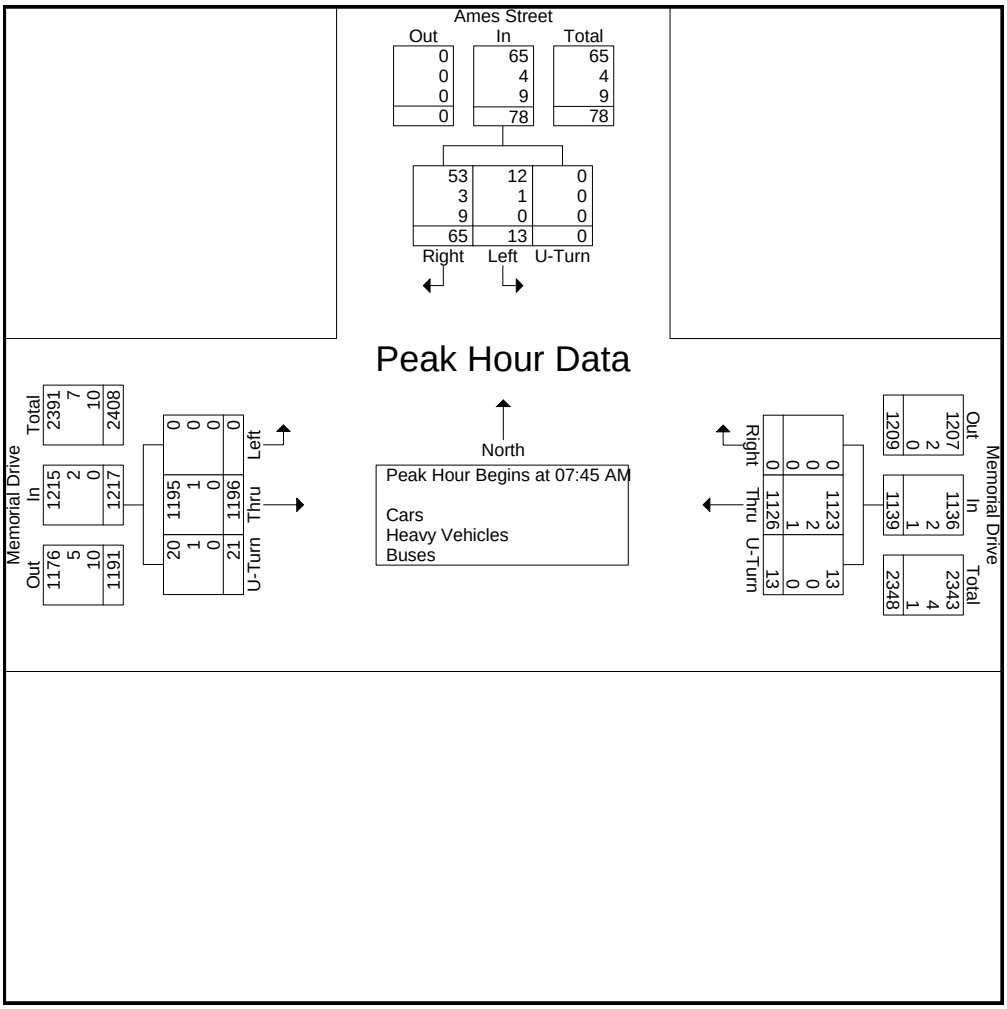
	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	10	4	0	14	0	283	2	285	281	0	5	286	585
08:00 AM	23	2	0	25	0	311	3	314	311	0	6	317	656
08:15 AM	18	2	0	20	0	296	6	302	314	0	4	318	640
08:30 AM	14	5	0	19	0	236	2	238	290	0	6	296	553
Total Volume	65	13	0	78	0	1126	13	1139	1196	0	21	1217	2434
% App. Total	83.3	16.7	0		0	98.9	1.1		98.3	0	1.7		
PHF	.707	.650	.000	.780	.000	.905	.542	.907	.952	.000	.875	.957	.928
Cars	53	12	0	65	0	1123	13	1136	1195	0	20	1215	2416
% Cars	81.5	92.3	0	83.3	0	99.7	100	99.7	99.9	0	95.2	99.8	99.3
Heavy Vehicles	3	1	0	4	0	2	0	2	1	0	1	2	8
% Heavy Vehicles	4.6	7.7	0	5.1	0	0.2	0	0.2	0.1	0	4.8	0.2	0.3
Buses	9	0	0	9	0	1	0	1	0	0	0	0	10
% Buses	13.8	0	0	11.5	0	0.1	0	0.1	0	0	0	0	0.4



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Groups Printed- Cars - Heavy Vehicles - Buses

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	25	4	0	0	259	15	409	0	5	717
04:45 PM	26	5	0	0	267	13	376	0	6	693
Total	51	9	0	0	526	28	785	0	11	1410
05:00 PM	29	12	0	0	280	20	405	0	5	751
05:15 PM	31	9	0	0	356	12	393	0	12	813
05:30 PM	36	7	0	0	344	19	377	0	7	790
05:45 PM	39	4	0	0	264	14	349	0	15	685
Total	135	32	0	0	1244	65	1524	0	39	3039
06:00 PM	35	7	0	0	264	9	323	0	12	650
06:15 PM	33	7	0	0	218	12	301	0	13	584
Grand Total	254	55	0	0	2252	114	2933	0	75	5683
Apprch %	82.2	17.8	0	0	95.2	4.8	97.5	0	2.5	
Total %	4.5	1	0	0	39.6	2	51.6	0	1.3	
Cars	232	53	0	0	2246	114	2925	0	75	5645
% Cars	91.3	96.4	0	0	99.7	100	99.7	0	100	99.3
Heavy Vehicles	14	2	0	0	4	0	4	0	0	24
% Heavy Vehicles	5.5	3.6	0	0	0.2	0	0.1	0	0	0.4
Buses	8	0	0	0	2	0	4	0	0	14
% Buses	3.1	0	0	0	0.1	0	0.1	0	0	0.2

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	26	5	0	31	0	267	13	280	376	0	6	382	693
05:00 PM	29	12	0	41	0	280	20	300	405	0	5	410	751
05:15 PM	31	9	0	40	0	356	12	368	393	0	12	405	813
05:30 PM	36	7	0	43	0	344	19	363	377	0	7	384	790
Total Volume	122	33	0	155	0	1247	64	1311	1551	0	30	1581	3047
% App. Total	78.7	21.3	0		0	95.1	4.9		98.1	0	1.9		
PHF	.847	.688	.000	.901	.000	.876	.800	.891	.957	.000	.625	.964	.937
Cars	113	32	0	145	0	1242	64	1306	1547	0	30	1577	3028
% Cars	92.6	97.0	0	93.5	0	99.6	100	99.6	99.7	0	100	99.7	99.4
Heavy Vehicles	5	1	0	6	0	3	0	3	2	0	0	2	11
% Heavy Vehicles	4.1	3.0	0	3.9	0	0.2	0	0.2	0.1	0	0	0.1	0.4
Buses	4	0	0	4	0	2	0	2	2	0	0	2	8
% Buses	3.3	0	0	2.6	0	0.2	0	0.2	0.1	0	0	0.1	0.3

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Groups Printed- Cars

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	21	4	0	0	258	15	408	0	5	711
04:45 PM	24	5	0	0	264	13	376	0	6	688
Total	45	9	0	0	522	28	784	0	11	1399
05:00 PM	28	11	0	0	279	20	405	0	5	748
05:15 PM	28	9	0	0	355	12	391	0	12	807
05:30 PM	33	7	0	0	344	19	375	0	7	785
05:45 PM	36	4	0	0	264	14	349	0	15	682
Total	125	31	0	0	1242	65	1520	0	39	3022
06:00 PM	32	6	0	0	264	9	322	0	12	645
06:15 PM	30	7	0	0	218	12	299	0	13	579
Grand Total	232	53	0	0	2246	114	2925	0	75	5645
Apprch %	81.4	18.6	0	0	95.2	4.8	97.5	0	2.5	
Total %	4.1	0.9	0	0	39.8	2	51.8	0	1.3	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	24	5	0	29	0	264	13	277	376	0	6	382	688
05:00 PM	28	11	0	39	0	279	20	299	405	0	5	410	748
05:15 PM	28	9	0	37	0	355	12	367	391	0	12	403	807
05:30 PM	33	7	0	40	0	344	19	363	375	0	7	382	785
Total Volume	113	32	0	145	0	1242	64	1306	1547	0	30	1577	3028
% App. Total	77.9	22.1	0		0	95.1	4.9		98.1	0	1.9		
PHF	.856	.727	.000	.906	.000	.875	.800	.890	.955	.000	.625	.962	.938

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Groups Printed- Heavy Vehicles

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	2	0	0	0	0	2
05:00 PM	1	1	0	0	1	0	0	0	0	3
05:15 PM	1	0	0	0	1	0	1	0	0	3
05:30 PM	3	0	0	0	0	0	1	0	0	4
05:45 PM	3	0	0	0	0	0	0	0	0	3
Total	8	1	0	0	2	0	2	0	0	13
06:00 PM	3	1	0	0	0	0	1	0	0	5
06:15 PM	3	0	0	0	0	0	1	0	0	4
Grand Total	14	2	0	0	4	0	4	0	0	24
Apprch %	87.5	12.5	0	0	100	0	100	0	0	
Total %	58.3	8.3	0	0	16.7	0	16.7	0	0	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	3	0	0	3	0	0	0	0	1	0	0	1	4
05:45 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
06:00 PM	3	1	0	4	0	0	0	0	1	0	0	1	5
06:15 PM	3	0	0	3	0	0	0	0	1	0	0	1	4
Total Volume	12	1	0	13	0	0	0	0	3	0	0	3	16
% App. Total	92.3	7.7	0		0	0	0		100	0	0		
PHF	1.00	.250	.000	.813	.000	.000	.000	.000	.750	.000	.000	.750	.800

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Groups Printed- Buses

	Ames Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	4	0	0	0	0	0	1	0	0	5
04:45 PM	2	0	0	0	2	0	0	0	0	4
Total	6	0	0	0	2	0	1	0	0	9
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	0	0	0	0	0	1	0	0	3
05:30 PM	0	0	0	0	0	0	1	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	2	0	0	4
06:00 PM	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	1	0	0	1
Grand Total	8	0	0	0	2	0	4	0	0	14
Apprch %	100	0	0	0	100	0	100	0	0	
Total %	57.1	0	0	0	14.3	0	28.6	0	0	

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	4	0	0	4	0	0	0	0	1	0	0	1	5
04:45 PM	2	0	0	2	0	2	0	2	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	0	0	2	0	0	0	0	1	0	0	1	3
Total Volume	8	0	0	8	0	2	0	2	2	0	0	2	12
% App. Total	100	0	0		0	100	0		100	0	0		
PHF	.500	.000	.000	.500	.000	.250	.000	.250	.500	.000	.000	.500	.600

N: Ames Street
E/W: Memorial Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Start Date : 5/16/2013
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Groups Printed- Peds and Bicycles

	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	4	0	0	0	16	5	1	0	2	16	44
04:45 PM	0	0	0	0	0	0	3	2	0	0	7	10	22
Total	0	0	4	0	0	0	19	7	1	0	9	26	66
05:00 PM	0	0	7	2	0	0	11	3	1	0	1	12	37
05:15 PM	0	0	6	3	0	0	4	10	0	0	1	14	38
05:30 PM	1	1	11	3	0	1	6	3	0	0	0	4	30
05:45 PM	0	0	9	11	0	0	3	0	0	0	4	28	55
Total	1	1	33	19	0	1	24	16	1	0	6	58	160
06:00 PM	0	0	5	7	0	1	13	0	0	0	6	14	46
06:15 PM	1	0	10	9	0	1	0	1	1	0	4	8	35
Grand Total	2	1	52	35	0	3	56	24	3	0	25	106	307
Apprch %	2.2	1.1	57.8	38.9	0	3.6	67.5	28.9	2.2	0	18.7	79.1	
Total %	0.7	0.3	16.9	11.4	0	1	18.2	7.8	1	0	8.1	34.5	

	Ames Street From North					Memorial Drive From East					Memorial Drive From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:15 PM																
05:15 PM	0	0	6	3	9	0	0	4	10	14	0	0	1	14	15	38
05:30 PM	1	1	11	3	16	0	1	6	3	10	0	0	0	4	4	30
05:45 PM	0	0	9	11	20	0	0	3	0	3	0	0	4	28	32	55
06:00 PM	0	0	5	7	12	0	1	13	0	14	0	0	6	14	20	46
Total Volume	1	1	31	24	57	0	2	26	13	41	0	0	11	60	71	169
% App. Total	1.8	1.8	54.4	42.1		0	4.9	63.4	31.7		0	0	15.5	84.5		
PHF	.250	.250	.705	.545	.713	.000	.500	.500	.325	.732	.000	.000	.458	.536	.555	.768

N: Ames Street
E/W: Memorial Drive
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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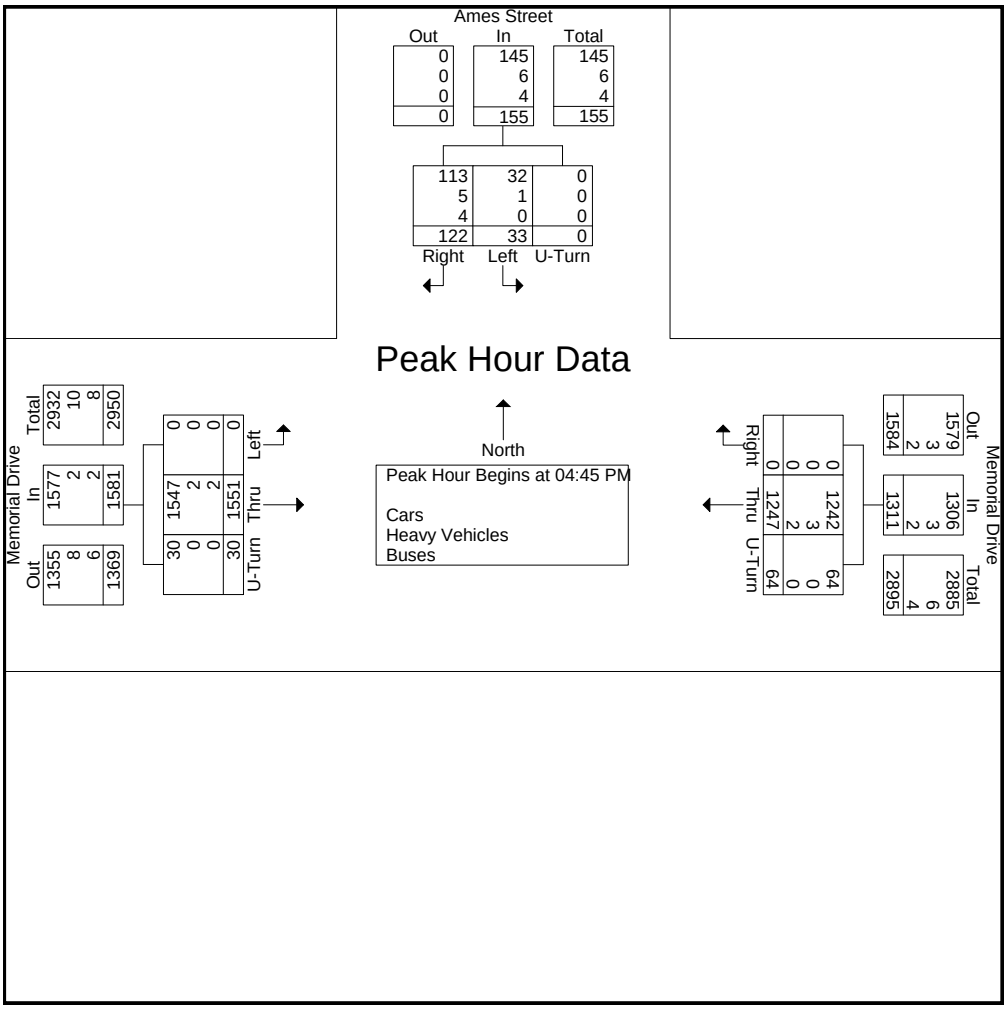
	Ames Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	26	5	0	31	0	267	13	280	376	0	6	382	693
05:00 PM	29	12	0	41	0	280	20	300	405	0	5	410	751
05:15 PM	31	9	0	40	0	356	12	368	393	0	12	405	813
05:30 PM	36	7	0	43	0	344	19	363	377	0	7	384	790
Total Volume	122	33	0	155	0	1247	64	1311	1551	0	30	1581	3047
% App. Total	78.7	21.3	0		0	95.1	4.9		98.1	0	1.9		
PHF	.847	.688	.000	.901	.000	.876	.800	.891	.957	.000	.625	.964	.937
Cars	113	32	0	145	0	1242	64	1306	1547	0	30	1577	3028
% Cars	92.6	97.0	0	93.5	0	99.6	100	99.6	99.7	0	100	99.7	99.4
Heavy Vehicles	5	1	0	6	0	3	0	3	2	0	0	2	11
% Heavy Vehicles	4.1	3.0	0	3.9	0	0.2	0	0.2	0.1	0	0	0.1	0.4
Buses	4	0	0	4	0	2	0	2	2	0	0	2	8
% Buses	3.3	0	0	2.6	0	0.2	0	0.2	0.1	0	0	0.1	0.3



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Groups Printed- Cars - Heavy Vehicles - Buses

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	10	0	0	19	256	0	175	37	0	497
07:45 AM	6	0	0	20	273	0	235	45	2	581
Total	16	0	0	39	529	0	410	82	2	1078
08:00 AM	6	0	0	23	273	0	261	61	6	630
08:15 AM	6	0	0	24	288	0	281	34	2	635
08:30 AM	5	0	0	24	260	0	252	53	0	594
08:45 AM	9	0	0	21	229	0	230	55	3	547
Total	26	0	0	92	1050	0	1024	203	11	2406
09:00 AM	8	0	0	28	190	0	209	49	6	490
09:15 AM	11	0	0	26	237	0	206	53	3	536
Grand Total	61	0	0	185	2006	0	1849	387	22	4510
Apprch %	100	0	0	8.4	91.6	0	81.9	17.1	1	
Total %	1.4	0	0	4.1	44.5	0	41	8.6	0.5	
Cars	59	0	0	183	2004	0	1843	387	22	4498
% Cars	96.7	0	0	98.9	99.9	0	99.7	100	100	99.7
Heavy Vehicles	1	0	0	1	2	0	5	0	0	9
% Heavy Vehicles	1.6	0	0	0.5	0.1	0	0.3	0	0	0.2
Buses	1	0	0	1	0	0	1	0	0	3
% Buses	1.6	0	0	0.5	0	0	0.1	0	0	0.1

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	6	0	0	6	20	273	0	293	235	45	2	282	581
08:00 AM	6	0	0	6	23	273	0	296	261	61	6	328	630
08:15 AM	6	0	0	6	24	288	0	312	281	34	2	317	635
08:30 AM	5	0	0	5	24	260	0	284	252	53	0	305	594
Total Volume	23	0	0	23	91	1094	0	1185	1029	193	10	1232	2440
% App. Total	100	0	0		7.7	92.3	0		83.5	15.7	0.8		
PHF	.958	.000	.000	.958	.948	.950	.000	.950	.915	.791	.417	.939	.961
Cars	22	0	0	22	91	1094	0	1185	1025	193	10	1228	2435
% Cars	95.7	0	0	95.7	100	100	0	100	99.6	100	100	99.7	99.8
Heavy Vehicles	0	0	0	0	0	0	0	0	4	0	0	4	4
% Heavy Vehicles	0	0	0	0	0	0	0	0	0.4	0	0	0.3	0.2
Buses	1	0	0	1	0	0	0	0	0	0	0	0	1
% Buses	4.3	0	0	4.3	0	0	0	0	0	0	0	0	0.0

N: Wadsworth Street
E/W: Memorial Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	10	0	0	18	256	0	175	37	0	496
07:45 AM	5	0	0	20	273	0	234	45	2	579
Total	15	0	0	38	529	0	409	82	2	1075
08:00 AM	6	0	0	23	273	0	260	61	6	629
08:15 AM	6	0	0	24	288	0	281	34	2	635
08:30 AM	5	0	0	24	260	0	250	53	0	592
08:45 AM	8	0	0	21	229	0	229	55	3	545
Total	25	0	0	92	1050	0	1020	203	11	2401
09:00 AM	8	0	0	28	190	0	209	49	6	490
09:15 AM	11	0	0	25	235	0	205	53	3	532
Grand Total	59	0	0	183	2004	0	1843	387	22	4498
Apprch %	100	0	0	8.4	91.6	0	81.8	17.2	1	
Total %	1.3	0	0	4.1	44.6	0	41	8.6	0.5	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	5	0	0	5	20	273	0	293	234	45	2	281	579
08:00 AM	6	0	0	6	23	273	0	296	260	61	6	327	629
08:15 AM	6	0	0	6	24	288	0	312	281	34	2	317	635
08:30 AM	5	0	0	5	24	260	0	284	250	53	0	303	592
Total Volume	22	0	0	22	91	1094	0	1185	1025	193	10	1228	2435
% App. Total	100	0	0		7.7	92.3	0		83.5	15.7	0.8		
PHF	.917	.000	.000	.917	.948	.950	.000	.950	.912	.791	.417	.939	.959

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	1	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	1	0	0	1	0	0	2
08:00 AM	0	0	0	0	0	0	1	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	2	0	0	2
08:45 AM	1	0	0	0	0	0	1	0	0	2
Total	1	0	0	0	0	0	4	0	0	5
09:00 AM	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	2	0	0	0	0	2
Grand Total	1	0	0	1	2	0	5	0	0	9
Apprch %	100	0	0	33.3	66.7	0	100	0	0	
Total %	11.1	0	0	11.1	22.2	0	55.6	0	0	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
08:45 AM	1	0	0	1	0	0	0	0	1	0	0	1	2
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
Total Volume	1	0	0	1	0	2	0	2	3	0	0	3	6
% App. Total	100	0	0		0	100	0		100	0	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.375	.000	.000	.375	.750

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Groups Printed- Buses

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	1	0	0	1	0	0	2
Grand Total	1	0	0	1	0	0	1	0	0	3
Apprch %	100	0	0	100	0	0	100	0	0	
Total %	33.3	0	0	33.3	0	0	33.3	0	0	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:30 AM													
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	1	0	0	1	1	0	0	1	2
Total Volume	0	0	0	0	1	0	0	1	1	0	0	1	2
% App. Total	0	0	0		100	0	0		100	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.250	.250

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Groups Printed- Peds and Bicycles

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
07:30 AM	0	0	2	6	0	0	1	1	2	1	0	0	13
07:45 AM	0	0	7	3	0	1	2	2	1	1	0	0	17
Total	0	0	9	9	0	1	3	3	3	2	0	0	30
08:00 AM	0	0	6	10	0	1	1	4	6	1	0	0	29
08:15 AM	0	0	11	6	0	0	2	6	7	0	0	0	32
08:30 AM	0	0	9	10	0	0	2	4	0	0	0	0	25
08:45 AM	0	0	9	10	0	1	3	6	0	2	0	1	32
Total	0	0	35	36	0	2	8	20	13	3	0	1	118
09:00 AM	0	0	8	5	0	1	2	7	2	1	0	0	26
09:15 AM	0	0	7	4	0	0	0	4	0	3	0	0	18
Grand Total	0	0	59	54	0	4	13	34	18	9	0	1	192
Apprch %	0	0	52.2	47.8	0	7.8	25.5	66.7	64.3	32.1	0	3.6	
Total %	0	0	30.7	28.1	0	2.1	6.8	17.7	9.4	4.7	0	0.5	

	Wadsworth Street From North					Memorial Drive From East					Memorial Drive From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:00 AM																
08:00 AM	0	0	6	10	16	0	1	1	4	6	6	1	0	0	7	29
08:15 AM	0	0	11	6	17	0	0	2	6	8	7	0	0	0	7	32
08:30 AM	0	0	9	10	19	0	0	2	4	6	0	0	0	0	0	25
08:45 AM	0	0	9	10	19	0	1	3	6	10	0	2	0	1	3	32
Total Volume	0	0	35	36	71	0	2	8	20	30	13	3	0	1	17	118
% App. Total	0	0	49.3	50.7		0	6.7	26.7	66.7		76.5	17.6	0	5.9		
PHF	.000	.000	.795	.900	.934	.000	.500	.667	.833	.750	.464	.375	.000	.250	.607	.922

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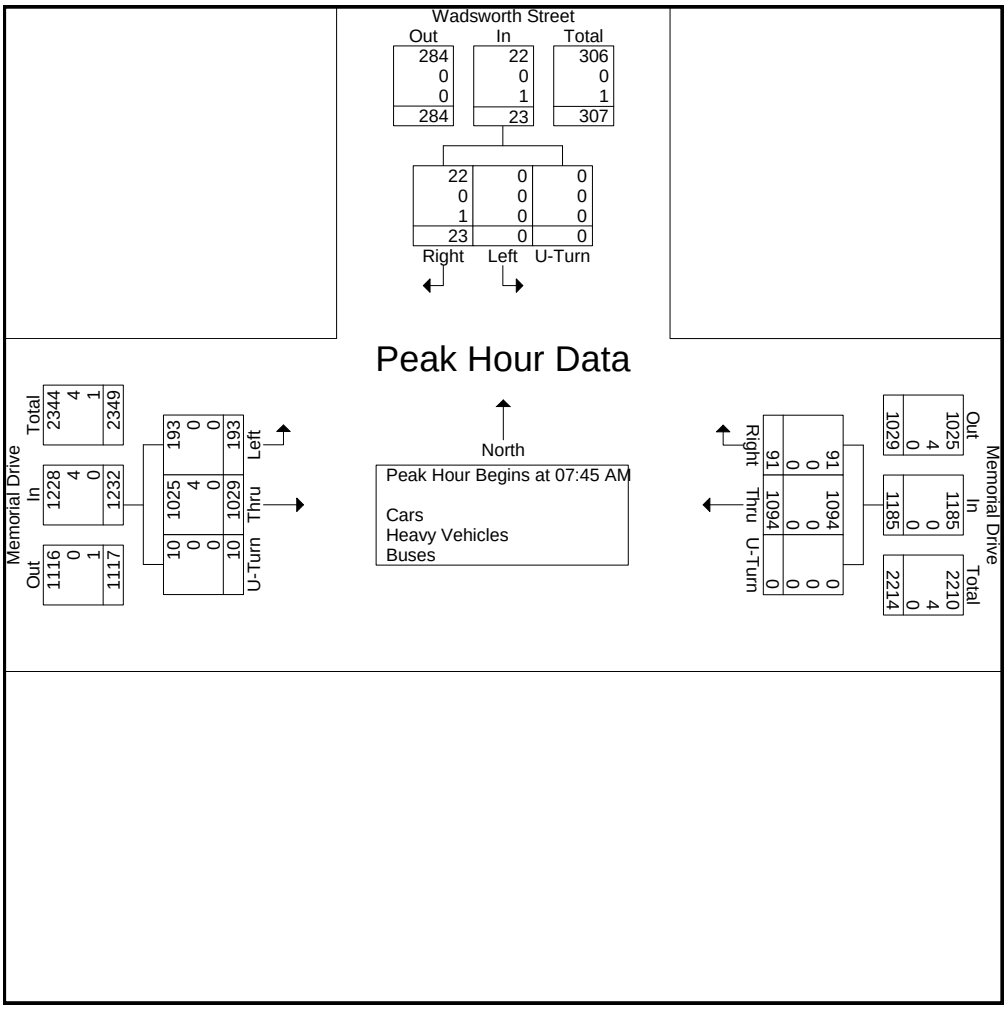
	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	6	0	0	6	20	273	0	293	235	45	2	282	581
08:00 AM	6	0	0	6	23	273	0	296	261	61	6	328	630
08:15 AM	6	0	0	6	24	288	0	312	281	34	2	317	635
08:30 AM	5	0	0	5	24	260	0	284	252	53	0	305	594
Total Volume	23	0	0	23	91	1094	0	1185	1029	193	10	1232	2440
% App. Total	100	0	0		7.7	92.3	0		83.5	15.7	0.8		
PHF	.958	.000	.000	.958	.948	.950	.000	.950	.915	.791	.417	.939	.961
Cars	22	0	0	22	91	1094	0	1185	1025	193	10	1228	2435
% Cars	95.7	0	0	95.7	100	100	0	100	99.6	100	100	99.7	99.8
Heavy Vehicles	0	0	0	0	0	0	0	0	4	0	0	4	4
% Heavy Vehicles	0	0	0	0	0	0	0	0	0.4	0	0	0.3	0.2
Buses	1	0	0	1	0	0	0	0	0	0	0	0	1
% Buses	4.3	0	0	4.3	0	0	0	0	0	0	0	0	0.0



N: Wadsworth Street
E/W: Memorial Drive
City, State: Cambridge, MA
Client: VHB/ M. Houdlette

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Site Code : TBA
Start Date : 5/16/2013
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Groups Printed- Cars - Heavy Vehicles - Buses

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	15	0	0	18	284	0	378	26	2	723
04:45 PM	21	0	0	15	264	0	375	20	0	695
Total	36	0	0	33	548	0	753	46	2	1418
05:00 PM	13	0	0	13	298	0	397	28	6	755
05:15 PM	18	0	0	23	325	0	375	12	4	757
05:30 PM	9	0	0	16	352	0	368	33	4	782
05:45 PM	10	0	0	28	274	0	314	30	3	659
Total	50	0	0	80	1249	0	1454	103	17	2953
06:00 PM	12	0	0	20	262	0	325	16	2	637
06:15 PM	16	0	0	23	218	0	292	21	0	570
Grand Total	114	0	0	156	2277	0	2824	186	21	5578
Apprch %	100	0	0	6.4	93.6	0	93.2	6.1	0.7	
Total %	2	0	0	2.8	40.8	0	50.6	3.3	0.4	
Cars	113	0	0	154	2275	0	2812	184	21	5559
% Cars	99.1	0	0	98.7	99.9	0	99.6	98.9	100	99.7
Heavy Vehicles	1	0	0	1	2	0	11	2	0	17
% Heavy Vehicles	0.9	0	0	0.6	0.1	0	0.4	1.1	0	0.3
Buses	0	0	0	1	0	0	1	0	0	2
% Buses	0	0	0	0.6	0	0	0	0	0	0

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	21	0	0	21	15	264	0	279	375	20	0	395	695
05:00 PM	13	0	0	13	13	298	0	311	397	28	6	431	755
05:15 PM	18	0	0	18	23	325	0	348	375	12	4	391	757
05:30 PM	9	0	0	9	16	352	0	368	368	33	4	405	782
Total Volume	61	0	0	61	67	1239	0	1306	1515	93	14	1622	2989
% App. Total	100	0	0		5.1	94.9	0		93.4	5.7	0.9		
PHF	.726	.000	.000	.726	.728	.880	.000	.887	.954	.705	.583	.941	.956
Cars	60	0	0	60	66	1238	0	1304	1505	91	14	1610	2974
% Cars	98.4	0	0	98.4	98.5	99.9	0	99.8	99.3	97.8	100	99.3	99.5
Heavy Vehicles	1	0	0	1	1	1	0	2	9	2	0	11	14
% Heavy Vehicles	1.6	0	0	1.6	1.5	0.1	0	0.2	0.6	2.2	0	0.7	0.5
Buses	0	0	0	0	0	0	0	0	1	0	0	1	1
% Buses	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.0

N: Wadsworth Street
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Groups Printed- Cars

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	15	0	0	18	284	0	378	26	2	723
04:45 PM	20	0	0	14	264	0	375	20	0	693
Total	35	0	0	32	548	0	753	46	2	1416
05:00 PM	13	0	0	13	298	0	397	27	6	754
05:15 PM	18	0	0	23	324	0	374	11	4	754
05:30 PM	9	0	0	16	352	0	359	33	4	773
05:45 PM	10	0	0	27	274	0	314	30	3	658
Total	50	0	0	79	1248	0	1444	101	17	2939
06:00 PM	12	0	0	20	261	0	324	16	2	635
06:15 PM	16	0	0	23	218	0	291	21	0	569
Grand Total	113	0	0	154	2275	0	2812	184	21	5559
Apprch %	100	0	0	6.3	93.7	0	93.2	6.1	0.7	
Total %	2	0	0	2.8	40.9	0	50.6	3.3	0.4	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	20	0	0	20	14	264	0	278	375	20	0	395	693
05:00 PM	13	0	0	13	13	298	0	311	397	27	6	430	754
05:15 PM	18	0	0	18	23	324	0	347	374	11	4	389	754
05:30 PM	9	0	0	9	16	352	0	368	359	33	4	396	773
Total Volume	60	0	0	60	66	1238	0	1304	1505	91	14	1610	2974
% App. Total	100	0	0		5.1	94.9	0		93.5	5.7	0.9		
PHF	.750	.000	.000	.750	.717	.879	.000	.886	.948	.689	.583	.936	.962

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Groups Printed- Heavy Vehicles

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	1	0	0	1	0	0	0	0	0	2
Total	1	0	0	1	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	1	0	1	1	0	3
05:30 PM	0	0	0	0	0	0	8	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	9	2	0	12
06:00 PM	0	0	0	0	1	0	1	0	0	2
06:15 PM	0	0	0	0	0	0	1	0	0	1
Grand Total	1	0	0	1	2	0	11	2	0	17
Apprch %	100	0	0	33.3	66.7	0	84.6	15.4	0	
Total %	5.9	0	0	5.9	11.8	0	64.7	11.8	0	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	1	0	1	1	1	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	8	0	0	8	8
Total Volume	1	0	0	1	1	1	0	2	9	2	0	11	14
% App. Total	100	0	0		50	50	0		81.8	18.2	0		
PHF	.250	.000	.000	.250	.250	.250	.000	.500	.281	.500	.000	.344	.438

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Groups Printed- Buses

	Wadsworth Street From North			Memorial Drive From East			Memorial Drive From West			
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	0	1
05:45 PM	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	1	0	0	1	0	0	2
06:00 PM	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	1	0	0	1	0	0	2
Apprch %	0	0	0	100	0	0	100	0	0	
Total %	0	0	0	50	0	0	50	0	0	

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	0	0	0	1	0	0	1	1	0	0	1	2
% App. Total	0	0	0		100	0	0		100	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.250	.500

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Groups Printed- Peds and Bicycles

	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	Peds EB	Peds WB	Right	Thru	Peds SB	Peds NB	Thru	Left	Peds NB	Peds SB	Int. Total
04:30 PM	0	0	12	9	0	0	10	5	1	0	7	1	45
04:45 PM	0	0	9	8	0	3	10	18	0	0	0	0	48
Total	0	0	21	17	0	3	20	23	1	0	7	1	93
05:00 PM	0	0	7	19	0	1	6	5	0	1	0	1	40
05:15 PM	2	0	20	18	0	4	13	10	0	0	0	3	70
05:30 PM	0	0	25	10	0	1	15	6	2	0	0	0	59
05:45 PM	0	0	11	14	0	1	11	4	5	0	0	0	46
Total	2	0	63	61	0	7	45	25	7	1	0	4	215
06:00 PM	0	0	11	18	0	2	5	5	5	0	0	0	46
06:15 PM	0	0	11	5	0	1	14	8	0	1	0	0	40
Grand Total	2	0	106	101	0	13	84	61	13	2	7	5	394
Apprch %	1	0	50.7	48.3	0	8.2	53.2	38.6	48.1	7.4	25.9	18.5	
Total %	0.5	0	26.9	25.6	0	3.3	21.3	15.5	3.3	0.5	1.8	1.3	

	Wadsworth Street From North					Memorial Drive From East					Memorial Drive From West					
Start Time	Right	Left	Peds EB	Peds WB	App. Total	Right	Thru	Peds SB	Peds NB	App. Total	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 05:15 PM																
05:15 PM	2	0	20	18	40	0	4	13	10	27	0	0	0	3	3	70
05:30 PM	0	0	25	10	35	0	1	15	6	22	2	0	0	0	2	59
05:45 PM	0	0	11	14	25	0	1	11	4	16	5	0	0	0	5	46
06:00 PM	0	0	11	18	29	0	2	5	5	12	5	0	0	0	5	46
Total Volume	2	0	67	60	129	0	8	44	25	77	12	0	0	3	15	221
% App. Total	1.6	0	51.9	46.5		0	10.4	57.1	32.5		80	0	0	20		
PHF	.250	.000	.670	.833	.806	.000	.500	.733	.625	.713	.600	.000	.000	.250	.750	.789

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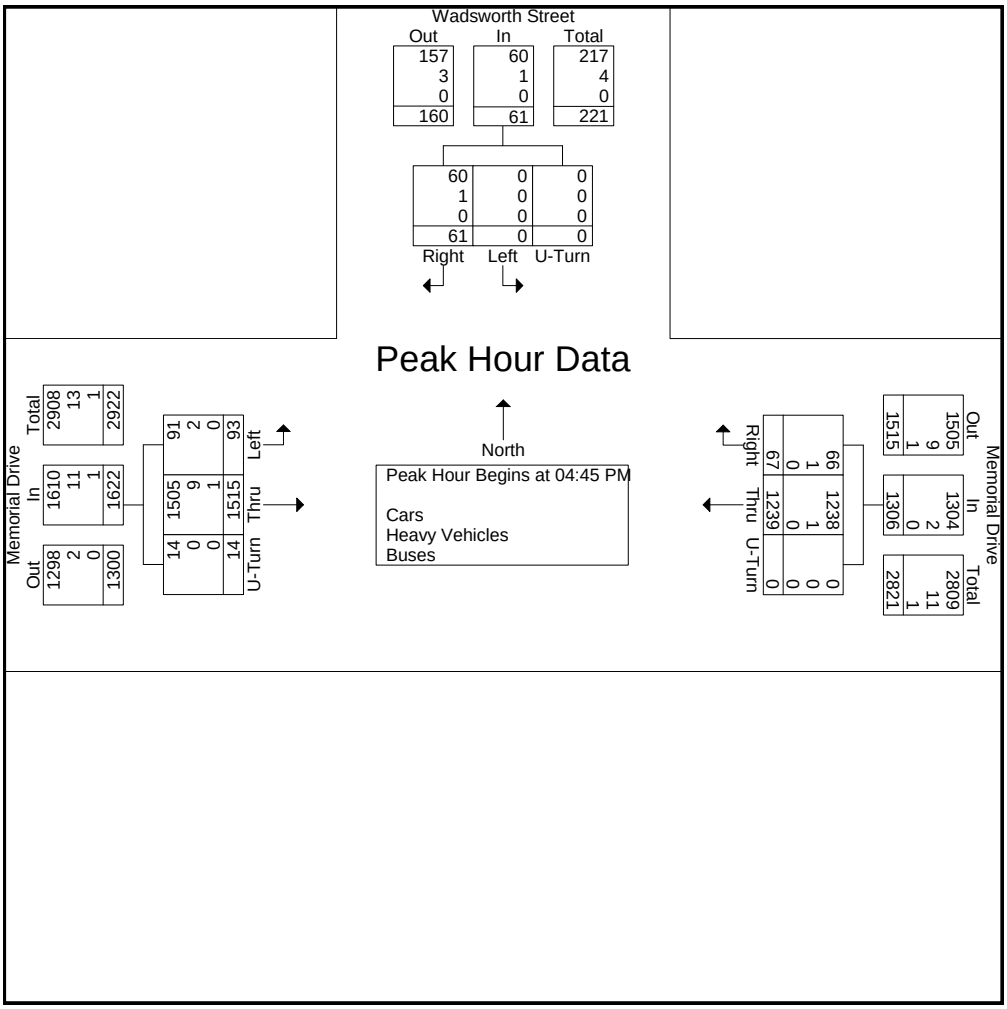
	Wadsworth Street From North				Memorial Drive From East				Memorial Drive From West				
Start Time	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	21	0	0	21	15	264	0	279	375	20	0	395	695
05:00 PM	13	0	0	13	13	298	0	311	397	28	6	431	755
05:15 PM	18	0	0	18	23	325	0	348	375	12	4	391	757
05:30 PM	9	0	0	9	16	352	0	368	368	33	4	405	782
Total Volume	61	0	0	61	67	1239	0	1306	1515	93	14	1622	2989
% App. Total	100	0	0		5.1	94.9	0		93.4	5.7	0.9		
PHF	.726	.000	.000	.726	.728	.880	.000	.887	.954	.705	.583	.941	.956
Cars	60	0	0	60	66	1238	0	1304	1505	91	14	1610	2974
% Cars	98.4	0	0	98.4	98.5	99.9	0	99.8	99.3	97.8	100	99.3	99.5
Heavy Vehicles	1	0	0	1	1	1	0	2	9	2	0	11	14
% Heavy Vehicles	1.6	0	0	1.6	1.5	0.1	0	0.2	0.6	2.2	0	0.7	0.5
Buses	0	0	0	0	0	0	0	0	1	0	0	1	1
% Buses	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.0



15-Apr-15
Sunny 60 degrees

Hayward Street at Amherst Street
8:00 am - 9:00 am

	Amherst Street EB										Crosswalk on West side	
Time	Vehicle left	Vehicle thru	Bike left	Bike thru	EZRide/Bus left	EZRide/Bus thru	Truck left	Truck thru	Total all vehicles (not bikes though) left	Total all vehicles (not bikes though) thru	NB	SB
8:00 AM - 8:15 AM	14	34	0	0	0	0	0	2	14	36	1	1
8:15 AM - 8:30 AM	15	19	0	2	0	0	0	1	15	20	0	0
8:30 AM - 8:45 AM	12	34	2	5	0	0	0	2	12	36	3	1
8:45 AM - 9:00 AM	14	34	0	4	0	0	0	0	14	34	2	1
Total	55	121	2	11	0	0	0	5	55	126	6	3

	Amherst Street WB										Crosswalk on East side	
Time	Vehicle right	Vehicle thru	Bike right	Bike thru	EZRide/Bus right	EZRide/Bus thru	Truck right	Truck thru	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) thru	NB	SB
8:00 AM - 8:15 AM	0	2	0	0	0	4	0	0	0	6	2	0
8:15 AM - 8:30 AM	0	16	0	0	0	3	0	0	0	19	1	1
8:30 AM - 8:45 AM	2	6	1	1	0	4	1	2	3	12	6	5
8:45 AM - 9:00 AM	0	16	0	2	0	3	0	0	0	19	3	4
Total	2	40	1	3	0	14	1	2	3	56	12	10

	Hayward Street SB										Crosswalk on north side	
Time	Vehicle right	Vehicle left	Bike right	Bike left	EZRide/Bus right	EZRide/Bus left	Truck right	Truck left	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) left	WB	EB
8:00 AM - 8:15 AM	9	1	0	0	2	0	0	0	11	1	1	3
8:15 AM - 8:30 AM	9	0	1	3	1	0	1	0	11	0	4	8
8:30 AM - 8:45 AM	10	1	0	2	0	0	2	0	12	1	5	7
8:45 AM - 9:00 AM	10	5	0	0	0	0	0	0	10	5	11	5
Total	38	7	1	5	3	0	3	0	44	7	21	23

16-Apr-15
Sunny 60 degrees

Hayward Street at Amherst Street
4:45 PM - 5:45 PM

	Amherst Street EB										Crosswalk on	
Time	Vehicle left	Vehicle thru	Bike left	Bike thru	EZRide/Bus left	EZRide/Bus thru	Truck left	Truck thru	Total all vehicles (not bikes though) left	Total all vehicles (not bikes though) thru	NB	SB
4:45 PM - 5:00 PM	4	8	0	3	0	0	0	0	4	8	0	0
5:00 PM - 5:15 PM	6	10	0	1	0	0	0	0	6	10	0	0
5:15 PM - 5:30 PM	9	8	1	3	0	0	0	0	9	8	0	0
5:30 PM - 5:45 PM	10	14	1	2	1	0	0	0	11	14	1	4
Total	29	40	2	9	1	0	0	0	30	40	1	4

	Amherst Street WB										Crosswalk on	
Time	Vehicle right	Vehicle thru	Bike right	Bike thru	EZRide/Bus right	EZRide/Bus thru	Truck right	Truck thru	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) thru	NB	SB
4:45 PM - 5:00 PM	1	32	0	4	0	2	0	0	1	34	2	6
5:00 PM - 5:15 PM	4	29	0	6	0	3	0	0	4	32	6	3
5:15 PM - 5:30 PM	4	20	3	4	0	1	0	0	4	21	1	4
5:30 PM - 5:45 PM	3	32	0	11	0	4	0	0	3	36	10	4
Total	12	113	3	25	0	10	0	0	12	123	19	17

	Hayward Street SB										Crosswalk on	
Time	Vehicle right	Vehicle left	Bike right	Bike left	EZRide/Bus right	EZRide/Bus left	Truck right	Truck left	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) left	WB	EB
4:45 PM - 5:00 PM	16	2	1	2	0	0	0	0	16	2	6	5
5:00 PM - 5:15 PM	27	1	0	0	1	0	0	0	28	1	12	14
5:15 PM - 5:30 PM	22	2	2	0	1	0	0	0	23	2	15	20
5:30 PM - 5:45 PM	17	1	2	0	0	0	0	0	17	1	15	17
Total	82	6	5	2	2	0	0	0	84	6	48	56

16-Apr-15
Sunny 60 degrees

Hayward Street at Amherst Street
8:00 am - 9:00 am

	Amherst Street EB										Crosswalk on West side	
Time	Vehicle left	Vehicle thru	Bike left	Bike thru	EZRide/Bus left	EZRide/Bus thru	Truck left	Truck thru	Total all vehicles (not bikes though) left	Total all vehicles (not bikes though) thru	NB	SB
8:00 AM - 8:15 AM	7	59	0	5	0	0	1	0	8	59	0	0
8:15 AM - 8:30 AM	4	40	0	9	0	0	0	3	4	43	5	4
8:30 AM - 8:45 AM	3	48	4	7	0	0	0	3	3	51	1	3
8:45 AM - 9:00 AM	2	49	0	4	0	0	0	1	2	50	3	1
Total	16	196	4	25	0	0	1	7	17	203	9	8

	Amherst Street WB										Crosswalk on East side	
Time	Vehicle right	Vehicle thru	Bike right	Bike thru	EZRide/Bus right	EZRide/Bus thru	Truck right	Truck thru	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) thru	NB	SB
8:00 AM - 8:15 AM	3	13	0	2	0	3	0	8	3	24	0	7
8:15 AM - 8:30 AM	2	15	0	1	0	3	0	4	2	22	5	4
8:30 AM - 8:45 AM	4	19	0	0	0	4	0	3	4	26	6	3
8:45 AM - 9:00 AM	2	24	0	2	0	2	0	5	2	31	10	3
Total	11	71	0	5	0	12	0	20	11	103	21	17

	Carleton Street SB										Crosswalk on north side	
Time	Vehicle right	Vehicle left	Bike right	Bike left	EZRide/Bus right	EZRide/Bus left	Truck right	Truck left	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) left	WB	EB
8:00 AM - 8:15 AM	5	1	0	0	0	0	2	0	7	1	3	2
8:15 AM - 8:30 AM	2	0	1	0	0	0	0	0	2	0	4	8
8:30 AM - 8:45 AM	4	1	0	0	0	0	0	0	4	1	9	7
8:45 AM - 9:00 AM	1	0	0	0	0	0	1	0	2	0	5	13
Total	12	2	1	0	0	0	3	0	15	2	21	30

16-Apr-15
Sunny 60 degrees

Hayward Street at Amherst Street
4:45 PM - 5:45 PM

	Amherst Street EB										Crosswalk on	
Time	Vehicle left	Vehicle thru	Bike left	Bike thru	EZRide/Bus left	EZRide/Bus thru	Truck left	Truck thru	Total all vehicles (not bikes though) left	Total all vehicles (not bikes though) thru	NB	SB
4:45 PM - 5:00 PM	4	14	0	2	0	0	1	0	5	14	5	2
5:00 PM - 5:15 PM	1	17	0	1	0	0	0	0	1	17	1	3
5:15 PM - 5:30 PM	2	17	0	4	0	0	1	0	3	17	5	1
5:30 PM - 5:45 PM	2	23	2	2	0	1	0	0	2	24	0	3
Total	9	71	2	9	0	1	2	0	11	72	11	9

	Amherst Street WB										Crosswalk on	
Time	Vehicle right	Vehicle thru	Bike right	Bike thru	EZRide/Bus right	EZRide/Bus thru	Truck right	Truck thru	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) thru	NB	SB
4:45 PM - 5:00 PM	2	48	0	5	0	2	0	1	2	51	3	5
5:00 PM - 5:15 PM	4	46	4	3	0	3	0	5	4	54	1	5
5:15 PM - 5:30 PM	3	45	0	7	0	2	0	0	3	47	7	6
5:30 PM - 5:45 PM	0	51	2	13	0	2	0	2	0	55	6	2
Total	9	190	6	28	0	9	0	8	9	207	17	18

	Carleton Street SB										Crosswalk on	
Time	Vehicle right	Vehicle left	Bike right	Bike left	EZRide/Bus right	EZRide/Bus left	Truck right	Truck left	Total all vehicles (not bikes though) right	Total all vehicles (not bikes though) left	WB	EB
4:45 PM - 5:00 PM	5	0	3	1	0	0	1	0	6	0	21	6
5:00 PM - 5:15 PM	8	0	1	0	0	0	0	0	8	0	14	13
5:15 PM - 5:30 PM	8	1	0	0	0	0	0	0	8	1	13	20
5:30 PM - 5:45 PM	1	1	0	0	0	0	0	0	1	1	15	20
Total	22	2	4	1	0	0	1	0	23	2	63	59

Trip Generation Calculation

Trip Generation Assumptions		Independent Variable	Average Rates								
Land Use	**Land Use Code Assumed**		**Daily**	**In**	**Out**	**AM Peak**	**In**	**Out**	**PM Peak**	**In**	**Out**
Retail	Shopping Center LUC 820	gross leasable area	42.7	50%	50%	0.96	62%	38%	3.71	48%	52%
Residential	Apartment LUC 220	units	6.65	50%	50%	0.51	20%	80%	0.62	65%	35%
Academic	University/College LUC 550	students or employees	8.96	50%	50%	0.75	76%	24%	0.79	34%	66%
Lab	R&D LUC 760	gross floor area	8.11	50%	50%	1.22	83%	17%	1.07	15%	85%
Office	General Office LUC 710	gross floor area	11.03	50%	50%	1.56	88%	12%	1.49	17%	83%
Hotel	Hotel LUC 310	units	8.17	50%	50%	0.53	59%	41%	0.60	51%	49%
Other	Museum*		NA	NA	NA	0.28	86%	14%	0.18	16%	84%

Notes/Sources:

*museum has limited data, only one study and no daily data

Gross Floor Area: of a building is the sum (in square feet) of the area of each floor level, including cellars, basements, mezzanines, penthouses, corridors, lobbies, stores, and offices, that are within the principal outside faces of exterior walls, not including architectural setbacks or projections. Included are all areas that have floors surfaces with clear standing head room regardless of their use. If a ground-level area, or part thereof, within the principal outside faces of the exterior walls is not enclosed, this GFA is considered part of the overall square footage of the building. However, unroofed areas and unenclosed roofed-over spaces, except those contained within the principal outside faces or exterior wall, should be excluded from the area calculations. For the purposes of trip generation calculation, the GFA of any parking garages within the building should not be included within the GFA of the entire building. the majority of land uses in this document express trip generation in terms of GFA.

Gross leasable Area: is the total floor area designed for tenant occupancy and exclusive use, including any basements, mezzanines, or upper floors, expressed in square feet and measured from the center-line of joint partitions and from outside wall faces. For purposes of trip gen calculations, the floor area of any parking garages within the building should not be included within the GLA of the entire building. GLA is the area for which tenants pay rent; it is the area that produces income. In the retail business, GLA lends itself readily to measurement and comparison; this, it has been adopted by the shopping center industry as standard for statistical comparison. Accordingly, GLA is used in this report for shopping centers. For specialty retailcenters, strip centers, discount stores and freestanding retail facilities, GLA usually equals GFA.

			Unadjusted Trips								
			Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	141	141	282	4	2	6	12	13	24
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	0	0	0	0	0	0	0	0	0	0	0
Office	0	0	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	0	0	0	0	0	0	0	0	0
Total	**6,600**		**141**	**141**	**282**	**4**	**2**	**6**	**12**	**13**	**24**
Parcel 5											
Retail	17,077	17	365	365	729	10	6	16	30	33	63
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	0	0	0	0	0	0	0	0	0	0	0
Office	355,761	356	1,962	1,962	3,924	488	67	555	90	440	530
Museum (employees)			58	58	117	29	4	33	4	29	33
Museum (visitors)	65,000	65	205	205	410	0	0	0	0	51	51
Total	**437,838**		**2,590**	**2,590**	**5,180**	**528**	**77**	**605**	**125**	**553**	**678**
Parcel 4											
Retail	15,394	15	329	329	657	9	6	15	27	30	57
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	0	0	0	0	0	0	0	0	0	0	0
Office	-13,624	-14	-75	-75	-150	-19	-3	-21	-3	-17	-20
Museum (employees)											
Museum (visitors)	0	0	0	0	0	0	0	0	0	0	0
Total	**1,770**		**254**	**254**	**507**	**-10**	**3**	**-6**	**24**	**13**	**37**
Parcel 2											
Retail	18,000	18	384	384	769	11	7	17	32	35	67
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	0	0	0	0	0	0	0	0	0	0	0
Office	300,000	300	1,655	1,655	3,309	412	56	468	76	371	447
Museum (employees)											
Museum (visitors)	0	0	0	0	0	0	0	0	0	0	0
Total	**318,000**		**2,039**	**2,039**	**4,078**	**423**	**63**	**485**	**108**	**406**	**514**
Parcel 3											
Retail	14,219	14	304	304	607	8	5	14	25	27	53
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	280,000	280	1,135	1,135	2,271	284	58	342	45	255	300
Office	0	0	0	0	0	0	0	0	0	0	0
Museum (employees)											
Museum (visitors)	0	0	0	0	0	0	0	0	0	0	0
Total	**294,219**		**1,439**	**1,439**	**2,878**	**292**	**63**	**355**	**70**	**282**	**352**
Total Parcels SOMA Garage (6, 5, 4, 3)											
Retail	53,290	53	1,138	1,138	2,275	32	19	51	95	103	198
Residential	0	0	0	0	0	0	0	0	0	0	0
Lab	280,000	280	1,135	1,135	2,271	284	58	342	45	255	300
Office	342,137	342	1,887	1,887	3,774	470	64	534	87	423	510
Museum (employees)			58	58	117	29	4	33	4	29	33
Museum (visitors)	65,000	65	205	205	410	0	0	0	0	51	51
Total	**740,427**		**4,423**	**4,423**	**8,847**	**814**	**146**	**960**	**231**	**861**	**1,092**
Parcel 1											
Retail	16,000	16	342	342	683	10	6	15	28	31	59
Residential	285,000	300	998	998	1,995	31	122	153	121	65	186
Lab	0	0	0	0	0	0	0	0	0	0	0
Office	15,000	15	83	83	165	21	3	23	4	19	22
Museum (employees)											
Museum (visitors)	0	0	0	0	0	0	0	0	0	0	0
Total	**316,000**		**1,422**	**1,422**	**2,844**	**61**	**131**	**192**	**153**	**115**	**268**
Grand Total all Parcels											
Retail	87,290	87	1,864	1,864	3,727	52	32	84	155	168	324
Residential	285,000	300	998	998	1,995	31	122	153	121	65	186
Lab	280,000	280	1,135	1,135	2,271	284	58	342	45	255	300
Office	657,137	657	3,624	3,624	7,248	902	123	1,025	166	813	979
Museum (employees)			58	58	117	29	4	33	4	29	33
Museum (visitors)	65,000	65	205	205	410	0	0	0	0	51	51
Total	**1,374,427**		**7,884**	**7,884**	**15,768**	**1,297**	**339**	**1,637**	**492**	**1,381**	**1,873**

				Person Trips								
				Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**Nat. AVO**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	1.78	251	251	502	7	4	11	21	23	44
Residential	0	0	1.13	0	0	0	0	0	0	0	0	0
Lab	0	0	1.13	0	0	0	0	0	0	0	0	0
Office	0	0	1.13	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	1.13	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	2.20	0	0	0	0	0	0	0	0	0
Total	**6,600**			**251**	**251**	**502**	**7**	**4**	**11**	**21**	**23**	**44**
Parcel 5												
Retail	17,077	17		649	649	1,298	18	11	29	54	59	113
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	355,761	356		2,217	2,217	4,434	552	75	627	102	497	599
Museum (employees)				66	66	132	33	5	38	5	33	38
Museum (visitors)	65,000	65		451	451	902	0	0	0	0	113	113
Total	**437,838**			**3,383**	**3,383**	**6,766**	**603**	**91**	**694**	**161**	**702**	**862**
Parcel 4												
Retail	15,394	15		585	585	1,170	16	10	26	49	53	102
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	-13,624	-14		-85	-85	-170	-21	-3	-24	-4	-19	-23
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**1,770**			**500**	**500**	**1,000**	**-5**	**7**	**2**	**45**	**34**	**79**
Parcel 2												
Retail	18,000	18		684	684	1,368	19	12	31	57	62	119
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	300,000	300		1,870	1,870	3,739	465	63	529	86	419	505
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**318,000**			**2,554**	**2,554**	**5,107**	**484**	**75**	**560**	**143**	**481**	**624**
Parcel 3												
Retail	14,219	14		540	540	1,081	15	9	24	45	49	94
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		1,283	1,283	2,566	320	66	386	51	288	339
Office	0	0		0	0	0	0	0	0	0	0	0
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**294,219**			**1,823**	**1,823**	**3,647**	**335**	**75**	**410**	**96**	**337**	**432**
Total Parcels SOMA Garage (6, 5, 4, 3)												
Retail	53,290	53		2,025	2,025	4,050	56	35	91	169	183	352
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		1,283	1,283	2,566	320	66	386	51	288	339
Office	342,137	342		2,132	2,132	4,264	531	72	603	98	478	576
Museum (employees)				66	66	132	33	5	38	5	33	38
Museum (visitors)	65,000	65		451	451	902	0	0	0	0	113	113
Total	**740,427**			**5,957**	**5,957**	**11,915**	**941**	**177**	**1,118**	**322**	**1,095**	**1,417**
Parcel 1												
Retail	16,000	16		608	608	1,216	17	10	27	51	55	106
Residential	285,000	300		1,127	1,127	2,254	35	138	173	137	74	210
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	15,000	15		93	93	187	23	3	26	4	21	25
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**316,000**			**1,829**	**1,829**	**3,657**	**75**	**152**	**227**	**192**	**149**	**341**
Grand Total all Parcels												
Retail	87,290	87		3,317	3,317	6,635	92	57	149	277	300	576
Residential	285,000	300		1,127	1,127	2,254	35	138	173	137	74	210
Lab	280,000	280		1,283	1,283	2,566	320	66	386	51	288	339
Office	657,137	657		4,095	4,095	8,190	1,019	139	1,158	188	918	1,106
Museum (employees)				66	66	132	33	5	38	5	33	38
Museum (visitors)	65,000	65		451	451	902	0	0	0	0	113	113
Total	**1,374,427**			**10,340**	**10,340**	**20,679**	**1,500**	**404**	**1,904**	**657**	**1,725**	**2,382**

					Auto Trips								
					Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**Local AVO**	**AutoMode (enhanced)**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	1.78	31%	44	44	87	1	1	2	4	4	8
Residential	0	0	1.13	32%	0	0	0	0	0	0	0	0	0
Lab	0	0	1.13	41%	0	0	0	0	0	0	0	0	0
Office	0	0	1.13	41%	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	1.13	27%	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	2.20	31%	0	0	0	0	0	0	0	0	0
Total	**6,600**				**44**	**44**	**87**	**1**	**1**	**2**	**4**	**4**	**8**
Parcel 5													
Retail	17,077	17			113	113	226	3	2	5	9	10	20
Residential	0	0			0	0	0	0	0	0	0	0	0
Lab	0	0			0	0	0	0	0	0	0	0	0
Office	355,761	356			804	804	1,609	200	27	228	37	180	217
Museum (employees)					16	16	32	8	1	9	1	8	9
Museum (visitors)	65,000	65			64	64	127	0	0	0	0	16	16
Total	**437,838**				**997**	**997**	**1,994**	**211**	**30**	**242**	**47**	**214**	**262**
Parcel 4													
Retail	15,394	15			102	102	204	3	2	5	8	9	18
Residential	0	0			0	0	0	0	0	0	0	0	0
Lab	0	0			0	0	0	0	0	0	0	0	0
Office	-13,624	-14			-31	-31	-62	-8	-1	-9	-1	-7	-8
Museum (employees)													
Museum (visitors)	0	0			0	0	0	0	0	0	0	0	0
Total	**1,770**				**71**	**71**	**142**	**-5**	**1**	**-4**	**7**	**2**	**9**
Parcel 2													
Retail	18,000	18			119	119	238	3	2	5	10	11	21
Residential	0	0			0	0	0	0	0	0	0	0	0
Lab	0	0			0	0	0	0	0	0	0	0	0
Office	300,000	300			678	678	1,357	169	23	192	31	152	183
Museum (employees)													
Museum (visitors)	0	0			0	0	0	0	0	0	0	0	0
Total	**318,000**				**797**	**797**	**1,595**	**172**	**25**	**197**	**41**	**163**	**204**
Parcel 3													
Retail	14,219	14			94	94	188	3	2	4	8	9	16
Residential	0	0			0	0	0	0	0	0	0	0	0
Lab	280,000	280			466	466	931	116	24	140	18	104	123
Office	0	0			0	0	0	0	0	0	0	0	0
Museum (employees)													
Museum (visitors)	0	0			0	0	0	0	0	0	0	0	0
Total	**294,219**				**560**	**560**	**1,119**	**119**	**25**	**144**	**26**	**113**	**139**
Total Parcels SOMA Garage (6, 5, 4, 3)													
Retail	53,290	53			353	353	705	10	6	16	29	32	61
Residential	0	0			0	0	0	0	0	0	0	0	0
Lab	280,000	280			466	466	931	116	24	140	18	104	123
Office	342,137	342			774	774	1,547	193	26	219	36	173	209
Museum (employees)					16	16	32	8	1	9	1	8	9
Museum (visitors)	65,000	65			64	64	127	0	0	0	0	16	16
Total	**740,427**				**1,671**	**1,671**	**3,342**	**327**	**57**	**384**	**84**	**334**	**418**
Parcel 1													
Retail	16,000	16			106	106	212	3	2	5	9	10	18
Residential	285,000	300			319	319	638	10	39	49	39	21	60
Lab	0	0			0	0	0	0	0	0	0	0	0
Office	15,000	15			34	34	68	8	1	10	2	8	9
Museum (employees)													
Museum (visitors)	0	0			0	0	0	0	0	0	0	0	0
Total	**316,000**				**459**	**459**	**918**	**21**	**42**	**63**	**49**	**38**	**87**
Grand Total all Parcels													
Retail	87,290	87			578	578	1,155	16	10	26	48	52	100
Residential	285,000	300			319	319	638	10	39	49	39	21	60
Lab	280,000	280			466	466	931	116	24	140	18	104	123
Office	657,137	657			1,486	1,486	2,972	370	50	420	68	333	401
Museum (employees)					16	16	32	8	1	9	1	8	9
Museum (visitors)	65,000	65			64	64	127	0	0	0	0	16	16
Total	**1,374,427**				**2,928**	**2,928**	**5,855**	**520**	**124**	**644**	**175**	**534**	**709**

				Transit Trips								
				Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**Transit Mode (enhanced)**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	30.0%	75	75	150	2	1	3	6	7	13
Residential	0	0	30.0%	0	0	0	0	0	0	0	0	0
Lab	0	0	42.0%	0	0	0	0	0	0	0	0	0
Office	0	0	42.0%	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	41.0%	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	30.0%	0	0	0	0	0	0	0	0	0
Total	**6,600**			**75**	**75**	**150**	**2**	**1**	**3**	**6**	**7**	**13**
Parcel 5												
Retail	17,077	17		195	195	389	5	3	9	16	18	34
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	355,761	356		931	931	1,862	232	32	263	43	209	252
Museum (employees)				27	27	54	14	2	15	2	14	15
Museum (visitors)	65,000	65		135	135	271	0	0	0	0	34	34
Total	**437,838**			**1,288**	**1,288**	**2,576**	**251**	**37**	**288**	**61**	**274**	**335**
Parcel 4												
Retail	15,394	15		176	176	351	5	3	8	15	16	30
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	-13,624	-14		-36	-36	-71	-9	-1	-10	-2	-8	-10
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**1,770**			**140**	**140**	**280**	**-4**	**2**	**-2**	**13**	**8**	**21**
Parcel 2												
Retail	18,000	18		205	205	410	6	4	9	17	19	36
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	300,000	300		785	785	1,570	195	27	222	36	176	212
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**318,000**			**990**	**990**	**1,981**	**201**	**30**	**231**	**53**	**195**	**248**
Parcel 3												
Retail	14,219	14		162	162	324	5	3	7	14	15	28
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		539	539	1,078	135	28	162	21	121	142
Office	0	0		0	0	0	0	0	0	0	0	0
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**294,219**			**701**	**701**	**1,402**	**139**	**30**	**169**	**35**	**136**	**170**
Total Parcels SOMA Garage (6, 5, 4, 3)												
Retail	53,290	53		608	608	1,215	17	10	27	51	55	106
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		539	539	1,078	135	28	162	21	121	142
Office	342,137	342		896	896	1,791	223	30	253	41	201	242
Museum (employees)				27	27	54	14	2	15	2	14	15
Museum (visitors)	65,000	65		135	135	271	0	0	0	0	34	34
Total	**740,427**			**2,204**	**2,204**	**4,409**	**388**	**70**	**458**	**115**	**424**	**539**
Parcel 1												
Retail	16,000	16		182	182	365	5	3	8	15	16	32
Residential	285,000	300		338	338	676	10	41	52	41	22	63
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	15,000	15		39	39	79	10	1	11	2	9	11
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**316,000**			**560**	**560**	**1,120**	**25**	**46**	**71**	**58**	**47**	**105**
Grand Total all Parcels												
Retail	87,290	87		995	995	1,990	28	17	45	83	90	173
Residential	285,000	300		338	338	676	10	41	52	41	22	63
Lab	280,000	280		539	539	1,078	135	28	162	21	121	142
Office	657,137	657		1,720	1,720	3,440	428	58	487	79	386	465
Museum (employees)				27	27	54	14	2	15	2	14	15
Museum (visitors)	65,000	65		135	135	271	0	0	0	0	34	34
Total	**1,374,427**			**3,755**	**3,755**	**7,509**	**614**	**146**	**761**	**226**	**666**	**892**

				Walk Trips								
				Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**WalkMode (enhanced)**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	29.0%	73	73	145	2	1	3	6	7	13
Residential	0	0	25.0%	0	0	0	0	0	0	0	0	0
Lab	0	0	7.0%	0	0	0	0	0	0	0	0	0
Office	0	0	7.0%	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	15.0%	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	29.0%	0	0	0	0	0	0	0	0	0
Total	**6,600**			**73**	**73**	**145**	**2**	**1**	**3**	**6**	**7**	**13**
Parcel 5												
Retail	17,077	17		188	188	376	5	3	8	16	17	33
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	355,761	356		155	155	310	39	5	44	7	35	42
Museum (employees)				10	10	20	5	1	6	1	5	6
Museum (visitors)	65,000	65		131	131	262	0	0	0	0	33	33
Total	**437,838**			**484**	**484**	**968**	**49**	**9**	**58**	**24**	**89**	**113**
Parcel 4												
Retail	15,394	15		170	170	339	5	3	8	14	15	29
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	-13,624	-14		-6	-6	-12	-1	0	-2	0	-1	-2
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**1,770**			**164**	**164**	**327**	**3**	**3**	**6**	**14**	**14**	**28**
Parcel 2												
Retail	18,000	18		198	198	397	6	3	9	17	18	34
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	300,000	300		131	131	262	33	4	37	6	29	35
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**318,000**			**329**	**329**	**658**	**38**	**8**	**46**	**23**	**47**	**70**
Parcel 3												
Retail	14,219	14		157	157	313	4	3	7	13	14	27
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		90	90	180	22	5	27	4	20	24
Office	0	0		0	0	0	0	0	0	0	0	0
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**294,219**			**247**	**247**	**493**	**27**	**7**	**34**	**17**	**34**	**51**
Total Parcels SOMA Garage (6, 5, 4, 3)												
Retail	53,290	53		587	587	1,175	16	10	26	49	53	102
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		90	90	180	22	5	27	4	20	24
Office	342,137	342		149	149	299	37	5	42	7	33	40
Museum (employees)				10	10	20	5	1	6	1	5	6
Museum (visitors)	65,000	65		131	131	262	0	0	0	0	33	33
Total	**740,427**			**967**	**967**	**1,934**	**81**	**20**	**101**	**60**	**144**	**204**
Parcel 1												
Retail	16,000	16		176	176	353	5	3	8	15	16	31
Residential	285,000	300		282	282	564	9	35	43	34	18	53
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	15,000	15		7	7	13	2	0	2	0	1	2
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**316,000**			**465**	**465**	**929**	**15**	**38**	**53**	**49**	**36**	**85**
Grand Total all Parcels												
Retail	87,290	87		962	962	1,924	27	16	43	80	87	167
Residential	285,000	300		282	282	564	9	35	43	34	18	53
Lab	280,000	280		90	90	180	22	5	27	4	20	24
Office	657,137	657		287	287	573	71	10	81	13	64	77
Museum (employees)				10	10	20	5	1	6	1	5	6
Museum (visitors)	65,000	65		131	131	262	0	0	0	0	33	33
Total	**1,374,427**			**1,761**	**1,761**	**3,522**	**134**	**66**	**200**	**132**	**227**	**359**

				Bike Trips								
				Daily			AM Peak Hour			PM Peak Hour		
Parcel 6	**Program**	**1,000 SF or (Units)**	**BikeMode (enhanced)**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Retail	6,600	7	8.0%	20	20	40	1	0	1	2	2	3
Residential	0	0	10.0%	0	0	0	0	0	0	0	0	0
Lab	0	0	10.0%	0	0	0	0	0	0	0	0	0
Office	0	0	10.0%	0	0	0	0	0	0	0	0	0
Museum (employees)	0	0	14.0%	0	0	0	0	0	0	0	0	0
Museum (visitors)	0	0	8.0%	0	0	0	0	0	0	0	0	0
Total	**6,600**			**20**	**20**	**40**	**1**	**0**	**1**	**2**	**2**	**3**
Parcel 5												
Retail	17,077	17		52	52	104	1	1	2	4	5	9
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	355,761	356		222	222	443	55	8	63	10	50	60
Museum (employees)				9	9	18	5	1	5	1	5	5
Museum (visitors)	65,000	65		36	36	72	0	0	0	0	9	9
Total	**437,838**			**319**	**319**	**638**	**61**	**9**	**70**	**15**	**68**	**83**
Parcel 4												
Retail	15,394	15		47	47	94	1	1	2	4	4	8
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	-13,624	-14		-8	-8	-17	-2	0	-2	0	-2	-2
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**1,770**			**38**	**38**	**77**	**-1**	**1**	**0**	**4**	**2**	**6**
Parcel 2												
Retail	18,000	18		55	55	109	2	1	2	5	5	10
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	300,000	300		187	187	374	47	6	53	9	42	51
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**318,000**			**242**	**242**	**483**	**48**	**7**	**55**	**13**	**47**	**60**
Parcel 3												
Retail	14,219	14		43	43	86	1	1	2	4	4	8
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		128	128	257	32	7	39	5	29	34
Office	0	0		0	0	0	0	0	0	0	0	0
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**294,219**			**172**	**172**	**343**	**33**	**7**	**41**	**9**	**33**	**41**
Total Parcels SOMA Garage (6, 5, 4, 3)												
Retail	53,290	53		162	162	324	5	3	7	14	15	28
Residential	0	0		0	0	0	0	0	0	0	0	0
Lab	280,000	280		128	128	257	32	7	39	5	29	34
Office	342,137	342		213	213	426	53	7	60	10	48	58
Museum (employees)				9	9	18	5	1	5	1	5	5
Museum (visitors)	65,000	65		36	36	72	0	0	0	0	9	9
Total	**740,427**			**549**	**549**	**1,098**	**94**	**17**	**111**	**29**	**105**	**134**
Parcel 1												
Retail	16,000	16		49	49	97	1	1	2	4	4	8
Residential	285,000	300		113	113	225	3	14	17	14	7	21
Lab	0	0		0	0	0	0	0	0	0	0	0
Office	15,000	15		9	9	19	2	0	3	0	2	3
Museum (employees)												
Museum (visitors)	0	0		0	0	0	0	0	0	0	0	0
Total	**316,000**			**171**	**171**	**341**	**7**	**15**	**22**	**18**	**14**	**32**
Grand Total all Parcels												
Retail	87,290	87		265	265	531	7	5	12	22	24	46
Residential	285,000	300		113	113	225	3	14	17	14	7	21
Lab	280,000	280		128	128	257	32	7	39	5	29	34
Office	657,137	657		410	410	819	102	14	116	19	92	111
Museum (employees)				9	9	18	5	1	5	1	5	5
Museum (visitors)	65,000	65		36	36	72	0	0	0	0	9	9
Total	**1,374,427**			**961**	**961**	**1,922**	**149**	**39**	**189**	**60**	**166**	**226**

Project Trip Assignment Data

Access Assumptions for Employment Distribution Based on City of Cambridge PTDM Data

City/Town of Residence	Access	%
Cambridge	All Local	11%
Somerville	All Local N	8%
Arlington	River St, BU, Mass Ave	4%
WWNB	River St, BU, Mass Ave	10%
Boston	All Local S and Longfellow	15%
NE/NW	Longfellow or Local N	32%
West	Mass Ave/Broadway or Mass Pike to River St	13%
S/SE	Longfellow Bridge or Massachusetts Ave Bridge	7%
Total		100%

Source: City of Cambridge Kendall Square Central Square Critical Sums Analysis Trip Distribution Summary Report

Places of Work for Cambridge Residents from Census 2000 Journey-to-Work

City/Town of Residence	Access	Trips	%
Cambridge	All Local	25,554	47%
Boston	All Local S and Longfellow Bridge	14,678	27%
WWNB	River St, BU, Mass Ave	3,213	6%
Somerville	All Local N	1,305	2%
Medford	All Local N	464	1%
Everett	All Local N	340	1%
NE/NW	Longfellow or Local N	3,961	7%
S/SE	Longfellow or BU Bridge	898	2%
W/SW	Mass Pike to River St	1,856	3%
West	Mass Ave/Broadway	1,984	4%
Total		54,253	100%

Source: City of Cambridge Kendall Square Central Square Critical Sums Analysis Trip Distribution Summary Report

MIT 2014 Town Gown Academic Trip Distribution

City/Town of Residence	Trips	%
Cambridge	2347	21.9%
Boston	1448	13.5%
Somerville	791	7.4%
Arlington	383	3.6%
Brookline	335	3.1%
Newton	296	2.8%
Belmont	255	2.4%
Medford	244	2.3%
Lexington	242	2.3%
Quincy	192	1.8%
Watertown	184	1.7%
Malden	142	1.3%
Waltham	117	1.1%
Acton	63	0.6%
Bedford	35	0.3%
North Of Boston	767	7.2%
South of Boston	65	0.6%
West of Boston	123	1.1%
Outside 128	1573	14.7%
Outside 495	348	10.3%
Out of State	754	7.0%
Total	10,704	100%

Source: 2014 MIT Town Gown Report

Background Traffic

Build Condition

Binney Street Project Intersection Changes

Lanes and Geometrics
8: Galileo Galilei Way/Binney Street & Binney St & Fulkerson St

6/17/2015

Lane Group	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	11	11	11	10	10	10
Grade (%)		0%	0%			0%				0%	
Storage Length (ft)	0			0		0	0			100	0
Storage Lanes	0			0		0	1			1	1
Taper Length (ft)	25					25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97							0.86	0.98
Frt			0.975				0.865				0.850
Flt Protected										0.950	
Satd. Flow (prot)	0	2637	2607	0	0	0	1161	0	0	1401	1256
Flt Permitted										0.950	
Satd. Flow (perm)	0	2637	2607	0	0	0	1161	0	0	1204	1229
Right Turn on Red					No			Yes			Yes
Satd. Flow (RTOR)							73				73
Link Speed (mph)		30	30			30				30	
Link Distance (ft)		563	1570			729				556	
Travel Time (s)		12.8	35.7			16.6				12.6	

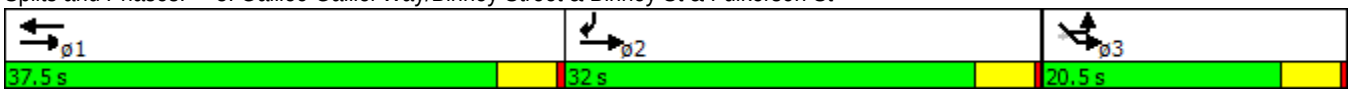
Intersection Summary

Area Type: CBD

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Configurations					
Volume (vph)	654	734	305	8	51
Turn Type	NA	NA	Prot	Prot	Perm
Protected Phases	1 2	1	2	3	
Permitted Phases					3
Detector Phase	1 2	1	2	3	3
Switch Phase					
Minimum Initial (s)		10.0	10.0	7.0	7.0
Minimum Split (s)		28.0	20.5	20.5	20.5
Total Split (s)		37.5	32.0	20.5	20.5
Total Split (%)		41.7%	35.6%	22.8%	22.8%
Yellow Time (s)		4.0	4.0	4.0	4.0
All-Red Time (s)		0.5	0.5	0.5	0.5
Lost Time Adjust (s)		-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)		4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?		Yes	Yes		
Recall Mode		Max	Min	Min	Min
Act Effct Green (s)	65.5	33.5	28.0	16.5	16.5
Actuated g/C Ratio	0.73	0.37	0.31	0.18	0.18
v/c Ratio	0.36	1.08	1.09	1.14	0.21
Control Delay	5.1	83.3	99.1	136.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	83.3	99.1	136.9	7.9
LOS	A	F	F	F	A
Approach Delay	5.1	83.3		115.3	
Approach LOS	A	F		F	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 69.3	Intersection LOS: E
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Galileo Galilei Way/Binney Street & Binney St & Fulkerson St



Lane Group	EBT	WBT	SBR	SEL	SER
Protected Phases	1 2	1	2	3	
Permitted Phases					3
Minimum Initial (s)		10.0	10.0	7.0	7.0
Minimum Split (s)		28.0	20.5	20.5	20.5
Total Split (s)		37.5	32.0	20.5	20.5
Total Split (%)		41.7%	35.6%	22.8%	22.8%
Maximum Green (s)		33.0	27.5	16.0	16.0
Yellow Time (s)		4.0	4.0	4.0	4.0
All-Red Time (s)		0.5	0.5	0.5	0.5
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?		Yes	Yes		
Vehicle Extension (s)		3.0	3.0	3.0	3.0
Minimum Gap (s)		3.0	3.0	3.0	3.0
Time Before Reduce (s)		0.0	0.0	0.0	0.0
Time To Reduce (s)		0.0	0.0	0.0	0.0
Recall Mode		Max	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0
90th %ile Green (s)		33.0	27.5	16.0	16.0
90th %ile Term Code		MaxR	Max	Max	Max
70th %ile Green (s)		33.0	27.5	16.0	16.0
70th %ile Term Code		MaxR	Max	Max	Max
50th %ile Green (s)		33.0	27.5	16.0	16.0
50th %ile Term Code		MaxR	Max	Max	Max
30th %ile Green (s)		33.0	27.5	16.0	16.0
30th %ile Term Code		MaxR	Max	Max	Max
10th %ile Green (s)		33.0	27.5	16.0	16.0
10th %ile Term Code		MaxR	Max	Max	Max

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Control Type: Semi Act-Uncoord
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 90
50th %ile Actuated Cycle: 90
30th %ile Actuated Cycle: 90
10th %ile Actuated Cycle: 90

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	12	10	11	10	11	10	11	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		200		0		250		0	0		0	0
Storage Lanes		1		0		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99				1.00				0.82	
Frt			0.974				0.995				0.850	
Flt Protected		0.950				0.950				0.978		
Satd. Flow (prot)	0	1486	2333	0	0	1404	2652	0	0	1497	1201	0
Flt Permitted		0.950				0.950				0.457		
Satd. Flow (perm)	0	1486	2333	0	0	1404	2652	0	0	699	982	0
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			30				30			30		
Link Distance (ft)			1570				701			237		
Travel Time (s)			35.7				15.9			5.4		

Intersection Summary

Area Type: CBD

Lane Group	SBT	SBR
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.967	
Flt Protected	0.995	
Satd. Flow (prot)	1388	0
Flt Permitted	0.938	
Satd. Flow (perm)	1295	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	826	
Travel Time (s)	18.8	

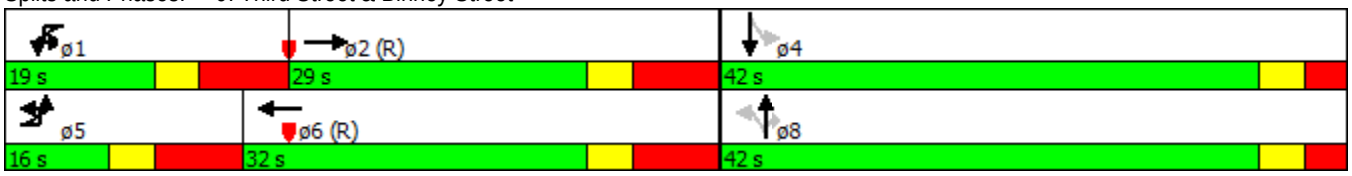
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	126	336	236	739	112	133	133	69	444
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	20.0	6.0	20.0	25.0	25.0	25.0	25.0	25.0
Minimum Split (s)	15.0	29.0	15.0	29.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	16.0	29.0	19.0	32.0	42.0	42.0	42.0	42.0	42.0
Total Split (%)	17.8%	32.2%	21.1%	35.6%	46.7%	46.7%	46.7%	46.7%	46.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	6.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	-4.0	0.0	-4.0		-2.0	0.0		-2.0
Total Lost Time (s)	9.0	5.0	9.0	5.0		4.0	6.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?		Yes	Yes						
Recall Mode	None	C-Min	None	C-Min	Min	Min	Min	Min	Min
Act Effct Green (s)	7.0	24.0	10.0	27.0		38.0	36.0		38.0
Actuated g/C Ratio	0.08	0.27	0.11	0.30		0.42	0.40		0.42
v/c Ratio	1.23	0.71	1.65	1.05		0.85	0.35		1.33
Control Delay	195.0	37.2	327.0	67.4		34.8	21.1		185.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	195.0	37.2	327.0	67.4		34.8	21.1		185.1
LOS	F	D	F	E		C	C		F
Approach Delay		75.4		128.8		30.0			185.1
Approach LOS		E		F		C			F

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 57 (63%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.65
Intersection Signal Delay: 118.5 Intersection LOS: F
Intersection Capacity Utilization 114.2% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 9: Third Street & Binney Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	6.0	20.0	6.0	20.0	25.0	25.0	25.0	25.0	25.0
Minimum Split (s)	15.0	29.0	15.0	29.0	31.0	31.0	31.0	31.0	31.0
Total Split (s)	16.0	29.0	19.0	32.0	42.0	42.0	42.0	42.0	42.0
Total Split (%)	17.8%	32.2%	21.1%	35.6%	46.7%	46.7%	46.7%	46.7%	46.7%
Maximum Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	6.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?		Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	Min	Min	Min	Min	Min
Walk Time (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Flash Dont Walk (s)		13.0		9.0	20.0	20.0	20.0	18.0	18.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0
90th %ile Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
70th %ile Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
50th %ile Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
30th %ile Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
30th %ile Term Code	Max	Coord	Max	Coord	Hold	Hold	Hold	Max	Max
10th %ile Green (s)	7.0	20.0	10.0	23.0	36.0	36.0	36.0	36.0	36.0
10th %ile Term Code	Max	Coord	Max	Coord	Hold	Hold	Hold	Max	Max

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 57 (63%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	13	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		0	100		0	25		0	25		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99		0.99	0.98		0.97	0.99	
Frt		0.983			0.988			0.932			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1330	1305	0	1486	2699	0	1342	1372	0	1430	1229	0
Flt Permitted	0.950			0.950			0.648			0.728		
Satd. Flow (perm)	1330	1305	0	1486	2699	0	905	1372	0	1062	1229	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		701			461			179			273	
Travel Time (s)		15.9			10.5			4.1			6.2	

Intersection Summary

Area Type: CBD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	76	437	139	888	43	22	17	81
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	1	6	5	2		8		4
Permitted Phases					8		4	
Detector Phase	1	6	5	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	6.0	25.0	6.0	25.0	25.0	25.0	25.0	25.0
Minimum Split (s)	15.0	34.0	15.0	34.0	31.0	31.0	31.0	31.0
Total Split (s)	15.0	42.0	17.0	44.0	31.0	31.0	31.0	31.0
Total Split (%)	16.7%	46.7%	18.9%	48.9%	34.4%	34.4%	34.4%	34.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	6.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	9.0	9.0	9.0	9.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	Min	Min
Act Effct Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.07	0.37	0.09	0.39	0.28	0.28	0.28	0.28
v/c Ratio	0.94	1.12	1.14	1.00	0.19	0.12	0.06	0.47
Control Delay	122.5	98.9	162.2	56.2	27.3	25.4	24.8	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.5	98.9	162.2	56.2	27.3	25.4	24.8	32.4
LOS	F	F	F	E	C	C	C	C
Approach Delay		102.1		69.5		26.3		31.6
Approach LOS		F		E		C		C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 74.1 Intersection LOS: E
Intersection Capacity Utilization 97.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 10: Second Street & Binney Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	1	6	5	2		8		4
Permitted Phases					8		4	
Minimum Initial (s)	6.0	25.0	6.0	25.0	25.0	25.0	25.0	25.0
Minimum Split (s)	15.0	34.0	15.0	34.0	31.0	31.0	31.0	31.0
Total Split (s)	15.0	42.0	17.0	44.0	31.0	31.0	31.0	31.0
Total Split (%)	16.7%	46.7%	18.9%	48.9%	34.4%	34.4%	34.4%	34.4%
Maximum Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	6.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	Min	Min	Min	Min
Walk Time (s)		3.0		3.0	3.0	3.0	3.0	3.0
Flash Dont Walk (s)		10.0		10.0	19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0
90th %ile Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
70th %ile Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
50th %ile Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
30th %ile Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max
10th %ile Green (s)	6.0	33.0	8.0	35.0	25.0	25.0	25.0	25.0
10th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	11	11	11	12	16	12	12	11
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	200		0		0		0	0		0	0	
Storage Lanes	1		0		0		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.99			0.98			1.00
Frt		0.970				0.984			0.939			
Flt Protected	0.950					0.991			0.996			0.994
Satd. Flow (prot)	1083	2467	0	0	0	2795	0	0	1215	0	0	1587
Flt Permitted	0.163					0.786			0.972			0.962
Satd. Flow (perm)	186	2467	0	0	0	2217	0	0	1182	0	0	1531
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						26						
Link Speed (mph)		30				30			30			30
Link Distance (ft)		461				264			210			270
Travel Time (s)		10.5				6.0			4.8			6.1

Intersection Summary

Area Type: CBD

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	0.89
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1136
Flt Permitted	
Satd. Flow (perm)	1014
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	

Intersection Summary

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	169	243	2	229	875	4	21	29	233	230
Turn Type	Perm	NA	pm+pt	pm+pt	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2	1	1	6		8		4	
Permitted Phases	2		6	6		8		4		4
Detector Phase	2	2	1	1	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	4.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	25.0	11.0	11.0	20.5	25.0	25.0	25.0	25.0	25.0
Total Split (s)	80.0	80.0	11.0	11.0	91.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	66.7%	66.7%	9.2%	9.2%	75.8%	24.2%	24.2%	24.2%	24.2%	24.2%
Yellow Time (s)	3.5	3.5	3.0	3.0	4.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	2.0	0.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0			0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0			4.5		5.0		5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						
Recall Mode	C-Max	C-Max	None	None	C-Max	Max	Max	Max	Max	Max
Act Effct Green (s)	86.0	86.0			86.5		24.0		24.0	24.0
Actuated g/C Ratio	0.72	0.72			0.72		0.20		0.20	0.20
v/c Ratio	1.38	0.19			0.84		0.21		0.93	1.24
Control Delay	234.1	5.9			14.9		42.9		84.4	182.7
Queue Delay	0.0	0.0			31.5		0.0		0.0	0.0
Total Delay	234.1	5.9			46.4		42.9		84.4	182.7
LOS	F	A			D		D		F	F
Approach Delay		87.5			46.4		42.9		130.3	
Approach LOS		F			D		D		F	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.38
Intersection Signal Delay: 73.4 Intersection LOS: E
Intersection Capacity Utilization 101.4% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 11: First Street & Binney Street

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases		2	1	1	6		8		4	
Permitted Phases	2		6	6		8		4		4
Minimum Initial (s)	4.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	25.0	11.0	11.0	20.5	25.0	25.0	25.0	25.0	25.0
Total Split (s)	80.0	80.0	11.0	11.0	91.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	66.7%	66.7%	9.2%	9.2%	75.8%	24.2%	24.2%	24.2%	24.2%	24.2%
Maximum Green (s)	75.0	75.0	6.0	6.0	86.5	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	3.5	3.5	3.0	3.0	4.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	2.0	0.5	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	None	None	C-Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0			0	0	0	0	0	0
90th %ile Green (s)	86.0	86.0	0.0	0.0	86.5	24.0	24.0	24.0	24.0	24.0
90th %ile Term Code	Coord	Coord	Skip	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	86.0	86.0	0.0	0.0	86.5	24.0	24.0	24.0	24.0	24.0
70th %ile Term Code	Coord	Coord	Skip	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	86.0	86.0	0.0	0.0	86.5	24.0	24.0	24.0	24.0	24.0
50th %ile Term Code	Coord	Coord	Skip	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	86.0	86.0	0.0	0.0	86.5	24.0	24.0	24.0	24.0	24.0
30th %ile Term Code	Coord	Coord	Skip	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	86.0	86.0	0.0	0.0	86.5	24.0	24.0	24.0	24.0	24.0
10th %ile Term Code	Coord	Coord	Skip	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	10	10	10	12	12	12
Grade (%)	0%				0%		0%	
Storage Length (ft)	0	0		250		0		0
Storage Lanes	2	0		2		0		1
Taper Length (ft)	25			25		25		
Lane Util. Factor	0.97	0.95	0.91	0.97	0.91	0.95	0.95	1.00
Ped Bike Factor	1.00							0.90
Frt	0.998							0.850
Flt Protected	0.953			0.950			0.999	
Satd. Flow (prot)	2783	0	0	3239	4793	0	3570	1404
Flt Permitted	0.953			0.950			0.928	
Satd. Flow (perm)	2783	0	0	3239	4793	0	3316	1265
Right Turn on Red		Yes						Yes
Satd. Flow (RTOR)	1							435
Link Speed (mph)	30				30		30	
Link Distance (ft)	264				605		866	
Travel Time (s)	6.0				13.8		19.7	

Intersection Summary

Area Type: Other

Lane Group	EBL	NBL	NBT	SBU	SBT	SBR
Lane Configurations						
Volume (vph)	291	692	821	18	1247	542
Turn Type	Prot	Prot	NA	Perm	NA	Perm
Protected Phases	3	1	6		2	
Permitted Phases				2		2
Detector Phase	3	1	6	2	2	2
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	13.0	13.0	30.0	30.0	30.0
Total Split (s)	30.0	39.0	90.0	51.0	51.0	51.0
Total Split (%)	25.0%	32.5%	75.0%	42.5%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag		Lead		Lag	Lag	Lag
Lead-Lag Optimize?		Yes		Yes	Yes	Yes
Recall Mode	C-Max	Max	Max	Max	Max	Max
Act Effct Green (s)	25.0	34.0	85.0		46.0	46.0
Actuated g/C Ratio	0.21	0.28	0.71		0.38	0.38
v/c Ratio	0.55	0.88	0.26		1.02	0.73
Control Delay	38.4	53.1	6.5		57.0	15.1
Queue Delay	1.4	0.0	0.0		0.0	2.2
Total Delay	39.8	53.1	6.5		57.0	17.3
LOS	D	D	A		E	B
Approach Delay	39.8		28.8		45.1	
Approach LOS	D		C		D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 3:EBL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 37.6 Intersection LOS: D
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 12: Land Boulevard & Binney Street

Lane Group	EBL	NBL	NBT	SBU	SBT	SBR
Protected Phases	3	1	6		2	
Permitted Phases				2		2
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	13.0	13.0	30.0	30.0	30.0
Total Split (s)	30.0	39.0	90.0	51.0	51.0	51.0
Total Split (%)	25.0%	32.5%	75.0%	42.5%	42.5%	42.5%
Maximum Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5
Lead/Lag		Lead		Lag	Lag	Lag
Lead-Lag Optimize?		Yes		Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0			5.0	5.0	5.0
Flash Dont Walk (s)	18.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
90th %ile Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
90th %ile Term Code	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
70th %ile Term Code	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
50th %ile Term Code	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
30th %ile Term Code	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	25.0	34.0	85.0	46.0	46.0	46.0
10th %ile Term Code	Coord	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 3:EBL, Start of Green
Control Type: Actuated-Coordinated

Lanes and Geometrics
8: Galileo Galilei Way/Binney Street & Binney St & Fulkerson St

6/17/2015

Lane Group	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	11	11	11	10	10	10
Grade (%)		0%	0%			0%				0%	
Storage Length (ft)	0			0		0	0			100	0
Storage Lanes	0			0		0	1			1	1
Taper Length (ft)	25					25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.94							0.77	0.96
Frt			0.965				0.865				0.850
Flt Protected										0.950	
Satd. Flow (prot)	0	2888	2592	0	0	0	1206	0	0	1487	1304
Flt Permitted										0.950	
Satd. Flow (perm)	0	2888	2592	0	0	0	1206	0	0	1144	1248
Right Turn on Red					No			Yes			Yes
Satd. Flow (RTOR)							73				81
Link Speed (mph)		30	30			30				30	
Link Distance (ft)		639	1570			729				650	
Travel Time (s)		14.5	35.7			16.6				14.8	

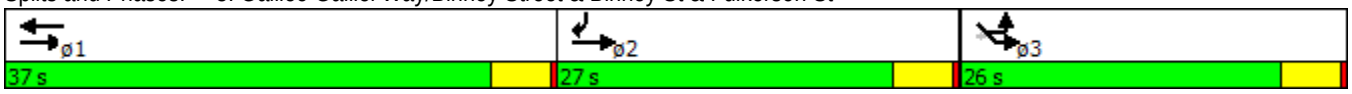
Intersection Summary

Area Type: CBD

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Configurations					
Volume (vph)	905	595	329	3	83
Turn Type	NA	NA	Prot	Prot	Perm
Protected Phases	1 2	1	2	3	
Permitted Phases					3
Detector Phase	1 2	1	2	3	3
Switch Phase					
Minimum Initial (s)		20.0	12.0	13.0	13.0
Minimum Split (s)		28.0	20.5	23.0	23.0
Total Split (s)		37.0	27.0	26.0	26.0
Total Split (%)		41.1%	30.0%	28.9%	28.9%
Yellow Time (s)		4.0	4.0	4.0	4.0
All-Red Time (s)		0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?		Yes	Yes		
Recall Mode		Max	Min	Min	Min
Act Effct Green (s)	59.6	32.6	22.5	18.0	18.0
Actuated g/C Ratio	0.69	0.38	0.26	0.21	0.21
v/c Ratio	0.52	0.94	1.40	0.76	0.28
Control Delay	8.2	45.5	220.6	49.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	45.5	220.6	49.0	10.6
LOS	A	D	F	D	B
Approach Delay	8.2	45.5		38.3	
Approach LOS	A	D		D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.6	
Natural Cycle: 120	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay: 63.0	Intersection LOS: E
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Galileo Galilei Way/Binney Street & Binney St & Fulkerson St



Lane Group	EBT	WBT	SBR	SEL	SER
Protected Phases	1 2	1	2	3	
Permitted Phases					3
Minimum Initial (s)		20.0	12.0	13.0	13.0
Minimum Split (s)		28.0	20.5	23.0	23.0
Total Split (s)		37.0	27.0	26.0	26.0
Total Split (%)		41.1%	30.0%	28.9%	28.9%
Maximum Green (s)		32.5	22.5	21.5	21.5
Yellow Time (s)		4.0	4.0	4.0	4.0
All-Red Time (s)		0.5	0.5	0.5	0.5
Lead/Lag		Lead	Lag		
Lead-Lag Optimize?		Yes	Yes		
Vehicle Extension (s)		3.0	3.0	3.0	3.0
Minimum Gap (s)		3.0	3.0	3.0	3.0
Time Before Reduce (s)		0.0	0.0	0.0	0.0
Time To Reduce (s)		0.0	0.0	0.0	0.0
Recall Mode		Max	Min	Min	Min
Walk Time (s)		5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0
90th %ile Green (s)		32.5	22.5	21.5	21.5
90th %ile Term Code		MaxR	Max	Max	Max
70th %ile Green (s)		32.5	22.5	21.5	21.5
70th %ile Term Code		MaxR	Max	Max	Max
50th %ile Green (s)		32.5	22.5	18.8	18.8
50th %ile Term Code		MaxR	Max	Gap	Gap
30th %ile Green (s)		32.5	22.5	15.5	15.5
30th %ile Term Code		MaxR	Max	Gap	Gap
10th %ile Green (s)		32.5	22.5	13.0	13.0
10th %ile Term Code		MaxR	Max	Min	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 86.6
Control Type: Semi Act-Uncoord
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 90
50th %ile Actuated Cycle: 87.3
30th %ile Actuated Cycle: 84
10th %ile Actuated Cycle: 81.5

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	12	10	11	10	11	10	11	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		200		0		250		0	0		0	0
Storage Lanes		1		0		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00				0.98			1.00	0.68	
Frt			0.992				0.984				0.850	
Flt Protected		0.950				0.950				0.992		
Satd. Flow (prot)	0	1486	2848	0	0	1486	2882	0	0	1573	1391	0
Flt Permitted		0.950				0.950				0.835		
Satd. Flow (perm)	0	1486	2848	0	0	1486	2882	0	0	1321	943	0
Right Turn on Red				No				No			No	
Satd. Flow (RTOR)												
Link Speed (mph)			30				30			30		
Link Distance (ft)			1570				701			237		
Travel Time (s)			35.7				15.9			5.4		

Intersection Summary

Area Type: CBD

Lane Group	SBT	SBR
Lane Configurations		
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.969	
Flt Protected	0.995	
Satd. Flow (prot)	1397	0
Flt Permitted	0.698	
Satd. Flow (perm)	980	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	798	
Travel Time (s)	18.1	

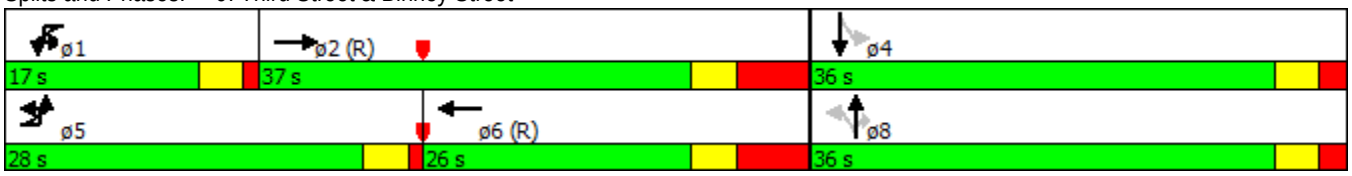
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	395	658	162	581	69	374	241	36	227
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	2.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	18.0	35.0	11.0	24.0	32.0	32.0	32.0	32.0	32.0
Total Split (s)	28.0	37.0	17.0	26.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	31.1%	41.1%	18.9%	28.9%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	5.0	1.0	5.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-4.0	1.0	-4.0		-1.0	0.0		-1.0
Total Lost Time (s)	4.0	4.0	5.0	4.0		4.0	5.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?									
Recall Mode	None	C-Max	None	C-Max	Min	Min	Min	Min	Min
Act Effct Green (s)	24.0	33.1	11.9	22.0		32.0	31.0		32.0
Actuated g/C Ratio	0.27	0.37	0.13	0.24		0.36	0.34		0.36
v/c Ratio	1.09	0.72	0.91	1.00		1.01	0.80		1.13
Control Delay	104.0	29.3	73.7	72.3		65.9	36.5		118.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	104.0	29.3	73.7	72.3		65.9	36.5		118.1
LOS	F	C	E	E		E	D		F
Approach Delay		56.3		72.6		55.5			118.1
Approach LOS		E		E		E			F

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 68.2 Intersection LOS: E
Intersection Capacity Utilization 105.9% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 9: Third Street & Binney Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Minimum Initial (s)	2.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	18.0	35.0	11.0	24.0	32.0	32.0	32.0	32.0	32.0
Total Split (s)	28.0	37.0	17.0	26.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	31.1%	41.1%	18.9%	28.9%	40.0%	40.0%	40.0%	40.0%	40.0%
Maximum Green (s)	24.0	29.0	13.0	18.0	31.0	31.0	31.0	31.0	31.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	5.0	1.0	5.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	Min	Min	Min	Min	Min
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0
90th %ile Green (s)	24.0	29.0	13.0	18.0	31.0	31.0	31.0	31.0	31.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
70th %ile Green (s)	24.0	29.0	13.0	18.0	31.0	31.0	31.0	31.0	31.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
50th %ile Green (s)	24.0	29.0	13.0	18.0	31.0	31.0	31.0	31.0	31.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
30th %ile Green (s)	24.0	29.0	13.0	18.0	31.0	31.0	31.0	31.0	31.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Max	Max	Max
10th %ile Green (s)	24.0	29.7	12.3	18.0	31.0	31.0	31.0	31.0	31.0
10th %ile Term Code	Max	Coord	Gap	Coord	Max	Max	Max	Max	Max

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 3 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	13	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	275		0	100		0	25		0	25		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.98		0.95	0.96		0.95	0.95	
Frt		0.996			0.988			0.920			0.899	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1458	1583	0	1391	2856	0	1516	1459	0	1516	1180	0
Flt Permitted	0.950			0.950			0.632			0.599		
Satd. Flow (perm)	1458	1583	0	1391	2856	0	963	1459	0	910	1180	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		701			461			188			273	
Travel Time (s)		15.9			10.5			4.3			6.2	

Intersection Summary

Area Type: CBD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	179	773	44	577	117	89	25	58
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	25.0	11.0	25.0	24.0	24.0	24.0	24.0
Total Split (s)	21.0	49.0	12.0	40.0	29.0	29.0	29.0	29.0
Total Split (%)	23.3%	54.4%	13.3%	44.4%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	8.0	5.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Act Effct Green (s)	14.8	45.8	6.7	33.2	21.0	21.0	21.0	21.0
Actuated g/C Ratio	0.16	0.51	0.07	0.37	0.23	0.23	0.23	0.23
v/c Ratio	0.81	1.07	0.47	0.65	0.57	0.61	0.13	0.69
Control Delay	58.3	68.1	54.7	27.5	41.7	39.6	29.2	46.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	68.1	54.7	27.5	41.7	39.6	29.2	46.7
LOS	E	E	D	C	D	D	C	D
Approach Delay		66.3		29.3		40.4		44.5
Approach LOS		E		C		D		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 25 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 49.0 Intersection LOS: D
Intersection Capacity Utilization 94.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 10: Second Street & Binney Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	25.0	11.0	25.0	24.0	24.0	24.0	24.0
Total Split (s)	21.0	49.0	12.0	40.0	29.0	29.0	29.0	29.0
Total Split (%)	23.3%	54.4%	13.3%	44.4%	32.2%	32.2%	32.2%	32.2%
Maximum Green (s)	16.0	41.0	7.0	32.0	21.0	21.0	21.0	21.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0
90th %ile Green (s)	16.0	41.0	7.0	32.0	21.0	21.0	21.0	21.0
90th %ile Term Code	Max	Coord	Max	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	16.0	41.0	7.0	32.0	21.0	21.0	21.0	21.0
70th %ile Term Code	Max	Coord	Max	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	16.0	41.0	7.0	32.0	21.0	21.0	21.0	21.0
50th %ile Term Code	Max	Coord	Max	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	15.1	53.0	0.0	32.9	21.0	21.0	21.0	21.0
30th %ile Term Code	Gap	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	11.1	53.0	0.0	36.9	21.0	21.0	21.0	21.0
10th %ile Term Code	Gap	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 25 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	11	11	12	16	12	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.97			0.97			1.00	0.84
Frt		0.975			0.971			0.926				0.850
Flt Protected	0.950				0.995			0.999			0.999	
Satd. Flow (prot)	1444	2927	0	0	2847	0	0	1735	0	0	1635	1338
Flt Permitted	0.396				0.821			0.990			0.991	
Satd. Flow (perm)	602	2927	0	0	2349	0	0	1716	0	0	1621	1127
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)					52							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		461			264			210			270	
Travel Time (s)		10.5			6.0			4.8			6.1	

Intersection Summary

Area Type: CBD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	341	466	57	396	5	66	8	282	270
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2	1	6		8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	2	2	1	6	8	8	4	4	4
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	25.0	21.0	20.5	25.0	25.0	25.0	25.0	25.0
Total Split (s)	62.0	62.0	21.0	83.0	37.0	37.0	37.0	37.0	37.0
Total Split (%)	51.7%	51.7%	17.5%	69.2%	30.8%	30.8%	30.8%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	4.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	0.5	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0		4.5		5.0		5.0	5.0
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max	Max	Max
Act Effct Green (s)	78.0	78.0		78.5		32.0		32.0	32.0
Actuated g/C Ratio	0.65	0.65		0.65		0.27		0.27	0.27
v/c Ratio	0.95	0.32		0.39		0.37		0.73	0.98
Control Delay	56.0	9.8		8.4		38.7		51.4	90.8
Queue Delay	0.0	0.0		0.8		0.0		0.0	0.0
Total Delay	56.0	9.9		9.2		38.7		51.4	90.8
LOS	E	A		A		D		D	F
Approach Delay		27.3		9.2		38.7		70.4	
Approach LOS		C		A		D		E	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 34.5 Intersection LOS: C
Intersection Capacity Utilization 92.4% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 11: First Street & Binney Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases		2	1	6		8		4	
Permitted Phases	2		6		8		4		4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	25.0	21.0	20.5	25.0	25.0	25.0	25.0	25.0
Total Split (s)	62.0	62.0	21.0	83.0	37.0	37.0	37.0	37.0	37.0
Total Split (%)	51.7%	51.7%	17.5%	69.2%	30.8%	30.8%	30.8%	30.8%	30.8%
Maximum Green (s)	57.0	57.0	16.0	78.5	32.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.5	3.5	3.5	4.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	0.5	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	78.0	78.0	0.0	78.5	32.0	32.0	32.0	32.0	32.0
90th %ile Term Code	Coord	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	78.0	78.0	0.0	78.5	32.0	32.0	32.0	32.0	32.0
70th %ile Term Code	Coord	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	78.0	78.0	0.0	78.5	32.0	32.0	32.0	32.0	32.0
50th %ile Term Code	Coord	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	78.0	78.0	0.0	78.5	32.0	32.0	32.0	32.0	32.0
30th %ile Term Code	Coord	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	78.0	78.0	0.0	78.5	32.0	32.0	32.0	32.0	32.0
10th %ile Term Code	Coord	Coord	Skip	Coord	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	10	10	10	12	12
Grade (%)	0%				0%	0%	
Storage Length (ft)	0	0		250			0
Storage Lanes	2	0		2			1
Taper Length (ft)	25			25			
Lane Util. Factor	0.97	0.95	0.91	0.97	0.91	0.95	1.00
Ped Bike Factor	1.00						0.93
Frt	0.998						0.850
Flt Protected	0.953			0.950			
Satd. Flow (prot)	3322	0	0	3237	4841	3574	1429
Flt Permitted	0.953			0.950			
Satd. Flow (perm)	3322	0	0	3237	4841	3574	1327
Right Turn on Red		Yes					Yes
Satd. Flow (RTOR)	1						188
Link Speed (mph)	30				30	30	
Link Distance (ft)	264				979	859	
Travel Time (s)	6.0				22.3	19.5	

Intersection Summary

Area Type: Other

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Volume (vph)	551	320	867	1236	241
Turn Type	Prot	Prot	NA	NA	Perm
Protected Phases	3	1	6	2	
Permitted Phases					2
Detector Phase	3	1	6	2	2
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	13.0	21.0	30.0	30.0
Total Split (s)	40.0	33.0	80.0	47.0	47.0
Total Split (%)	33.3%	27.5%	66.7%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead		Lag	Lag
Lead-Lag Optimize?		Yes			
Recall Mode	C-Max	None	Max	Max	Max
Act Effct Green (s)	35.0	20.2	75.0	49.8	49.8
Actuated g/C Ratio	0.29	0.17	0.62	0.42	0.42
v/c Ratio	0.63	0.70	0.33	0.87	0.38
Control Delay	31.9	53.8	11.0	27.1	2.6
Queue Delay	5.0	0.0	0.0	0.0	0.0
Total Delay	36.9	53.8	11.0	27.1	2.6
LOS	D	D	B	C	A
Approach Delay	36.9		22.9	23.1	
Approach LOS	D		C	C	

Intersection Summary

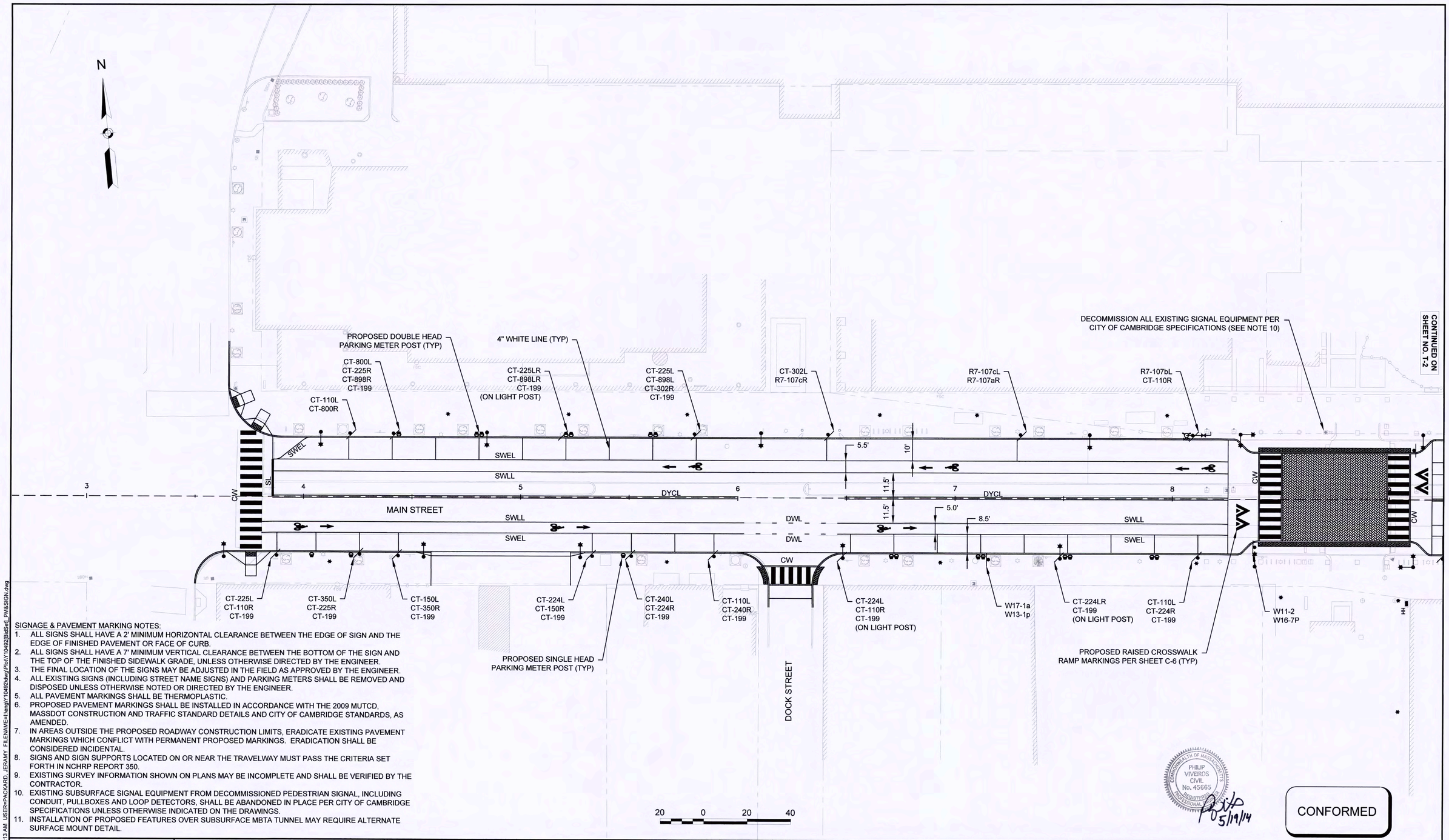
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 3:EBL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Land Boulevard & Binney Street

Lane Group	EBL	NBL	NBT	SBT	SBR
Protected Phases	3	1	6	2	
Permitted Phases					2
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	30.0	13.0	21.0	30.0	30.0
Total Split (s)	40.0	33.0	80.0	47.0	47.0
Total Split (%)	33.3%	27.5%	66.7%	39.2%	39.2%
Maximum Green (s)	35.0	28.0	75.0	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5
Lead/Lag		Lead		Lag	Lag
Lead-Lag Optimize?		Yes			
Vehicle Extension (s)	4.0	4.0	3.0	4.0	4.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	None	Max	Max	Max
Walk Time (s)	7.0			5.0	5.0
Flash Dont Walk (s)	18.0			20.0	20.0
Pedestrian Calls (#/hr)	0			0	0
90th %ile Green (s)	35.0	25.1	75.0	44.9	44.9
90th %ile Term Code	Coord	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	35.0	22.2	75.0	47.8	47.8
70th %ile Term Code	Coord	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	35.0	20.2	75.0	49.8	49.8
50th %ile Term Code	Coord	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	35.0	18.2	75.0	51.8	51.8
30th %ile Term Code	Coord	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	35.0	15.2	75.0	54.8	54.8
10th %ile Term Code	Coord	Gap	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 3:EBL, Start of Green
Control Type: Actuated-Coordinated

Main Street Reconstruction Intersection Changes



SIGNAGE & PAVEMENT MARKING NOTES:

1. ALL SIGNS SHALL HAVE A 2' MINIMUM HORIZONTAL CLEARANCE BETWEEN THE EDGE OF SIGN AND THE EDGE OF FINISHED PAVEMENT OR FACE OF CURB.
2. ALL SIGNS SHALL HAVE A 7' MINIMUM VERTICAL CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND THE TOP OF THE FINISHED SIDEWALK GRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE FINAL LOCATION OF THE SIGNS MAY BE ADJUSTED IN THE FIELD AS APPROVED BY THE ENGINEER.
4. ALL EXISTING SIGNS (INCLUDING STREET NAME SIGNS) AND PARKING METERS SHALL BE REMOVED AND DISPOSED UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. PROPOSED PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE 2009 MUTCD, MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS AND CITY OF CAMBRIDGE STANDARDS, AS AMENDED.
7. IN AREAS OUTSIDE THE PROPOSED ROADWAY CONSTRUCTION LIMITS, ERADICATE EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH PERMANENT PROPOSED MARKINGS. ERADICATION SHALL BE CONSIDERED INCIDENTAL.
8. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELWAY MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350.
9. EXISTING SURVEY INFORMATION SHOWN ON PLANS MAY BE INCOMPLETE AND SHALL BE VERIFIED BY THE CONTRACTOR.
10. EXISTING SUBSURFACE SIGNAL EQUIPMENT FROM DECOMMISSIONED PEDESTRIAN SIGNAL, INCLUDING CONDUIT, PULLBOXES AND LOOP DETECTORS, SHALL BE ABANDONED IN PLACE PER CITY OF CAMBRIDGE SPECIFICATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
11. INSTALLATION OF PROPOSED FEATURES OVER SUBSURFACE MBTA TUNNEL MAY REQUIRE ALTERNATE SURFACE MOUNT DETAIL.

COMMONWEALTH OF MASSACHUSETTS
PHILIP VIVEIROS
CIVIL
No. 45665
REGISTERED PROFESSIONAL ENGINEER
5/19/14

CONFORMED

HDR ENGINEERING, INC.
695 ATLANTIC AVENUE, 2FL
BOSTON, MASSACHUSETTS 02111-2626
(617) 357-7700

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

kmdg KLOPFER MARTIN DESIGN GROUP

KLEINFELDER Bright People. Right Solutions.

Scale	AS NOTED
Date	MAY 2014
Job No.	
Designed by	JMP
Drawn by	JMP
Checked by	PV
Approved by	

No.	Description	Date
	REVISIONS	

THE WORKS — CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

Client: CITY OF CAMBRIDGE, MA

Project: RECONSTRUCTION OF MAIN STREET KENDALL SQUARE

Drawing: SIGNAGE & PAVEMENT MARKING PLAN - 1

Sheet: T-1

File No.

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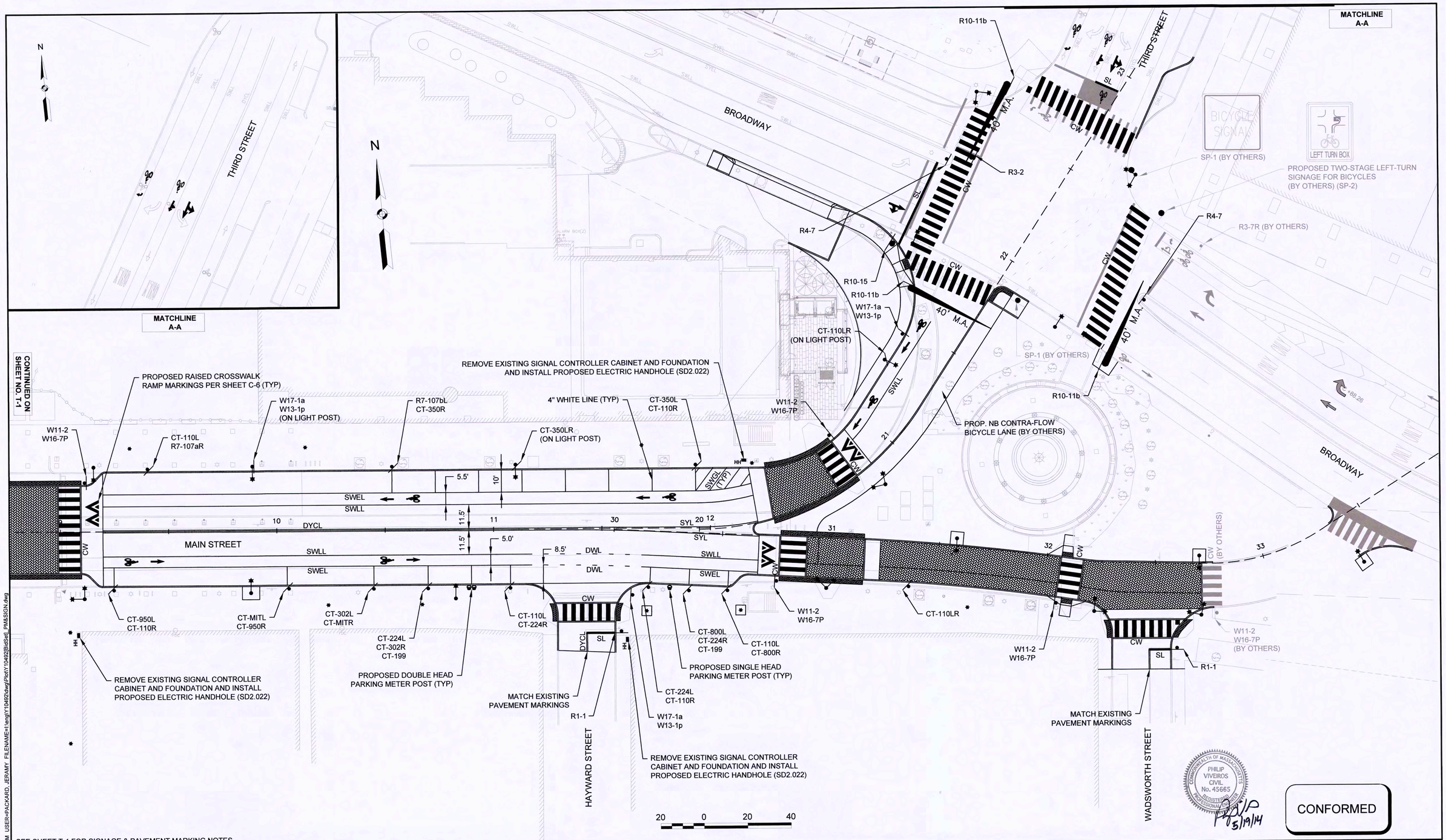

SEE SHEET T-1 FOR SIGNAGE & PAVEMENT MARKING NOTES

CONFORMED

PHILIP VIVEIROS CIVIL No. 45665 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS 5/19/14

HDR ENGINEERING, INC.
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BOSTON, MASSACHUSETTS 02111-2626
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Scale	AS NOTED
Date	MAY 2014
Job No.	
Designed by	JMP
Drawn by	JMP
Checked by	PV
Approved by	

No.	Description	Date
	REVISIONS	

THE WORKS — CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

Client: CITY OF CAMBRIDGE, MA

Project: RECONSTRUCTION OF MAIN STREET KENDALL SQUARE

Drawing: SIGNAGE & PAVEMENT MARKING PLAN - 2

Sheet: T-2

File No.

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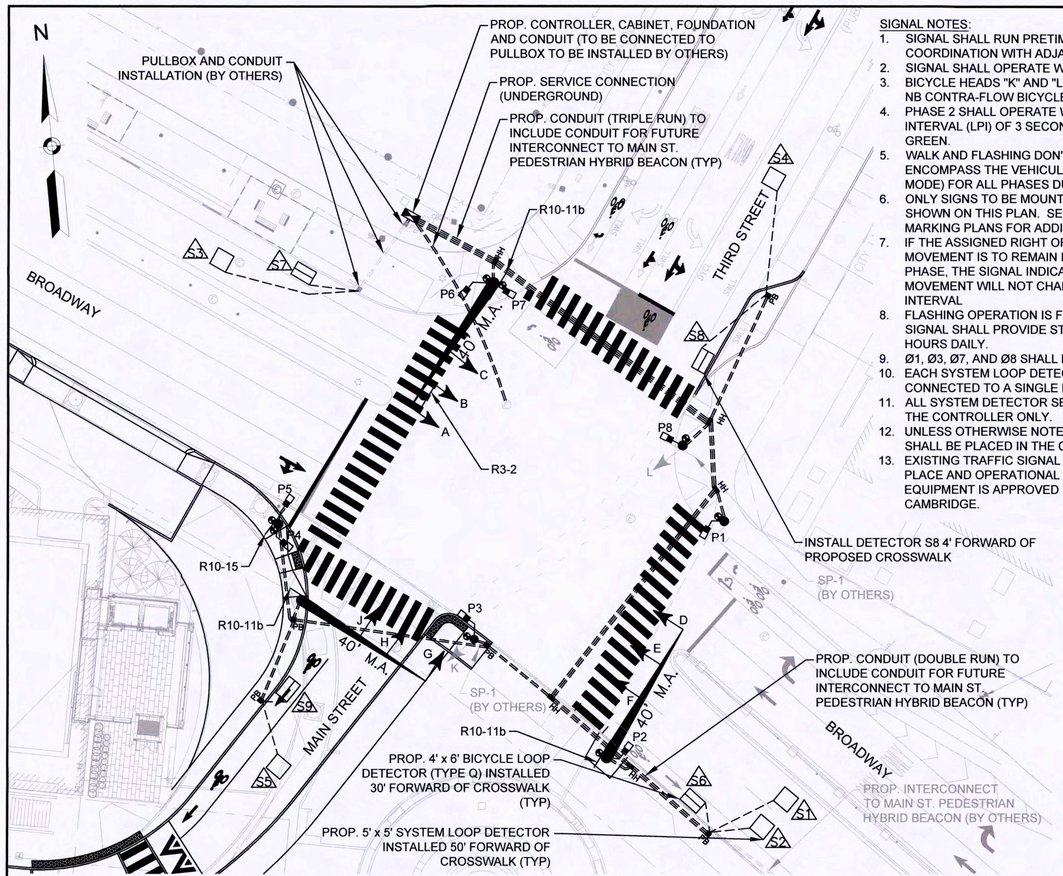


SIGNAL NOTES:

1. SIGNAL SHALL RUN PRETIMED, IN TIME-BASED COORDINATION WITH ADJACENT SIGNALS.
2. SIGNAL SHALL OPERATE WITH NEMA DUAL-RING PHASING.
3. BICYCLE HEADS "K" AND "L" WILL BE INSTALLED WITH PROP. NB CONTRA-FLOW BICYCLE LANE (BY OTHERS).
4. PHASE 2 SHALL OPERATE WITH A LEADING PEDESTRIAN INTERVAL (LPI) OF 3 SECONDS PRIOR TO BROADWAY EB GREEN.
5. WALK AND FLASHING DON'T WALK TIMES SHALL FULLY ENCOMPASS THE VEHICULAR GREEN (VIA "REST IN WALK" MODE) FOR ALL PHASES DURING ALL TIME PERIODS.
6. ONLY SIGNS TO BE MOUNTED ON SIGNAL EQUIPMENT ARE SHOWN ON THIS PLAN. SEE SIGNAGE & PAVEMENT MARKING PLANS FOR ADDITIONAL SIGNS.
7. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL
8. FLASHING OPERATION IS FOR EMERGENCY ONLY. THE SIGNAL SHALL PROVIDE STOP AND GO OPERATION 24 HOURS DAILY.
9. Ø1, Ø3, Ø7, AND Ø8 SHALL NOT BE USED.
10. EACH SYSTEM LOOP DETECTOR GROUP SHALL BE CONNECTED TO A SINGLE LOOP AMPLIFIER CHANNEL.
11. ALL SYSTEM DETECTOR SETTINGS TO BE IMPLEMENTED AT THE CONTROLLER ONLY.
12. UNLESS OTHERWISE NOTED, SYSTEM LOOP DETECTORS SHALL BE PLACED IN THE CENTER OF THE LANE.
13. EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN PLACE AND OPERATIONAL UNTIL PROPOSED SIGNAL EQUIPMENT IS APPROVED FOR USE BY THE CITY OF CAMBRIDGE.

SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	Ø2 (3 SEC LPI) 1	2	3	Ø4 (OL A*) 4	5	6	Ø5 7	8	9	Ø6 10	11	12	FLASH OPER.
BROADWAY	W.B.	A,B	R	R	R	R	R	R	R	R	R	↑	Y	R	FY
BROADWAY	W.B.	C	~~R~~	~~R~~	~~R~~	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~FY~~
BROADWAY	E.B.	D	←R	←R	←R	←R	←R	←R	←G	←Y	←R	←R	←R	←R	←FR
BROADWAY	E.B.	E	↑	Y	R	R	R	R	R	R	R	R	R	R	FY
BROADWAY	E.B.	F	G	Y	R	R	R	R	R	R	R	R	R	R	FY
THIRD STREET	S.B.	G,H	R	R	R	↑/~~G~~	Y	R	R	R	R	R	R	R	FR
THIRD STREET	S.B.	J	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~FR~~
THIRD STREET CONNECTOR	N.B.	K,L	R	R	R	R	R	R	↑	Y	R	R	R	R	FR
PEDESTRIANS	N.B./S.B.	P1–P2	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	OUT
PEDESTRIANS	E.B./W.B.	P3–P4	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIANS	N.B./S.B.	P5–P6	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIANS	E.B./W.B.	P7–P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OUT
TIMING IN SECONDS															
MINIMUM INTERVAL			15			7			7			15			EMERGENCY ONLY
VEHICLE EXTENSION			3			3			3			3			
MAXIMUM I	(M–F 0600–1000)		32			24			22			32			
MAXIMUM II	(M–F 1500–2000)		31			27			20			31			
MAXIMUM III	(ALL OTHER TIMES)		35			23			20			35			
YELLOW AND RED CLEARANCE				3	1		3	1		3	1		3	1	
WALK			22*			5*			5*			18*			
PEDESTRIAN CLEARANCE			8	3	1	18	3	1	15	3	1	13	3	1	
RECALL			MAX			MAX			MAX			MAX			
MEMORY			–			–			–			–			

* REST IN WALK

NOTE: FLASHING OPERATION PER MUTCD SECTIONS 4D.28–4D.31.

COORDINATION DATA			COORDINATION PHASE TIMING (SEC)		
TIMING PLAN	CYCLE LENGTH	REF / OFFSET	Ø2 & Ø6	Ø4	Ø5
M–F 0600–1000	90	1	36	28	26
M–F 1500–2000	90	14	35	31	24
ALL OTHER TIMES	90	0	39	27	24

DETECTOR DATA

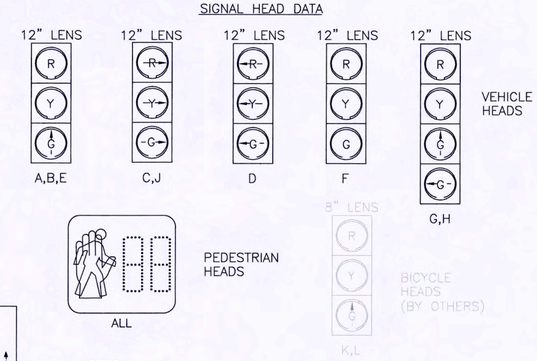
DETECTOR NO.	NO. SECTION/ SIZE	NO. OF TURNS	CALL DELAY (SEC)	CALL PHASE	SWITCH+EXTEND PHASE	MODE	LOOP CONNECTION
S1	1–5'X5'	3	0	SYSTEM	–	PULSE	–
S2	1–5'X5'	3	0	SYSTEM	–	PULSE	–
S3	1–5'X5'	3	0	SYSTEM	–	PULSE	–
S4	1–5'X5'	3	0	SYSTEM	–	PULSE	–
S5	1–5'X5'	3	0	SYSTEM	–	PULSE	–
S6	1–4'X6'	Q	0	SYSTEM	–	PULSE/ BICYCLE	–
S7	1–4'X6'	Q	0	SYSTEM	–	PULSE/ BICYCLE	–
S8	1–4'X6'	Q	0	SYSTEM	–	PULSE/ BICYCLE	–
S9	1–4'X6'	Q	0	SYSTEM	–	PULSE/ BICYCLE	–

LIST OF MAJOR ITEMS REQUIRED

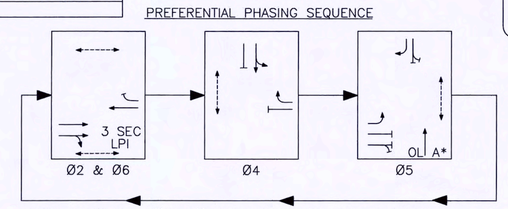
PAY ITEM	QUANTITY	DESCRIPTION
816.01	3	40' MAST ARM AND FOUNDATION (STEEL) WITH BLACK PAINT
	1	SERVICE CONNECTION (UNDERGROUND)
	2	10' SIGNAL POST AND FOUNDATION (STEEL) WITH BLACK PAINT
	2	8' SIGNAL POST AND FOUNDATION (STEEL) WITH BLACK PAINT
	8	PEDESTRIAN SIGNAL INDICATION WITH COUNTDOWN TIMER
	8	APS–CAPABLE PEDESTRIAN PUSHBUTTON ASSEMBLY
	1	TS2 TYPE 1 SIGNAL CONTROLLER (EAGLE SIEMENS), CABINET (TYPE M), AND FOUNDATION
	7	3 SECTION–12" LENS SIGNAL HEAD
	2	4 SECTION–12" LENS SIGNAL HEAD
	1	GPS TIME CLOCK MODULE (GARMIN), PER CITY SPEC
	9	WIRE LOOP SYSTEM DETECTOR – SIZE VARIES
	5	DUAL CHANNEL LOOP DETECTOR AMPLIFIER (RACK MOUNTED)
811.31	5	PULL BOX–12"X12" (SD2.031)
811.22	5	ELECTRIC HANDHOLE (SD2.022)

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

SIGNAL HEAD DATA



PREFERENTIAL PHASING SEQUENCE



NOTE: OVERLAP A ("OL A") FOR FUTURE (BICYCLE–ONLY) NB MOVEMENT (BY OTHERS).

NOTES:

1. ALL INDICATIONS SHALL BE EQUIPPED WITH TUNNEL VISORS.
2. ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.

COMMONWEALTH OF MASSACHUSETTS PHILIP VIVEROS CIVIL No. 45665 REGISTERED PROFESSIONAL ENGINEER 5/19/14

CONFORMED

20 0 20 40

HDR ENGINEERING, INC.
695 ATLANTIC AVENUE, 2FL
BOSTON, MASSACHUSETTS 02111–2626
(617) 357–7700

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

kmdg KLOPFER MARTIN DESIGN GROUP

KLEINFELDER Bright People. Right Solutions.

Scale	AS NOTED			
Date	MAY 2014			
Job No.				
Designed by	PV			
Drawn by	MPS			
Checked by	CWA	No.	Description	Date
Approved by			REVISIONS	

THE WORKS — CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

Client: CITY OF CAMBRIDGE, MA

Project: RECONSTRUCTION OF MAIN STREET KENDALL SQUARE

Drawing: THIRD STREET/ BROADWAY SIGNAL PLAN

Sheet: T-5

File No.

PLOT DATE=5/19/2014 11:59:42 AM USER=PACKARD, JERAMY FILENAME=I:\eng\Y10492\dwg\Plot\Y10492B\dSet_SIGNAL_ThirdBroadway.dwg

Future Condition

North Point/Monsignor O’Brien Highway FDR

Functional Design Report

Monsignor O'Brien Highway (Route 28) Transportation Improvement Project

Cambridge,
Massachusetts

Prepared for **CJUF III NorthPoint, LLC**
c/o The HYM Investment Group, LLC
One Congress Street, 10th Floor
Boston, Massachusetts 02114

Prepared by **Vanasse Hangen Brustlin, Inc.**
Watertown, Massachusetts

February 2015

2

O'Brien Highway at Third Street

O'Brien Highway is a state-owned roadway that begins at the Cambridge/Somerville City-Limits and terminates at the Land Boulevard where is becomes Charles River Dam Road until it meets Leverett Circle in Boston. It is also designated as Massachusetts Route 28. MassDOT classifies this roadway as an Urban Principal Arterial and it is part of the National Highway System (other). Land use in the area is a mix-use of commercial/retail, residential and MBTA's Green Line Lechmere Station. MassDOT owns and maintains O'Brien Highway from the Cambridge/Somerville city line to Land Boulevard and DCR owns/maintains the roadway from Land Boulevard to the Cambridge/Boston city line.

Third Street intersects O'Brien Highway from the west approximately 900 feet south of the Somerville/Cambridge City Limit. MassDOT classifies Third Street, a city-owned roadway, as an Urban Minor Arterial.

These roadways form a traditional three-legged intersection, controlled by a traffic signal system. The northbound and southbound approaches of O'Brien Highway consist of three general purpose lanes. The Third Street eastbound approach consists of an exclusive left-turn lane and a shared through/right-turn lane. There are two unsignalized driveways on the east side of the intersection. Currently, the driveway to the north is being reconstructed to support hotel development.

Sidewalks are present along all legs of the intersections and crosswalks are provided across Third Street and the southern leg of O'Brien Highway. Sidewalks and crosswalks are in decent condition. Pedestrian curb ramps are present for each crossing and do not appear to be in compliance with current Americans with Disabilities Act (ADA) standards. Stop lines are in decent condition, but many of the lane markings are faded. The signage in the area ranges from fair to poor condition.

The traffic signal operates in an interval-based fashion. The northbound approach of O'Brien Highway has a protected lead phase. There is an exclusive pedestrian phase for the Third Street crossing and there is a lead-pedestrian interval (LPI) associated with the O'Brien Highway crossing. The traffic signal equipment is relatively old (type 1 mast arms) and is showing signs of wear. The intersection is programmed to run different programs throughout the day, with all cycle lengths being 90 seconds; however, when the pedestrian phase is activated the intervals are extended to 93 seconds.

Summary of Proposed Improvements

To better accommodate existing and future traffic volumes through the study area and to provide efficient traffic operation, traffic control improvements will be necessary. Under 2012 existing conditions, the intersection experiences an overall LOS F during the both morning and evening peak periods (v/c = 0.70 and 1.34, respectively). In the absence of any improvements, the intersection delay is expected to degrade, especially during peak hours as traffic volumes increase at this intersection.

Nineteen crashes were reported at this intersection during the six year period from January 2006 to January 2012. Finally, this intersection continues to satisfy the 2009 Manual on Uniform Traffic Control Devices (MUTCD) criteria for warranting a traffic signal.

■

Intersection Improvement Alternatives

Two additional alternatives were originally considered for improving operations and safety at this intersection:

- T-Intersection: The existing alignment would remain with the intersection of O'Brien Highway at Third Street being signalized and the driveways to the east of the intersection remaining unsignalized.

- Four-Way Intersection: Under this alternative, the northern driveway currently being reconstructed to support hotel development would be signalized. O'Brien Highway northbound would have a lagging clearance phase that would operate with the pedestrian crossing on Third Street while O'Brien Highway southbound is shut off.

The first alternative was eliminated due to safety concerns with vehicles exiting the northern driveway (currently under construction). The second alternative was eliminated due to capacity constraints along the southbound approach of O'Brien Highway.

■

Proposed Geometric Changes

Proposed improvements at this intersection are detailed in the 25 percent design plans prepared with this FDR. These geometric improvements are as follows:

- Reduce the number of travel lanes on O'Brien Highway northbound from three lanes to two lanes to provide bicycle lanes on both sides of O'Brien Highway (southern leg) and to provide for a southbound left-turn lane at Water Street;
- Extend the median north into the intersection to restrict the left-turn movement from O'Brien Highway northbound onto Third Street;
- Modify the current driveway for Antique Market to be a right-in, right-out only;
- Clearly define the Third Street approach to include an exclusive left-turn lane and a shared left/through/right-turn lane;
- Install wheelchair ramps to meet current ADA/AAB access standards; and
- Currently the driveway across from Third Street is under construction as part of a separate project. The design plans for this project show that the driveway opening is being reduced slightly and a rumble island is being installed to make it a right-in/right-out only condition. Removal of the rumble island will be necessary to allow for all movements out of the driveway when the approach is signalized.

Turning Movements

There is a truck restriction on Third Street for all hours of the day. All trucks (larger than a SU-30) at this intersection are required to stay on O'Brien Highway. The current geometry accommodates a WB-40 for all turns within lane markings.

■

Proposed Traffic Control Improvements

Improvements to traffic control will be necessary to accommodate future traffic volumes, and to provide efficient traffic operation at this intersection. These traffic control improvements are as follows:

- Install a new fully actuated traffic signal system with appropriate timing and phasing for peak hour volume requirements to control all movements at this intersection;
- Provide coordination along O'Brien Highway utilizing a GPS time-sync device;
- Pedestrian crossings are planned to remain across O'Brien Highway (on the south side of the intersection) and across Third Street. Pedestrians crossing O'Brien Highway would cross the

roadway concurrently with the Third Street traffic movement, while the Third Street crossing would run with the O'Brien Highway northbound and southbound movement with the southbound right-turn movement stopped;

- The O'Brien Highway pedestrian crossing will have a pedestrian recall set for Monday through Friday from 5:30 AM to 8 PM;
- Signalization of the private northern driveway access/egress (currently under construction) along the east side of O'Brien Highway (across from Third Street);
- Provide emergency pre-emption on all street approaches;
- Provide bicycle detection on all approaches; and
- Upgrade existing signage to meet with the proposed design.

■

Benefits

With these improvements in place, the intersection is expected to operate during 2022 conditions at an overall LOS C (v/c=0.94) during the weekday morning peak period and LOS E (v/c=1.09) during the weekday evening peak period.

■

Environmental

There are no environmental issues associated with the proposed improvements for this intersection.

■

Right-of-Way

One Permanent Easement and a number of Temporary Easements will be required to construct this intersection. The Permanent Easement will be required on Third Street to include the vehicle detection. The Temporary Easements (number and locations to be refined at 75% design) will be obtained by the NorthPoint proponent prior to construction.

■

Issues

Currently MassDOT owns/maintains O'Brien Highway while the City of Cambridge maintains the traffic signal. Since implementation of a coordinated traffic signal system would be most successful with a single agency maintaining all locations, it is anticipated that MassDOT will assume maintenance of the traffic signal and full jurisdiction of this intersection.

4

O'Brien Highway at Lechmere Bus Terminal & O'Brien Highway at North First Street

Approximately 260 feet east of Water Street, the current Lechmere Bus Terminal Driveway intersects O'Brien Highway (Route 28) from the southwest. Land use in the area is generally commercial.

The intersection of O'Brien Highway at the Lechmere Bus Terminal Driveway is controlled by a traffic signal system. The northbound approach of O'Brien Highway consists of two through lanes. The southbound approach of O'Brien Highway consists of three through lanes. Originally, the Lechmere Bus Terminal exited into this intersection for left- and right-turn movements. In in recent years, the MBTA has changed the bus circulation and this exit is rarely used except as a mid-block crossing for pedestrians. There are sidewalks on all approaches to the intersection and a crosswalk to cross O'Brien Highway. It is noted that First Street and the proposed North First Street are Urban Collector roadways, O'Brien Highway is a Principal Arterial.

The traffic signal is a semi-actuated, two-phase operation with concurrent pedestrian movements. Traffic signal mast arm are old (type 1 style) and the traffic posts are in poor condition but the signal indications are in fair condition.

Pavement markings and signage are in fair condition with some fading. Pavement along O'Brien Highway is in fair condition with some minor cracking forming.

Summary of Proposed Improvements

The MBTA is relocating Lechmere Station and the Bus Terminal from the west side of O'Brien Highway into the NorthPoint site. With the relocation of Lechmere Station and the Bus Terminal, there is no longer a need for the existing traffic signal.

Once the station is relocated, a new roadway (North First Street) is proposed to extend from the intersection of Cambridge Street/First Street, east, intersecting O'Brien Highway and continuing into the NorthPoint site. This will be the main access and egress to NorthPoint and the relocated

Lechmere MBTA Station. This new four-way intersection will be located approximately 300 feet south of the existing Lechmere Bus Terminal driveway.

This new intersection of O'Brien Highway and North First Street will satisfy the 2009 Manual on Uniform Traffic Control Devices (MUTCD) criteria for warranting a traffic signal based on projected volumes and is discussed in greater detail later in this chapter.

Intersection Improvement Alternatives

Several alternatives were originally considered at this newly created intersection. The primary alternatives studied include:

- Northbound left-turn restriction: The O'Brien Highway northbound left-turns onto North First Street would remain at the Cambridge Street intersection.
- North First Street One-Way: North First Street between O'Brien Highway and Cambridge Street would carry one-way traffic (both directions were considered).
- Southbound Right-turn lane: An exclusive right-turn lane from O'Brien Highway southbound onto North First Street was included in the original 25 percent design submitted in 2006.

While each alternative had its benefits, maintaining overall traffic flow and balance between all modes of transportation through the three intersections of Lechmere Square was the highest priority. The proposed design (discussed below) best accomplishes this goal. Specifically, the changes to design at the Lechmere Square intersections were driven by the City's request that the proponent remove the O'Brien Highway southbound right-turn lane, thereby reducing the crossing distance from East Cambridge to the new Lechmere Station. The design modifications also allow for a cycle-track to be constructed.

Proposed Geometric Changes

Proposed improvements at these intersections are detailed in the 25 percent design plans prepared with this FDR. These geometric improvements are as follows:

O'Brien Highway at Lechmere Bus Terminal

- After the relocation of the station, close all curb-cuts on O'Brien Highway to/from the existing station;
- Extend the existing median to remove the cut through for the station; and
- Reconstruction the sidewalk to be continuous through this area and meet current ADA/AAB standards.

O'Brien Highway at North First Street

- O'Brien Highway northbound will provide two exclusive left-turn lanes, a through lane and a shared through/right-turn lane;
- O'Brien Highway southbound will provide two through lanes and a shared through/right-turn lane. No left-turn into the NorthPoint Site will be permitted from O'Brien Highway at this intersection;
- Provide an exclusive left-turn lane and a shared through/right-turn lane for North First Street eastbound;
- Provide two general purposed lanes on North First Street westbound;
- Provide a separated bicycle lane along O'Brien Highway and bicycle lanes along North First Street;
- Construct sidewalk and wheelchair ramps to meet current ADA/AAB access standards at the intersection.

Turning Movements

Currently the MBTA has a restriction for authorized vehicles only into Lechmere Station. Otherwise, there are no truck exclusions at this intersection. The proposed intersection accommodates WB-50 vehicles for left-turns from O'Brien Highway northbound onto North First Street. This is necessary to accommodate trucks carrying hazardous-materials, which are now rerouted from Cambridge Street. In addition, SU-30 vehicles are accommodated coming out of the NorthPoint Driveway. This is in accordance with Exhibit 6-15 of the MassDOT *Project Development and Design Guide*.

■

Proposed Traffic Control Improvements

In addition to the geometric changes listed above, improvements to traffic control will be necessary to accommodate future traffic volumes, and to provide efficient traffic operation at this intersection. Anticipated proposed traffic control improvements at these intersections are as follows:

O'Brien Highway at Lechmere Bus Terminal

- Remove existing traffic signal at the existing Lechmere Bus Terminal (which will be closed).

O'Brien Highway at North First Street

- Install a fully actuated traffic signal with appropriate timing and phasing for peak hour volume requirements to control all movements at this intersection;
- Provide vehicle coordination with the traffic signals in Lechmere Square (at O'Brien Highway/Cambridge Street and Cambridge Street/First Street) and along O'Brien Highway. Communications via GPS time sync units;
- Provide a protected-only phase for the O'Brien Highway northbound left-turn movement;
- Provide split phasing for the North First Street approaches;
- Provide concurrent pedestrian movements with pedestrian recall set for Monday through Friday from 5:30 AM to 8 PM;
- Provide emergency pre-emption for all approaches;
- Provide bicycle detection on all approaches; and
- Upgrade existing signs and pavement markings to meet with the proposed design.

■

Benefits

During 2022 conditions, the proposed intersection is expected to operate at an overall LOS D (V/C=0.93) during the weekday morning peak hour and LOS D (V/C=0.84) during the evening peak hour. The proposed improvements reflect a balance between an enhanced pedestrian/bicycle environment and vehicle operations.

■

Environmental

There are no environmental issues associated with the proposed improvements for this intersection.

■

Right-of-Way

Alterations to the State Highway Layout are required to construct North First Street. Currently the property to the west of the proposed intersection is owned by the MBTA and ownership will be transferred to NorthPoint after Lechmere Station is relocated. A traffic signal and sidewalk easement will be required on the east side of O'Brien Highway.

■

Issues

MassDOT will receive jurisdiction of the intersection. It is anticipated that MassDOT will also accept the maintenance of the traffic signal.

It is imperative to the maintenance of traffic flow that all three Lechmere Square traffic signal locations function as an appropriately coordinated system. MassDOT and the City of Cambridge may consider entering into a maintenance agreement at these locations to facilitate coordination efforts.

Data Profile and Existing/Proposed Comparison

■

2012 Average Daily Traffic (ADT)

Automatic Traffic Recorder (ATR) counts conducted on O'Brien Highway, in the area near where North First Street will be constructed, in May 2012 indicate the average daily traffic volume shown in Table 4-1.

Table 4-1:
O'Brien Highway 2012 ADT

Roadway	Weekday Traffic Volume (vpd)
O'Brien Highway NB	8,060-8,090
O'Brien Highway SB	10,845-11,595

Source: Automatic Traffic Recorder count taken in May 2012

■

Geometric Conditions

Table 4-2 illustrates the potential differences between existing and proposed geometric conditions for the intersection of O'Brien Highway at Lechmere Bus Terminal and the future intersection of O'Brien Highway at North First Street.

5

O'Brien Highway at Cambridge Street/East Street (Lechmere Square)

As previously identified, O'Brien Highway (Route 28) is a state-owned roadway and part of the National Highway System. Cambridge Street and East Street intersect O'Brien Highway (Route 28) approximately 500 feet east of the existing Lechmere Bus Terminal and approximately 250 feet east of the proposed intersection of O'Brien Highway and North First Street. MassDOT classifies O'Brien Highway as an Urban Principal Arterial, Cambridge Street as an urban collector and East Street is a local roadway. Land use in the area is primarily industrial/commercial and residential.

This intersection is locally known as Lechmere Square. O'Brien Highway, Cambridge Street and East Street form a non-traditional four-legged intersection controlled by a traffic signal system. The northbound approach of O'Brien Highway consists of two left-turn lanes, separated by a median from the rest of the O'Brien Highway northbound approach. Vehicles turn onto Cambridge Street approximately 150 feet prior to the main intersection with Cambridge Street and East Street. The remainder of the O'Brien Highway northbound approach consists of a through lane and a shared through-right lane. The southbound approach of O'Brien Highway consists of an exclusive left-turn lane, three though lanes and an exclusive right-turn lane. The Cambridge Street eastbound approach consists of an exclusive left-turn lane, an exclusive through lane and two right-turn lanes. The East Street westbound approach consists of a general purpose lane. Sidewalks are present along all legs of the intersection and crosswalks are provided across both sides of O'Brien Highway, East Street and across the right-turn movement for Cambridge Street. In recent years, the Lechmere Station has modified their driveway flow and provided for the buses to exit at this intersection instead of the other end of the bus terminal driveway.

The intersection is controlled by the traffic signal at the intersection of Cambridge Street and First Street. The traffic signal operates in an interval-based fashion and utilizes the equivalent of a three-phase operation, including concurrent pedestrian movements. The traffic signal equipment is generally old and with some equipment in fair condition and some in poor condition. The mast arms are the old type 1 style with free-swinging signal heads. There are no pedestrian push buttons at the intersection.

Sidewalks are present along all legs of the intersections and crosswalks are provided across both legs of O'Brien Highway and across East Street. The sidewalks and pavement are in decent

condition with cracking on the median islands and a large trench through the middle of the intersection. Pedestrian curb ramps are present for each crossing and appear to be AAB/ADA compliant. Pavement markings for the crosswalks and roadway are for the most part are worn. The signage is in fair condition. This intersection also runs underneath the Green Line trolley viaduct. During the day time, the viaduct blocks the sun from the area and during the night time, the viaduct blocks some of the street lighting from the area, creating poor lighting conditions throughout the day. It should be noted that the viaduct is being removed as part of the Green Line Extension project.

Summary of Proposed Improvements

To accommodate future traffic volumes through the study area, and to provide efficient traffic operation, roadway and traffic control improvements will be necessary. Under 2012 existing conditions, the intersection experiences an overall LOS C (v/c = 0.62) during the morning peak period and LOS C (v/c = 0.67) during the evening peak period. In the absence of any improvements, the intersection delay is expected to further increase, especially during peak hours as traffic volumes increase at this intersection.

Eighteen crashes were reported at this intersection during the six-year period from January 2006 to December 2011. Finally, this intersection continues to satisfy the 2009 Manual on Uniform Traffic Control Devices (MUTCD) criteria for warranting a traffic signal.

■

Intersection Improvement Alternatives

Two alternatives were originally considered for improving operations and safety at this intersection:

- Unsignalized T-Intersections: East Street would keep its existing alignment with O'Brien Highway and be modified to be a right-in/right-out under "STOP" control. Cambridge Street would be realigned to an exit-only right-turn under "YIELD" control.

- O'Brien Highway Left-turn Movement: Cambridge Street would be a two-way street and the O'Brien Highway northbound left-turn movements would be maintained onto Cambridge Street instead of at the proposed intersection of O'Brien Highway at North First Street.
  - Cambridge Street eastbound was evaluated as right-turn out under "YIELD" control.
  - Cambridge Street eastbound was evaluated as part of the traffic signal with no movements restricted.

While each alternative had benefits, maintaining overall traffic flow and balance between all modes of transportation through the three intersections of Lechmere Square was the highest priority and the proposed design, discussed below, best accomplishes this goal. Specific to this location, since the 2006 FDR was submitted, the MBTA has added a second head house accessing Lechmere Station at East Street. A review of the revised station plans indicated

major possible changes to pedestrian circulation to the station and across O'Brian Highway. As such, the original design was modified to better accommodate projected pedestrian flows with the second head house in place.

■

Proposed Geometric Changes

Proposed improvements at this intersection are detailed in the 25 percent design plans prepared with this FDR. These geometric improvements are as follows:

- Modify O'Brien Highway northbound to consists of a though lane (a second through lane will be developing to provide left-turn storage at O'Brien Highway/North First Street intersection) and a shared through/right-turn lane. Eliminate the double left-turn lanes onto Cambridge Street and relocate them to the intersection of O'Brien Highway/North First Street (See Chapter 4);
- Reduce the O'Brien Highway southbound approach to consist of three though lanes;
- Modify Cambridge Street to be exiting only. Cambridge Street will provide a shared left/through lane and a channelized right-turn lane;
- Widen and extend the medians on O'Brien Highway. This will cause East Street to become a right-in/right-out only;
- Provide a separated bicycle lane along O'Brien Highway and bicycle lanes along East Street and along the right-hand side of Cambridge Street;
- Construct sidewalk and wheelchair ramps to meet current ADA/AAB access standards along all approaches.

Turning Movements

Currently Cambridge Street, from O'Brien Highway to First Street, is designated as a Hazardous Truck Route. East Street is not designated as a truck route nor does it have any restriction. The proposed geometry at this location accommodates WB-50 vehicles turning out of Cambridge Street. With the proposed geometry, there will no longer be turns (for any vehicles) allowed from O'Brien Highway onto Cambridge at this intersection. This is in accordance with Exhibit 6-15 of the MassDOT *Project Development and Design Guide*. It is noted that Cambridge Street is an Urban Minor Arterial Roadway, East Street is a Local Roadway, while O'Brien Highway is a Principal Arterial Roadway.

■

Proposed Traffic Control Improvements

In addition to the geometric changes listed above, improvements to traffic control will be necessary to accommodate future traffic volumes, and to provide efficient traffic operation at this intersection. Anticipated proposed traffic control improvements at this intersection are as follows:

- Install a new fully-actuated traffic signal assembly with appropriate timing and phasing for peak hour volume requirements;
- Provide coordination with the traffic signals in Lechmere Square (at O'Brien Highway/North First Street and Cambridge Street/First Street) and along O'Brien Highway. Communications via GPS time synch unit;
- Proposed three phase operation with concurrent pedestrian movements;
- The East Street approach will be modified to "STOP" controlled;
- Provide bicycle detection on all approaches;
- Provide emergency pre-emption for all approaches;
- Upgrade existing signs and pavement markings to meet with the proposed design.

■

Benefits

Under the 2022 Volumes on existing geometry (Build Condition), the intersection is expected to operate at an overall LOS E (v/c=1.42) and LOS F (v/c=2.02) during the 2022 weekday morning and weekday evening peak period, respectively. Under the 2022 Volumes on proposed geometry (Build with Mitigation Condition), the intersection is expected to operate at an overall LOS B (v/c=0.65) and LOS C (v/c=0.93) during the 2022 weekday morning and weekday evening peak period, respectively. The overall LOS is actually expected to improve slightly with these proposed modifications but some movements will degrade slightly.

■

Environmental

There are no environmental issues associated with the proposed improvements for this intersection.

■

Right-of-Way

One Permanent Easement and a few Temporary Easements will be required to construct this intersection. The Permanent Easement is located at the existing Lechmere Station to provide for adequate capacity along O'Brien Highway, for both vehicles and bicycles and to ensure that the State has the right to maintain the wheelchair ramps and traffic signal equipment. The Temporary Easements (number and locations to be refined at 75% design) will be obtained by the NorthPoint proponent prior to construction.

■

Issues

Currently MassDOT owns/maintains O'Brien Highway while the City of Cambridge maintains the traffic signal. Since implementation of a coordinated traffic signal system would be most successful with a single agency maintaining all locations, it is anticipated that MassDOT will assume maintenance of the traffic signal and full jurisdiction of this intersection.

It is imperative to the maintenance of traffic flow that all three Lechmere Square traffic signal locations function as an appropriately coordinated system. MassDOT and the City of Cambridge may consider entering into a maintenance agreement at these locations to facilitate coordination efforts.

Data Profile and Existing/Proposed Comparison

■

2012 Average Daily Traffic (ADT)

Automatic Traffic Recorder (ATR) counts taken on O'Brien Highway on either side of Cambridge Street/East Street in May 2012 indicate the average daily traffic volume shown in Table 5-1.

6

O'Brien Highway/Charles River Dam Road at Land Boulevard/Charlestown Avenue

As previously identified, O'Brien Highway is a state-owned roadway and part of the National Highway System. At the intersections with Charlestown Avenue (Gilmore Bridge) and Land Boulevard, approximately 950 feet east of the Cambridge Street/East Street intersection, it is classified as an Urban Principal Arterial. Beyond Charlestown Avenue/Land Boulevard, O'Brien Highway becomes Charles River Dam Road. MassDOT classifies both Charlestown Avenue and Land Boulevard as Urban Minor Arterials. Land use in this area is a mix of commercial and residential.

Charlestown Avenue and Land Boulevard intersect O'Brien Highway from the east and west, respectively. This intersection is controlled by a traffic signal system and all legs of the intersection are classified as Arterial roadways. O'Brien Highway northbound consists of an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane. O'Brien Highway southbound approach consists of an exclusive left-turn lane, three through lanes, and a channelized right-turn lane. The Land Boulevard eastbound approach consists of an exclusive left-turn lane, two though lanes, and an exclusive right-turn lane. The Charlestown Avenue westbound approach consists of two general purpose lanes. There is sidewalk on both sides of O'Brien Highway and Land Boulevard and also on the north side of Charlestown Avenue. There are existing crosswalks across both sides of O'Brien Highway and across Land Boulevard. Because of the Longfellow Bridge reconstruction project, the lane usage on Charles River Dam Road and O'Brien Highway have been modified to allow for left-turning vehicles from an exclusive left-turn lane and a shared left-turn/through lane.

The traffic signal operates as part of a coordinated system with O'Brien Highway at Museum Way and along the Land Boulevard corridor via a GPS sync timer unit and utilizes a five-phase operation including split phasing for Charlestown Avenue and Land Boulevard. Vehicular signal heads are all overhead-mounted and some are not properly positioned over the corresponding lane. All of the equipment is new; installed in the past 2 years in order to rephrase the intersection to accommodate detoured traffic from the Longfellow Bridge reconstruction.

The pavement in the middle of the intersection is cracked and has been patched due to utility work. The sidewalks are in decent condition with some cracking and the pedestrian curb ramps were recently reconstructed. Pavement markings for the crosswalks are very worn, with the one across Charlestown Avenue barely visible. The signage is in decent condition. It was noted that some of the D6 guide signs are the old standards.

Summary of Proposed Improvements

In order to accommodate future traffic volumes through the study area, and to provide efficient traffic operation roadway and traffic control improvements will be necessary. Under 2012 existing conditions, the intersection of O'Brien Highway at Land Boulevard/Charlestown Avenue experiences an overall LOS F (v/c = 1.27) during the morning peak period and LOS F (v/c = 1.19), during the evening peak period. In the absence of any improvements, the intersection and approach delays are expected to further increase, especially during peak hours as traffic volumes increase at this intersection.

Fifty-five crashes were reported at this intersection during the six year period from January 2006 to December 2011. The intersection continues to satisfy the 2009 Manual on Uniform Traffic Control Devices (MUTCD) criteria for warranting a traffic signal.

■

Intersection Improvement Alternatives

One alternative was considered for improving operations and safety at this intersection:

- Retaining Existing Geometry: This option kept the rumble stripe on Charlestown Avenue and the crosswalk across the south leg of O'Brien Highway. This concept was rejected because of the (existing) need to add capacity on Charlestown Avenue and increase in vehicle storage on Charles River Dam Road. This includes removal of the crosswalk across the southern leg of the intersection. There is an existing crosswalk on the north leg of O'Brien Highway at Museum Way (less than 150' away) that is sufficient to accommodate pedestrians.

Although the NorthPoint project was specifically designed to eliminate project related through-traffic on O'Brien Highway at this location, the proposed improvements attempt to alleviate existing congestion and improve connectivity for all modes.

■

Proposed Geometric Changes

Proposed improvements at this intersection are detailed in the 25 percent design plans prepared with this FDR. There are no major geometric improvements at this intersection. Minor improvements are as follows:

- Remove the existing rumble strip and re-stripe Charlestown Avenue to provide an exclusive left-turn lane, a shared left/through lane and a shared through/right-turn lane;
- Remove the crosswalks across the southern leg of O'Brien Highway;
- Install a new crosswalk across Charlestown Avenue;
- Minor alignment adjustments to Land Boulevard are proposed to further improve the geometrics at the intersection.

Turning Movements

Both O'Brien Highway and Land Boulevard allow for the use of trucks, with Land Boulevard designated as a Hazardous Truck Route to Binney Street. Charlestown Avenue is not designated for truck use. The proposed geometry at this location accommodates WB-50 vehicles for all turns except the right turns onto and from Charlestown Avenue. Right turn from Charlestown Avenue and Charles River Dam Road make this maneuver from the shared left/through lane and from the right-most through lane, respectively. There were approximately 6 heavy vehicles per hour observed making these turns during the two-hour weekday morning peak period and less during the weekday evening peak period.

■

Proposed Traffic Control Improvements

Improvements to traffic control will be necessary to accommodate future traffic volumes and to provide efficient traffic operation at this intersection. These traffic control improvements are as follows:

- Install a fully actuated traffic signal with appropriate timing and phasing for peak hour volume requirements (retain the existing equipment where possible);
- Maintain coordination with the traffic signals at O'Brien Highway/Museum Way and along Land Boulevard. Communications via GPS time sync units;
- Maintain existing phasing of split phasing for Charlestown Avenue and Land Boulevard and concurrent pedestrian movements;
- Signalize the crosswalk across Charlestown Avenue to run concurrently with the O'Brien Highway northbound approach;
- Provide bicycle detection on all approaches;
- Provide emergency pre-emption for all approaches;
- Upgrade existing signs and pavement markings to meet with the proposed design.

■

Benefits

With these improvements in place, the intersection is expected to operate at an overall LOS F (V/C=1.26) during the weekday morning peak hour and LOS F (V/C = 1.24) during the weekday evening peak hour under 2022 conditions.

While the overall intersection appears to degrade when compared to existing conditions, critical approaches improve during the peak hours.

■

Environmental

There are no environmental issues associated with the proposed improvements for this intersection.

■

Right-of-Way

There are no known right-of-way issues associated with the proposed improvements for this location.

■

Issues

MassDOT/DCR will maintain jurisdiction of this intersection. MassDOT maintains O'Brien Highway and the traffic signal, while DCR maintains Charles River Dam Road, Land Boulevard and Charlestown Avenue.

Data Profile and Existing/Proposed Comparison

■

2012 Average Daily Traffic (ADT)

Automatic Traffic Recorder (ATR) counts conducted on O'Brien Highway at Charlestown Avenue and Land Boulevard in May 2012 indicate the average daily traffic volume shown in Table 6-1.

8

Cambridge Street at First Street

Cambridge Street is a city-owned roadway. MassDOT classifies Cambridge Street as an Urban Minor Arterial. First Street intersects from the south and is an Urban Collector. The intersection of Cambridge Street at First Street is located approximately 280 feet to the west of the intersection of O'Brien Highway at Cambridge Street/East Street. Land use in the area consists of the Lechmere Station on the north side of the intersection, residential, and retail/commercial use.

These roadways form a traditional T-intersection and controlled by a traffic signal system. The eastbound approach of Cambridge Street consists of one general-purpose lane. The westbound approach of Cambridge Street consists of an exclusive left-turn lane and a through lane. The northbound approach of First Street is comprised of an exclusive left-turn lane and an exclusive right-turn lane. Lechmere Station has a circulating buses-only driveway on the north side that exits into this intersection. This approach consists of one general-purpose lane. First Street is a Collector roadway, while Cambridge Street is an Arterial roadway. Parking is designated on both side of the Cambridge Street western leg. Sidewalks are present along all legs of the intersections and crosswalks are provided on every approach.

The traffic signal controls this intersection and the intersection of O'Brien Highway at Cambridge Street/East Street. The traffic signal is pre-timed and utilizes a three-phase operation with an exclusive pedestrian phase.

The traffic signal equipment is in fair condition. Most of the equipment is old (type 1 mast arms) and rusty. All of pedestrian signal heads have countdown timers, but per the old City of Cambridge ordinance, there are no pedestrian push buttons.

The pavement on Cambridge Street and First Street appears to be in good condition. There are sidewalks along all approaches of the intersection. The sidewalks vary from cement concrete to brick paved walks and are in good/fair condition. The crosswalk and pavement markings are in fair condition with some worn areas. The pavement is in decent condition, with the exception of the MBTA driveway. The driveway has numerous cracks, although there does not appear to be a drainage problem.

Summary of Proposed Improvements

In order to better accommodate existing and future traffic volumes through the study area, and to provide efficient traffic operation, roadway and traffic control improvements will be necessary. Under 2012 existing conditions, the intersection experiences an overall LOS E (v/c = 0.51) during the morning peak period and LOS D (v/c = 0.60) during the evening peak period. In the absence of any improvements, the intersection delay is expected to further increase, especially during peak hours as traffic volumes increase at this intersection.

Seventeen crashes were reported at this intersection during the six year period from January 2006 to December 2011. Finally, this intersection continues to satisfy the 2009 Manual on Uniform Traffic Control Devices (MUTCD) criteria for warranting a traffic signal.

■

Intersection Improvement Alternatives

Several alternatives were originally considered for improving operations and safety at this intersection:

- North First Street Extension – One-way towards the Intersection. This option allowed for traffic leaving the NorthPoint site and Lechmere Station to have direct access to the intersection of Cambridge Street/First Street and for the relocation of the left-turn movement from the intersection of O'Brien Highway at Cambridge Street/East Street. This option allows for simplified operations, but will require the traffic signals in Lechmere Square to be programmed to maximum vehicle flow throughout.

- North First Street – One-way away from the intersection. This option was considered as a means to provide access to the NorthPoint site and Lechmere Station without having to travel through the intersection of O'Brien Highway at Cambridge Street/East Street. However, this option would need to keep the Cambridge Street eastbound leg two-way and the lead phase would be necessary to process the left-turns from Cambridge Street to First Street. This option also requires the left-turn movement from O'Brien Highway to remain at Cambridge Street intersection instead of being relocated to the North First Street intersection.

- Cambridge Street - Lane Use. This option assumes North First Street is two-way and Cambridge Street is one-way toward O'Brien Highway from First Street (allowing a right-out only onto O'Brien Highway). This concept was rejected because it maintained the current inefficient traffic flow and was not as successful at balancing vehicle and pedestrian flow through Lechmere Square couplet without causing excessive delays and queuing.

While each alternative had its benefits, maintaining overall traffic flow and balance between all modes of transportation through the three intersections of Lechmere Square was the highest priority and the proposed design best accomplishes this goal. Specifically, this intersection was modified from the original design to restrict left-turn movements from

Cambridge Street to North First Street and from First Street onto Cambridge Street. The turning restrictions were necessary to maintain adequate traffic signal progression and bicycle/pedestrian accommodations while also meeting the City's request for changes at the other Lechmere Square intersections (as discussed previously).

■

Proposed Geometric Changes

Proposed improvements at this intersection are detailed in the 25 percent design plans prepared with this FDR. These geometric improvements are as follows:

- Construct North First Street through Lechmere Station to O'Brien Highway, once the station has been relocated onto the NorthPoint site. This street shall consist of a median divided four-lane cross-section and bicycle accommodations. There will be an exclusive through lane and a shared through/right-turn lane southbound into the intersection and have two lanes departing the intersection northbound. A separated bicycle lane will be provided in the southbound direction and a bicycle lane in the northbound direction.

- Narrow a portion of Cambridge Street, from First Street to O'Brien Highway, from a two-way roadway into a one-way roadway eastbound away from the intersection.

- Modify the Cambridge Street eastbound approach to consist of an exclusive through lane and a shared through/right-turn lane. Removal of the existing parking lane will be necessary.

- Re-stripe First Street to consist of an exclusive through lane and an exclusive right-turn lane.

- Provide bicycle accommodations in the form of shared lanes on First Street and the Cambridge Street departure and bicycle lanes (or separated bicycle lane) on the Cambridge Street and North First Street;

- Install wheelchair ramps along all four corners of the intersection to meet current ADA/AAB access standards.

Turning Movements

Currently Cambridge Street, from O'Brien Highway to First Street, is designated as a Hazardous Truck Route. The Hazardous Truck Route then continues on First Street. The proposed geometry at this location accommodates WB-50 vehicles for all right-turns and is in accordance with Exhibit 6-15 of the MassDOT *Project Development and Design Guide*.

■

Proposed Traffic Control Improvements

Improvements to traffic control will be necessary to accommodate future traffic volumes, and to provide efficient traffic operation at this intersection. These traffic control improvements are as follows:

- Install a fully actuated traffic signal assembly with appropriate timing and phasing for peak hour volume requirements;
- Provide a lead phase for the North First Street southbound movement, with a lead interval for the bicycle movement;
- Provide for concurrent pedestrian movements;
- Provide for coordination through Lechmere Square with the traffic signal controllers at the intersections of O'Brien Highway at North First Street and O'Brien Highway at Cambridge Street via GPS time sync unit;
- Provide concurrent pedestrian movements with pedestrian recall set for Monday through Friday from 5:30 AM to 8 PM;
- Provide emergency pre-emption for all approaches;
- Provide bicycle detection on all approaches; and
- Upgrade existing signs and pavement markings to meet with the proposed design.

■

Benefits

Under 2022 conditions, with these improvements in place the intersection is expected to operate at an overall LOS B (v/c=0.66) during the weekday morning peak period and LOS C (v/c=0.73) during the weekday evening peak period.

■

Environmental

There are no environmental issues associated with the proposed improvements for this intersection.

■

Right-of-Way

A permanent easement will be required to construct North First Street. Temporary easements (number and locations to be refined at 75% design) will be required to construct sidewalk, pedestrian curb ramps and traffic signal equipment.

■

Issues

The City of Cambridge will maintain jurisdiction of this intersection. However, MassDOT may require that no changes may be made to the controller without prior notification/permission.

It is imperative to the maintenance of traffic flow that all three Lechmere Square traffic signal locations function as an appropriately coordinated system. MassDOT and the City of Cambridge may consider entering into a maintenance agreement at these locations to facilitate coordination efforts.

Data Profile and Existing/Proposed Comparison

■

2012 Average Daily Traffic (ADT)

Automatic Traffic Recorder (ATR) counts conducted near the intersection of Cambridge Street/First Street in May 2012 indicate the average daily traffic volume shown in Table 8-1.

Table 8-1: Cambridge Street at First Street 2012 ADT

Roadway	Weekday Traffic Volume (vpd)
Cambridge Street, west of First Street	9,435
Cambridge Street, east of First Street	10,915
First Street, south of Cambridge Street	7,490

Source: Automatic Traffic Recorder counts from May 2012

■

Geometric Conditions

As illustrated in Table 8-2, the main difference between existing and proposed geometric conditions for this intersection is the construction of a North First Street.

Toole Memorandum – Ames Street Cycle Track

ToolеDesignGroup

33 Broad Street
Suite 405
Boston, MA 02109
617.619.9910
617.619.9920 fax
www.tooledesign.com

MEMORANDUM

Date: July 11, 2014

To: Cara Seiderman

From: Patrick Baxter, P.E., PTOE, Toole Design Group

Project: Ames Street Two-Way Cycle Track

RE: Intersection Treatment Recommendations

Toole Design Group (TDG) has developed intersection design alternatives to support the proposed two-way cycle track on Ames Street on the behalf of the City of Cambridge, including conceptual intersection treatments and signal timing for the intersections with Broadway and with Main Street. This memo describes the analyses performed as well as the recommended intersection designs for both locations.

TDG obtained Synchro capacity analysis files from McMahon Associates that include intersection traffic volumes obtained in 2010 for the afternoon peak hour. Based on direction provided by the City of Cambridge, no growth was applied to the existing 2010 traffic volumes. Existing conditions mapping as well as the proposed cross-section for the reconstructed Ames Street and Main Street were provided by the City of Cambridge. TDG obtained existing conditions curb alignments for Broadway at the intersection with Ames Street from McMahon Associates.

The two-way cycle track is proposed along the east side of Ames Street between Broadway and Main Street. The reconstructed roadway will provide an 11-foot, two-way cycle track, which will be protected by a 3-foot striped buffer and a 7-foot parking lane. The remainder of the section will include two 11-foot travel lanes and a 7-foot parking lane along the west side of Ames Street.

TDG developed and evaluated several alternatives for each intersection to connect the proposed cycle track to adjacent facilities and roadways. Following the development of the initial alternatives, TDG staff met with staff from the City of Cambridge on May 28, 2014 to review the concept designs and signal timing options. Based on comments received from City staff, TDG updated the selected alternatives as described below.

Ames Street at Broadway

The proposed two-way cycle track will terminate at Broadway and will provide a direct connection to the mid-block connector on the north side of Broadway, which extends north to Cambridge Street. Facilitating connections from the cycle track to east and westbound Broadway was also considered.

Broadway has recently been reconstructed and the roadway has been reduced to a single lane in each direction with a parking lane and a bicycle lane. TDG has developed three traffic signal modification alternatives and two intersection modification alternatives.

Geometric Modifications

TDG developed intersection concepts for two-alternatives at this location. Both alternatives provide an 11-foot wide two-way cycle track on the east side of Ames Street. The designs include a 100 foot right-turn lane, which cuts into the parking lane on the intersection approach, allowing for the proposed overlapping turn phases at the traffic signal. Two-way bicycle intersection crossing markings are provided within the intersection with green paint to clearly mark the bicycle crossing between the proposed two-way cycle track and the existing mid-block connector path. The eastbound Broadway approach is modified to replace the outside through lane with a right-turn lane, shifting the bicycle lane to provide a through-bike lane treatment between the turn lane and the through lane.

- Geometric Alternative 1 - Provides bicycle boxes on both Broadway approaches, allowing bicycles wishing to turn left from Broadway to Ames Street cycle track or the mid-block connector to take the travel lane in front of motor vehicles while the signal is red, completing the turn during the vehicle phase.
- Geometric Alternative 2 - Provides the bicycle box on Broadway eastbound; however, westbound bicycles wishing to turn left would turn right into the ramp for the mid-block connector and wait for the bicycle signal phase to cross into the cycle track.

Based on comments received from City staff during the May 28, 2014 meeting, Alternative 2 (Figure 1) was selected for advancement.

Traffic Signal Modifications

TDG considered three potential alternatives for traffic signal phasing to accommodate the connection between the two-way cycle track on Ames Street and the mid-block connector north of Broadway:

- Traffic Signal Alternative 1 - Bicycle signals with concurrent with the Ames Street phase.
- Traffic Signal Alternative 2 - Bicycle signals with exclusive phasing and maintaining the existing signal phasing for vehicles.
- Traffic Signal Alternative 3 - Bicycle signals with revised signal phasing (described below).

Alternative 1 was removed from consideration due to safety considerations. Right-turning vehicles from Ames Street may not anticipate bicyclists approaching from the north in the contra-flow direction, resulting in a potentially unsafe conflict pattern.

Alternative 2 minimizes modifications to the existing signal; however, this alternative would result in very short green times for bicyclists and increased delay for motor vehicles. Under this scenario, a short exclusive bicycle phase would be provided, including a 3 second yellow interval and a 6-second bicycle all-red time to provide sufficient time for a bicycle to clear the intersection. Under the existing conditions, the intersection operates with delay during the afternoon peak hour with LOS E for vehicles.

The addition of an exclusive bicycle phase would increase delay; however, the intersection would continue to operate at LOS E during the peak hour.

Alternative 3 provides modified signal phasing for vehicles, allowing for both crosswalks across Broadway and the proposed bicycle crossing to be accommodated with concurrent phasing and no conflicts between motorized and non-motorized users. This alternative would improve operations for motor vehicles to LOS C while providing longer protected bicycle green times and continuous pedestrian movement. The proposed phasing would be as follows:

1. Eastbound/Westbound Broadway through vehicles with concurrent pedestrian crossing across Ames Street.
2. Northbound Ames Street left-turning vehicles, overlapping eastbound Broadway right turning vehicles, concurrent conflict-free north/south bicycle phase, and concurrent conflict-free pedestrian crossing across the east Broadway leg.
3. Westbound Broadway left-turning vehicles, overlapping northbound Ames Street right-turning vehicles, and concurrent conflict-free pedestrian crossing across the west Broadway leg.

Based on comments received from City staff during the meeting held on May 28, 2014, Alternative 3 is the preferred alternative for the Ames Street at Broadway intersection. The proposed signal will include bicycle signals for northbound and southbound bicycles, including near side 4 inch bicycle signal heads for enhanced compliance and understanding. A conceptual signal plan (Figure 2) is attached to this memo indicating the recommended signal head locations.

Ames Street at Main Street

TDG has developed two concepts for the Main Street intersection in order to support a phased development of the proposed cycle track. Under the phase 1 alternative, the cycle track terminates at this location. Under the full build alternative, the proposed two-way cycle track continues through the intersection along the east side of Ames Street towards Memorial Drive.

Intersection Modifications

Under phase 1, a bicycle box should be provided on the eastbound Main Street approach, allowing cyclists an opportunity to take the lane when the signal is red. Left-turning cyclists would move with the green vehicle indication to enter the Ames Street cycle track. The Ames Street northbound approach should be modified to shift the alignment of the southbound lane to the west curb, minimizing the transition through the intersection for drivers. This will also allow for the development of a short right turn lane on the northbound approach. Under this alternative, a two-stage turn queue box is not feasible due to the alignment that turning buses will take through the intersection. The Phase 1 alternative is shown in Figures 3 and 4, representing options with the existing median on the west leg and without the median, respectively.

Under the full build condition (Figure 5), intersection crossing markings should be installed for the two-way cycle track, including chevrons or shared lane markings within the intersection to designate the

crossing as two-way. In addition, two-stage turn queue boxes should be striped within the alignment of the two-way cycle track intersection crossing markings, forward of the vehicle stop bar. These will provide a location for eastbound and westbound cyclists wishing to turn left into the cycle track a location to wait for the proposed bicycle signal phase.

Traffic Signal Modifications

Both proposed alternatives would include an exclusive bicycle phase at the traffic signal.

- Phase 1 - Bicycle signal faces should only be installed for southbound cyclists, as there will be no proposed bicycle facility on Ames Street south of Main Street.

- Full Build - Bicycle signal heads should be provided for bicycles traveling in both the northbound and southbound directions, including near side 4-inch signal heads to enhance visibility. Traffic analysis indicates that the intersection would continue to operate acceptably at LOS C during the afternoon peak hour with the addition of the exclusive bicycle phase, which would operate concurrently with the parallel crosswalks across Main Street. .

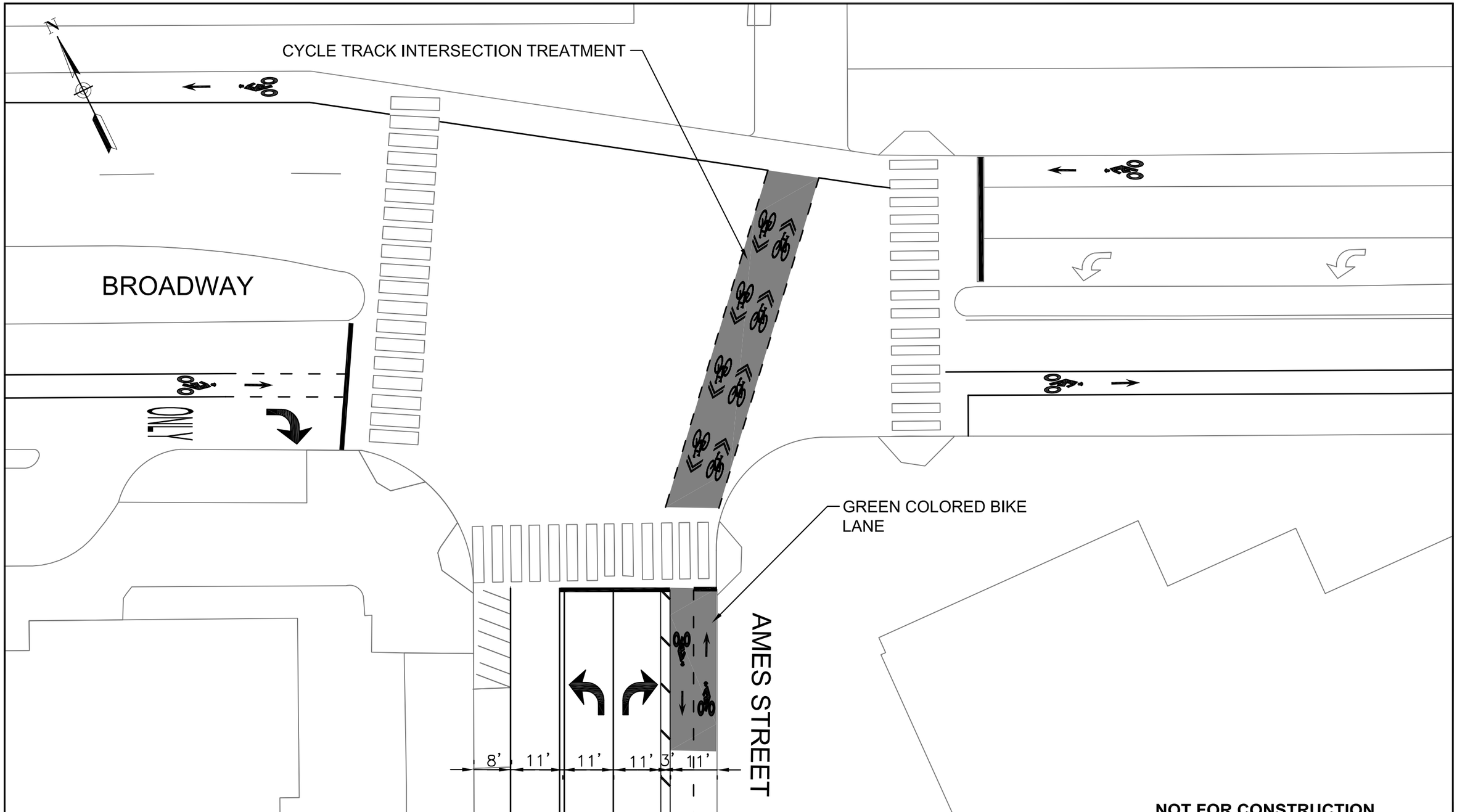
A conceptual signal plan (Figure 6) is attached to this memo indicating the recommended signal head locations.

Conclusion

The City of Cambridge plans to replace the existing parking protected one-way cycle tracks on Ames Street with a two-way cycle track along the east side which requires several modifications to the intersections of Ames Street at Main Street and at Broadway in order to provide appropriate accommodations to cyclists. The proposed modifications include:

- Ames Street at Broadway
    - Modify vehicle signal phasing to provide concurrent protected bicycle signal phase across Broadway.
    - Provide intersection crossing markings between the proposed cycle track and the existing mid-block connector.
    - Provide a bicycle box on Broadway eastbound.
- Ames Street at Main Street
    - Provide protected bicycle phase concurrent with Main Street pedestrian crossing.
    - Provide a bicycle box on the eastbound Main Street approach under phase 1 .
    - Provide intersection crossing markings for the full build condition.
    - Provide two-stage turn queue boxes for the full build condition within the alignment of the intersection crossing markings.

The modifications described above include experimental treatments not included in the current version of the MUTCD including two-stage turn queue boxes and bicycle boxes. Green pavement treatments and bicycle signals are currently under Interim Approval by FHWA, and are expected to be included in the next edition of the MUTCD.



NOT FOR CONSTRUCTION

FIGURE 1 - FULL BUILD
AMES STREET AT BROADWAY

0 5 10 20 40 FEET
1" = 20'-0"

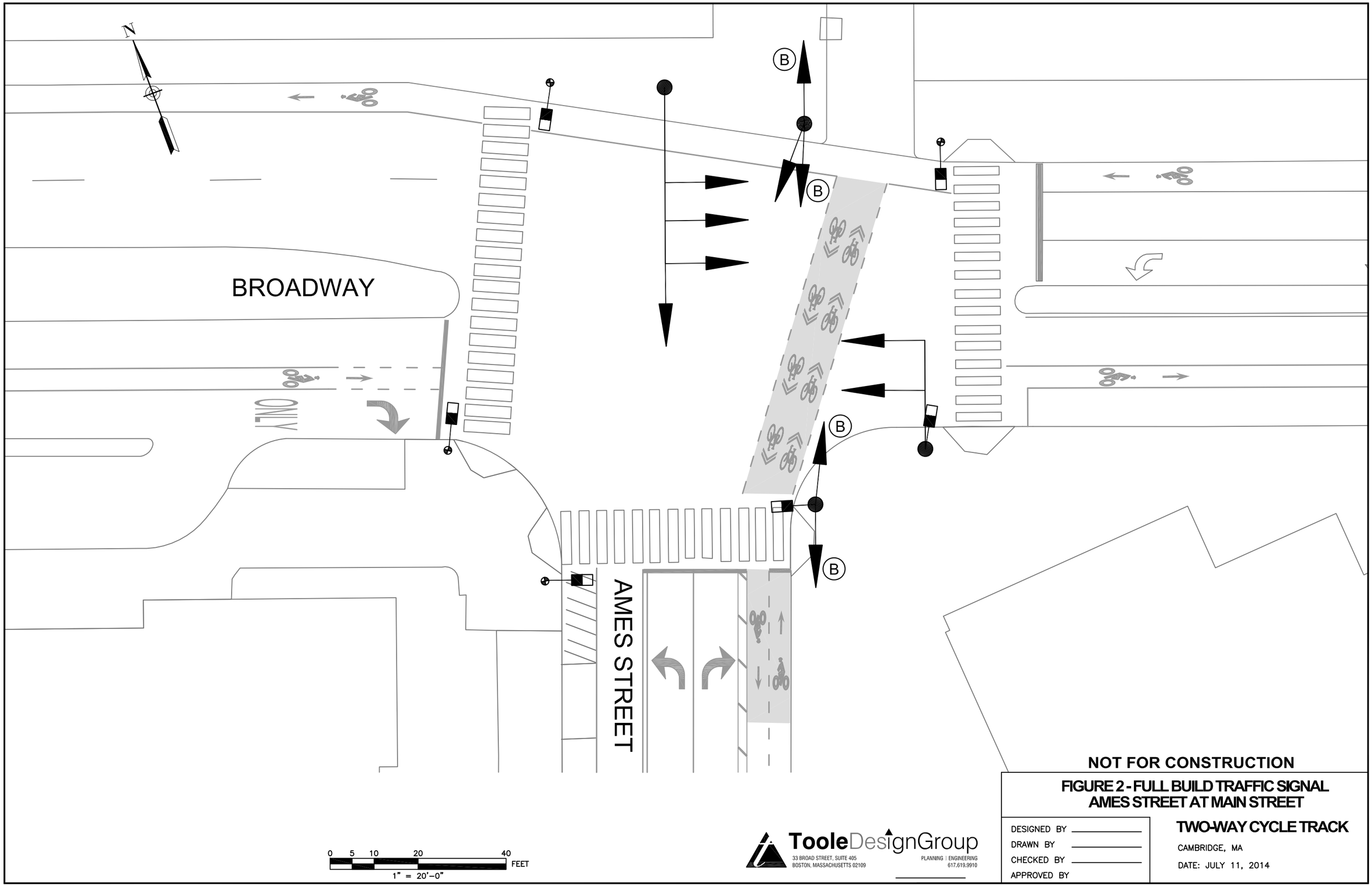
ToolеDesignGroup
33 BROAD STREET, SUITE 405
BOSTON, MASSACHUSETTS 02109
PLANNING | ENGINEERING
617.619.9910

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014



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BOSTON, MASSACHUSETTS 02109
PLANNING | ENGINEERING
617.619.9910

NOT FOR CONSTRUCTION

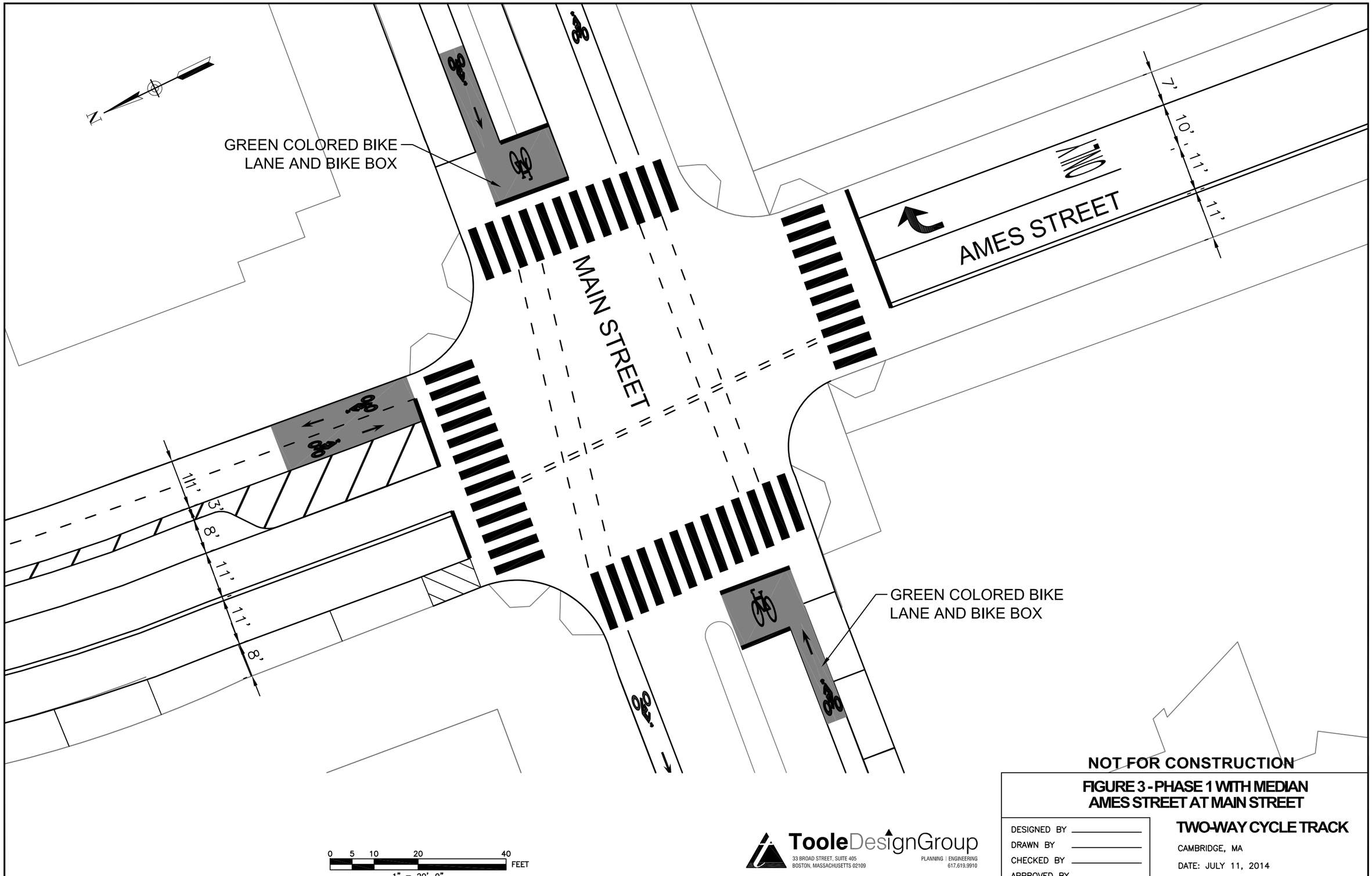
FIGURE 2 - FULL BUILD TRAFFIC SIGNAL
AMES STREET AT MAIN STREET

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014



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33 BROAD STREET, SUITE 405
BOSTON, MASSACHUSETTS 02109
PLANNING | ENGINEERING
617.619.9910

NOT FOR CONSTRUCTION

FIGURE 3 - PHASE 1 WITH MEDIAN
AMES STREET AT MAIN STREET

DESIGNED BY
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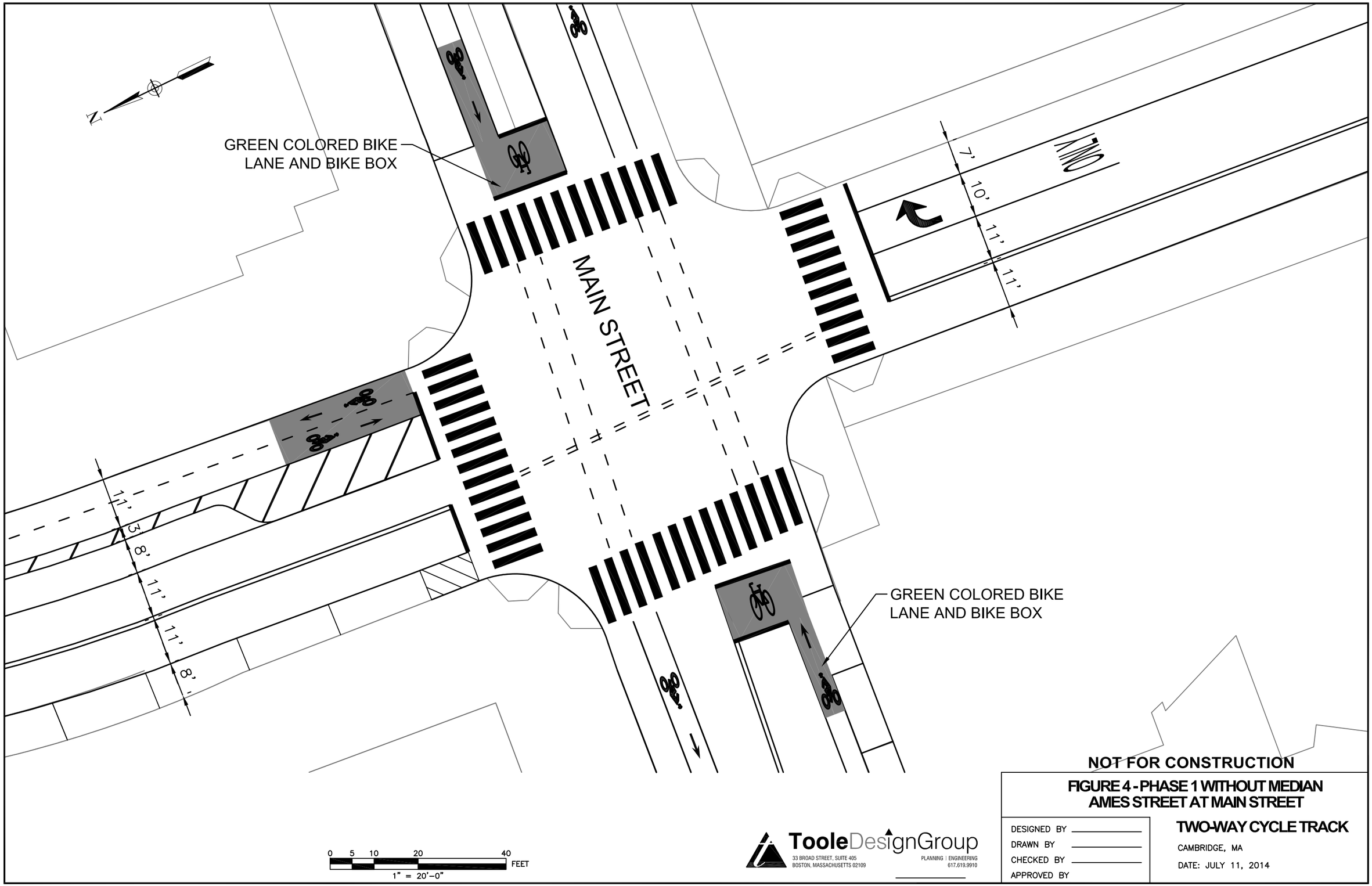
CHECKED BY
APPROVED BY

TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014



NOT FOR CONSTRUCTION

FIGURE 4 - PHASE 1 WITHOUT MEDIAN
AMES STREET AT MAIN STREET

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33 BROAD STREET, SUITE 405
BOSTON, MASSACHUSETTS 02109
PLANNING | ENGINEERING
617.619.9910

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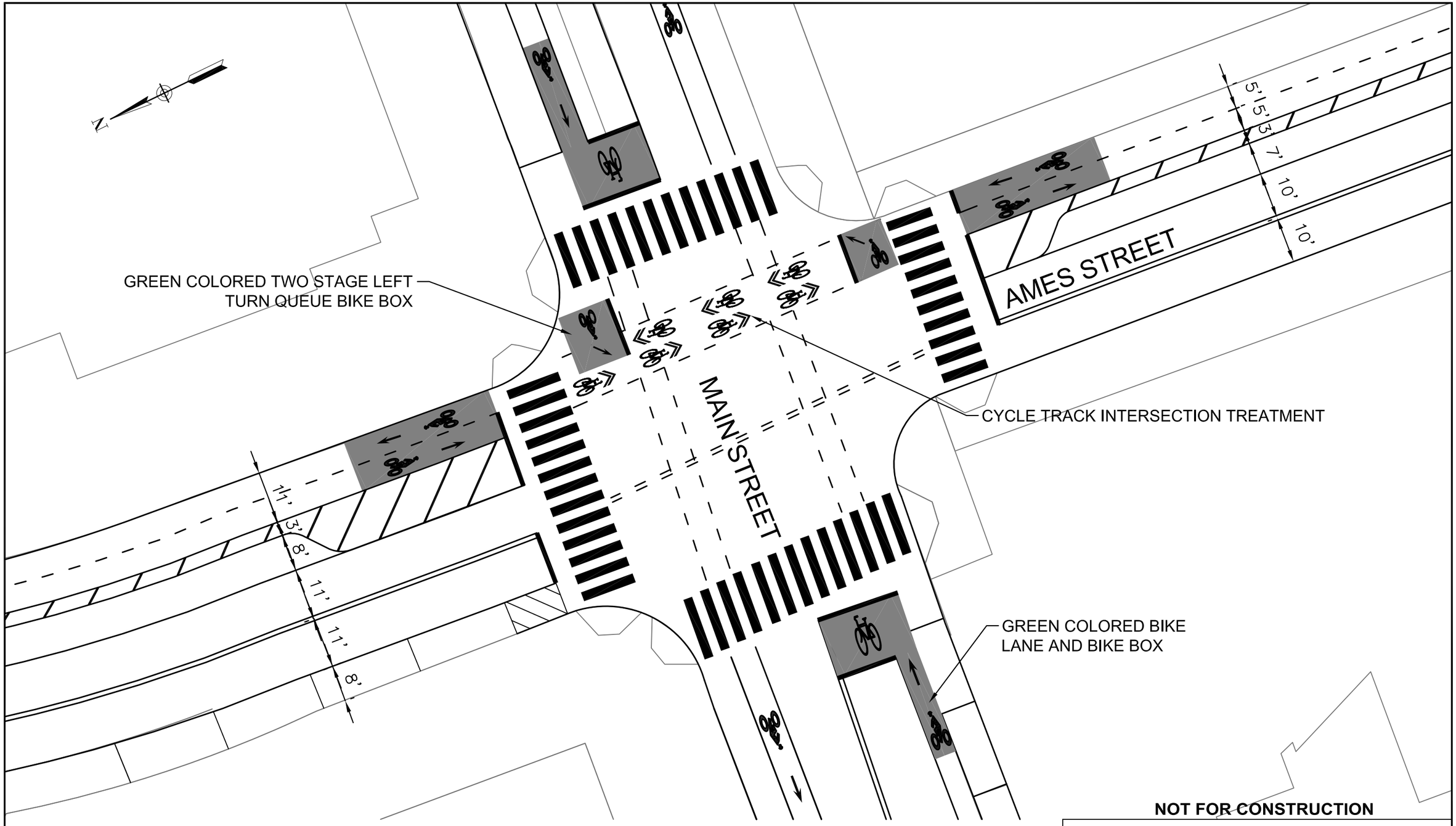
TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014



NOT FOR CONSTRUCTION

FIGURE 5 - FULL BUILD
AMES STREET AT MAIN STREET

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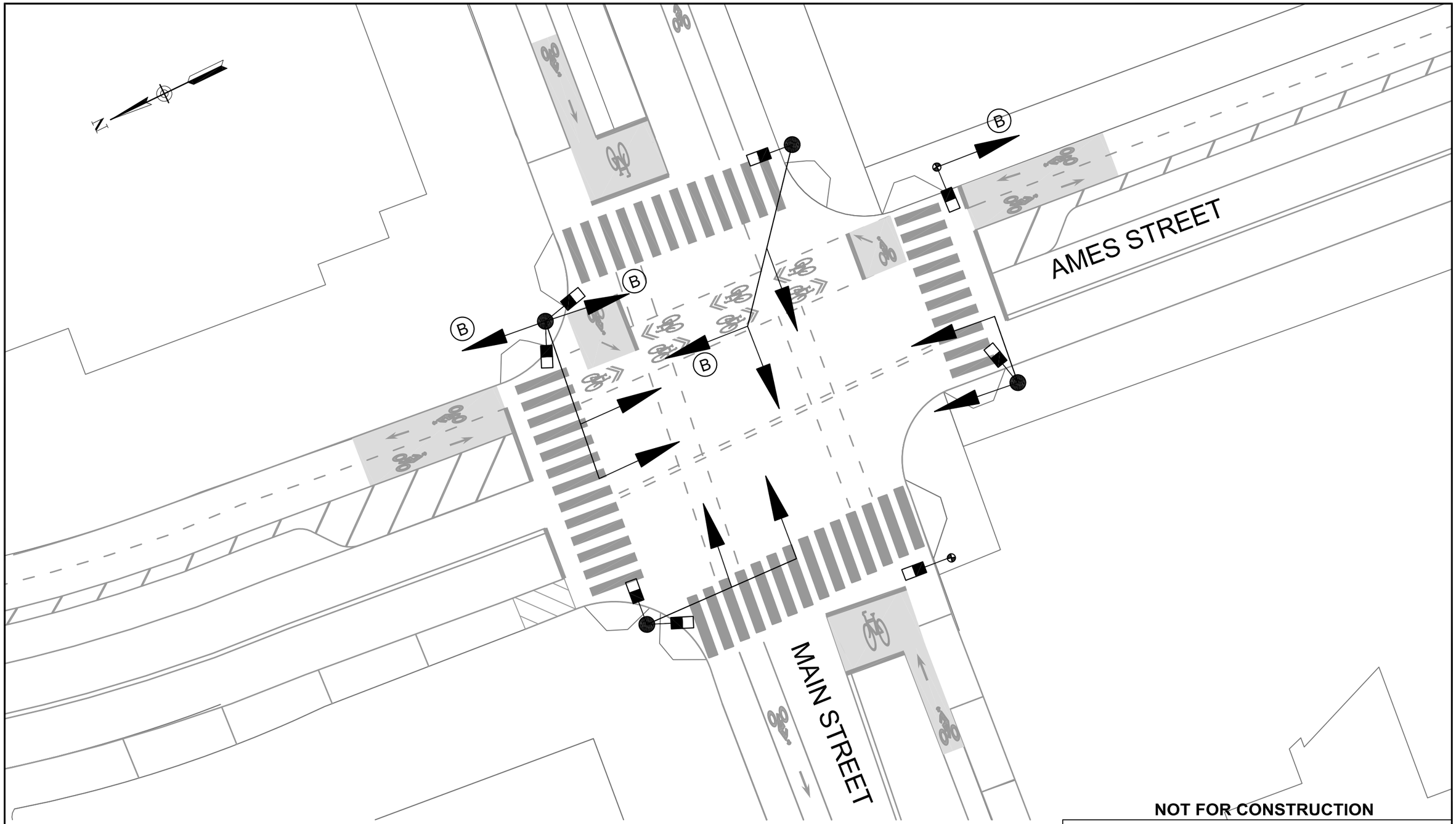
33 BROAD STREET, SUITE 405
BOSTON, MASSACHUSETTS 02109
PLANNING | ENGINEERING
617.619.9910

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014



0 5 10 20 40 FEET

1" = 20'-0"

ToolеDesignGroup

33 BROAD STREET, SUITE 405
BOSTON, MASSACHUSETTS 02109

PLANNING | ENGINEERING
617.619.9910

NOT FOR CONSTRUCTION

FIGURE 6 - FULL BUILD TRAFFIC SIGNAL
AMES STREET AT MAIN STREET

DESIGNED BY _____
DRAWN BY _____
CHECKED BY _____
APPROVED BY _____

TWO-WAY CYCLE TRACK

CAMBRIDGE, MA

DATE: JULY 11, 2014

Synchro Results

Existing Conditions

Lane Group	NBL	SET	NWT
Lane Group Flow (vph)	210	2348	435
v/c Ratio	0.16	1.21	0.32
Control Delay	21.6	124.5	5.3
Queue Delay	0.0	0.0	0.0
Total Delay	21.6	124.6	5.3
Queue Length 50th (ft)	29	~588	10
Queue Length 95th (ft)	m70	#686	14
Internal Link Dist (ft)	450	1169	1079
Turn Bay Length (ft)	85		
Base Capacity (vph)	1298	1945	1369
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	16	27
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.16	1.22	0.32

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	NBL	NBR	SET	SER	NWU	NWL	NWT
Lane Configurations							
Volume (vph)	145	25	1583	601	22	51	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	12	12	12	12	11
Total Lost time (s)	3.0		3.0				3.0
Lane Util. Factor	0.97		0.91				0.91
Frpb, ped/bikes	1.00		0.99				1.00
Flpb, ped/bikes	1.00		1.00				1.00
Frt	0.98		0.96				1.00
Flt Protected	0.96		1.00				0.99
Satd. Flow (prot)	3058		4806				4495
Flt Permitted	0.96		1.00				0.66
Satd. Flow (perm)	3058		4806				3009
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.91	0.91	0.91
Adj. Flow (vph)	179	31	1702	646	24	56	355
RTOR Reduction (vph)	0	0	80	0	0	0	0
Lane Group Flow (vph)	210	0	2268	0	0	0	435
Confl. Bikes (#/hr)				6			
Heavy Vehicles (%)	3%	20%	3%	2%	0%	12%	11%
Bus Blockages (#/hr)	0	0	0	10	0	0	0
Turn Type	Prot		NA		Prot	D.P+P	NA
Protected Phases	3		2		4	4	2 4
Permitted Phases						2	
Actuated Green, G (s)	37.2		30.8				35.8
Effective Green, g (s)	38.2		31.8				37.8
Actuated g/C Ratio	0.42		0.35				0.42
Clearance Time (s)	4.0		4.0				
Vehicle Extension (s)	3.0		3.0				
Lane Grp Cap (vph)	1297		1698				1362
v/s Ratio Prot	c0.07		c0.47				c0.02
v/s Ratio Perm							0.11
v/c Ratio	0.16		1.34				0.32
Uniform Delay, d1	16.0		29.1				17.5
Progression Factor	1.18		1.00				0.32
Incremental Delay, d2	0.2		155.1				0.6
Delay (s)	19.1		184.2				6.1
Level of Service	B		F				A
Approach Delay (s)	19.1		184.2				6.1
Approach LOS	B		F				A

Intersection Summary			
HCM 2000 Control Delay	146.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	366	310	206	60	599
v/c Ratio	0.77	0.74	0.39	0.13	0.83
Control Delay	37.8	49.4	21.5	33.3	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	49.4	21.5	33.3	46.5
Queue Length 50th (ft)	181	132	82	35	353
Queue Length 95th (ft)	#323	m151	m106	m32	m305
Internal Link Dist (ft)	1468	719	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	477	419	524	456	722
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	0.74	0.39	0.13	0.83

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	251	54	41	205	36	19	120	19	58	527	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.97			0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99			1.00		0.96	1.00	
Frt		0.98			0.98			0.98		1.00	0.99	
Flt Protected		0.99			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1386			1270			1388		1443	1588	
Flt Permitted		0.93			0.89			0.82		0.66	1.00	
Satd. Flow (perm)		1300			1142			1151		1003	1588	
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.77	0.77	0.77	0.96	0.96	0.96
Adj. Flow (vph)	38	270	58	45	225	40	25	156	25	60	549	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	366	0	0	310	0	0	206	0	60	599	0
Confl. Peds. (#/hr)	174		67	67		174	61		42	42		61
Confl. Bikes (#/hr)			89			7			2			10
Heavy Vehicles (%)	14%	11%	8%	10%	7%	0%	5%	4%	5%	5%	1%	13%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.0			32.0			40.0		40.0	40.0	
Effective Green, g (s)		33.0			33.0			41.0		41.0	41.0	
Actuated g/C Ratio		0.37			0.37			0.46		0.46	0.46	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		476			418			524		456	723	
v/s Ratio Prot											c0.38	
v/s Ratio Perm		c0.28			0.27			0.18		0.06		
v/c Ratio		0.77			0.74			0.39		0.13	0.83	
Uniform Delay, d1		25.1			24.8			16.2		14.2	21.4	
Progression Factor		1.00			1.71			1.16		2.27	2.06	
Incremental Delay, d2		11.3			5.5			1.9		0.1	1.1	
Delay (s)		36.5			47.8			20.8		32.3	45.3	
Level of Service		D			D			C		C	D	
Approach Delay (s)		36.5			47.8			20.8			44.1	
Approach LOS		D			D			C			D	

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)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	291	338	282	39	141
v/c Ratio	0.96	1.00	0.97	0.19	0.35
Control Delay	72.5	82.5	79.0	36.4	25.0
Queue Delay	0.0	9.5	1.4	0.0	0.0
Total Delay	72.5	92.0	80.3	36.4	25.0
Queue Length 50th (ft)	180	~114	94	20	59
Queue Length 95th (ft)	m#297	#338	#292	45	98
Internal Link Dist (ft)	719		195	1971	
Turn Bay Length (ft)					175
Base Capacity (vph)	302	338	291	209	407
Starvation Cap Reductn	0	11	2	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.96	1.03	0.98	0.19	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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	216	55	304	254	32	116
Ideal Flow (vphpl)	1900	1900	2200	1900	1900	1900
Lane Width	11	12	12	11	10	11
Total Lost time (s)	4.0		5.0	5.0	3.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.97	1.00	0.95	1.00
Satd. Flow (prot)	1432		2032	1749	1452	1183
Flt Permitted	1.00		0.97	1.00	0.95	1.00
Satd. Flow (perm)	1432		2032	1749	1452	1183
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.82	0.82
Adj. Flow (vph)	232	59	338	282	39	141
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	291	0	338	282	39	141
Confl. Bikes (#/hr)		77				
Heavy Vehicles (%)	7%	17%	5%	5%	16%	32%
Parking (#/hr)	2	2				
Turn Type	NA		Split	NA	Perm	pm+ov
Protected Phases	4 5		1	1		1
Permitted Phases					6	6
Actuated Green, G (s)	19.0		14.0	14.0	12.0	26.0
Effective Green, g (s)	20.0		15.0	15.0	13.0	28.0
Actuated g/C Ratio	0.22		0.17	0.17	0.14	0.31
Clearance Time (s)			6.0	6.0	4.0	6.0
Lane Grp Cap (vph)	318		338	291	209	368
v/s Ratio Prot	c0.20		c0.17	0.16		c0.06
v/s Ratio Perm					0.03	0.06
v/c Ratio	0.92		1.00	0.97	0.19	0.38
Uniform Delay, d1	34.2		37.5	37.3	33.9	24.2
Progression Factor	0.93		0.93	0.93	1.00	1.00
Incremental Delay, d2	27.4		45.2	41.5	2.0	3.0
Delay (s)	59.1		80.0	76.3	35.8	27.3
Level of Service	E		E	E	D	C
Approach Delay (s)	59.1			78.3	29.1	
Approach LOS	E			E	C	

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	90	1455	110	477	374	60	286	107
v/c Ratio	0.35	0.95	0.28	0.62	0.34	0.20	0.25	0.26
Control Delay	23.0	32.3	21.0	33.9	22.3	11.3	1.4	16.3
Queue Delay	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.2
Total Delay	23.0	32.3	21.1	34.1	22.3	11.3	1.4	16.5
Queue Length 50th (ft)	55	331	66	123	79	4	0	25
Queue Length 95th (ft)	m47	m273	m54	170	113	m13	m0	67
Internal Link Dist (ft)		1079			832	195		257
Turn Bay Length (ft)	250		175	200			100	
Base Capacity (vph)	254	1538	399	766	1094	307	1163	417
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	39	43	0	0	0	66
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.95	0.31	0.66	0.34	0.20	0.25	0.30

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												
Volume (vph)	84	1353	102	420	300	29	21	36	272	14	39	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	13	12	12	11	11	11	12	12
Total Lost time (s)	3.0	3.0	3.0	5.0	3.0			2.0	5.0		2.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95			1.00	0.88		1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1555	4468	1161	3001	3154			1156	2209		1357	
Flt Permitted	0.45	1.00	1.00	0.95	1.00			0.91	1.00		0.97	
Satd. Flow (perm)	741	4468	1161	3001	3154			1067	2209		1325	
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	90	1455	110	477	341	33	22	38	286	15	43	49
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	35	0	34	0
Lane Group Flow (vph)	90	1455	110	477	366	0	0	60	251	0	73	0
Confl. Bikes (#/hr)			17			2			15			6
Heavy Vehicles (%)	1%	1%	21%	5%	5%	3%	43%	39%	11%	7%	26%	11%
Turn Type	Perm	NA	Prot	Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		3 4	3 4	1 2	3 4			5 6	1 2		5 6	
Permitted Phases	3 4						5 6		5 6	5 6		
Actuated Green, G (s)	29.0	29.0	29.0	24.0	29.0			24.0	48.0		24.0	
Effective Green, g (s)	30.0	30.0	30.0	25.0	30.0			26.0	47.0		26.0	
Actuated g/C Ratio	0.33	0.33	0.33	0.28	0.33			0.29	0.52		0.29	
Clearance Time (s)												
Lane Grp Cap (vph)	247	1489	387	833	1051			308	1153		382	
v/s Ratio Prot		c0.33	0.09	c0.16	0.12				c0.06			
v/s Ratio Perm	0.12							c0.06	0.05		0.05	
v/c Ratio	0.36	0.98	0.28	0.57	0.35			0.19	0.22		0.19	
Uniform Delay, d1	22.8	29.7	22.1	27.9	22.6			24.1	11.6		24.1	
Progression Factor	0.98	1.04	0.94	1.00	1.00			0.42	0.14		1.00	
Incremental Delay, d2	0.4	3.5	0.2	2.9	0.9			0.9	0.3		1.1	
Delay (s)	22.6	34.2	21.0	30.8	23.5			11.0	1.9		25.2	
Level of Service	C	C	C	C	C			B	A		C	
Approach Delay (s)		32.7			27.6			3.5			25.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWT
Lane Group Flow (vph)	136	1013	562	228	565	298	149	402	210	1223
v/c Ratio	0.82	0.89	0.81	1.36	0.70	0.30	0.52	0.67	0.48	1.05
Control Delay	89.2	55.6	25.7	235.4	47.5	8.5	45.3	45.7	7.2	78.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.2	55.6	25.7	235.4	47.5	8.5	45.3	45.7	7.2	78.9
Queue Length 50th (ft)	105	278	150	~232	212	70	109	159	4	~541
Queue Length 95th (ft)	#239	#379	#350	#393	276	119	168	200	22	#680
Internal Link Dist (ft)		832			440			1843		515
Turn Bay Length (ft)	200		400				600			
Base Capacity (vph)	165	1138	691	168	809	997	314	658	461	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.89	0.81	1.36	0.70	0.30	0.47	0.61	0.46	1.05

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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	129	962	534	212	525	277	128	346	181	326	697	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	12	12	12	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1646	4868	1759	1687	3471	1568	1574	3292	1468		3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1646	4868	1759	1687	3471	1568	1574	3292	1468		3304	
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.94	0.94	0.94
Adj. Flow (vph)	136	1013	562	228	565	298	149	402	210	347	741	135
RTOR Reduction (vph)	0	0	280	0	0	34	0	0	172	0	8	0
Lane Group Flow (vph)	136	1013	282	228	565	264	149	402	38	0	1215	0
Confl. Peds. (#/hr)							120		11			50
Confl. Bikes (#/hr)									1			11
Heavy Vehicles (%)	6%	3%	1%	7%	4%	3%	7%	6%	10%	3%	5%	7%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Prot	Split	NA	
Protected Phases	5	2		1	6	4	8	8	8	4	4	
Permitted Phases			2			6						
Actuated Green, G (s)	11.1	27.1	27.1	11.0	27.0	68.0	20.9	20.9	20.9		41.0	
Effective Green, g (s)	12.1	28.1	28.1	12.0	28.0	70.0	21.9	21.9	21.9		42.0	
Actuated g/C Ratio	0.10	0.23	0.23	0.10	0.23	0.58	0.18	0.18	0.18		0.35	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0		2.0	
Lane Grp Cap (vph)	165	1139	411	168	809	966	287	600	267		1156	
v/s Ratio Prot	0.08	c0.21		c0.14	0.16	0.10	0.09	c0.12	0.03		c0.37	
v/s Ratio Perm			0.16			0.07						
v/c Ratio	0.82	0.89	0.69	1.36	0.70	0.27	0.52	0.67	0.14		1.05	
Uniform Delay, d1	52.9	44.4	41.9	54.0	42.1	12.4	44.3	45.7	41.2		39.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.88	0.63		1.00	
Incremental Delay, d2	26.0	10.5	9.0	194.4	2.1	0.1	1.6	2.9	0.2		41.0	
Delay (s)	78.9	54.9	51.0	248.4	44.3	12.5	40.3	43.0	26.1		80.0	
Level of Service	E	D	D	F	D	B	D	D	C		F	
Approach Delay (s)		55.5			78.2			37.8			80.0	
Approach LOS		E			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	481	600	359	198	29
v/c Ratio	0.27	0.73	0.97	0.60	0.10
Control Delay	9.7	23.0	67.5	40.3	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	23.0	67.5	40.3	29.0
Queue Length 50th (ft)	81	75	155	102	13
Queue Length 95th (ft)	132	m132	#321	172	36
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1806	820	369	328	292
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	0.27	0.73	0.97	0.60	0.10

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	428	448	97	37	0	271	45	133	44	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		6.0	6.0				6.0			5.0	5.0
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.93				1.00			1.00	0.97
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.97				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2755	2382				1210			1476	1315
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2755	2382				1210			1476	1315
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.97	0.88	0.88	0.88	0.89	0.89	0.89
Adj. Flow (vph)	0	481	462	100	38	0	308	51	149	49	29
RTOR Reduction (vph)	0	0	0	0	0	0	73	0	0	0	0
Lane Group Flow (vph)	0	481	600	0	0	0	286	0	0	198	29
Confl. Peds. (#/hr)					102			41			6
Confl. Bikes (#/hr)				8	8			24			11
Heavy Vehicles (%)	0%	14%	18%	0%	3%	0%	4%	0%	3%	2%	0%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		59.0	31.0				22.0			20.0	20.0
Effective Green, g (s)		59.0	31.0				22.0			20.0	20.0
Actuated g/C Ratio		0.66	0.34				0.24			0.22	0.22
Clearance Time (s)			6.0				6.0			5.0	5.0
Lane Grp Cap (vph)		1806	820				295			328	292
v/s Ratio Prot		0.17	c0.25				c0.24			c0.13	
v/s Ratio Perm											0.02
v/c Ratio		0.27	0.73				0.97			0.60	0.10
Uniform Delay, d1		6.5	25.9				33.7			31.4	27.8
Progression Factor		1.44	0.71				1.00			1.00	1.00
Incremental Delay, d2		0.3	4.2				45.0			8.0	0.7
Delay (s)		9.6	22.6				78.6			39.4	28.5
Level of Service		A	C				E			D	C
Approach Delay (s)		9.6	22.6			78.6				38.0	
Approach LOS		A	C			E				D	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	94	245	178	505	199	71	551
v/c Ratio	0.48	0.43	0.93	0.82	0.47	0.18	0.92
Control Delay	28.2	39.1	89.5	44.4	18.7	15.1	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	39.1	89.5	44.4	18.7	15.1	30.5
Queue Length 50th (ft)	30	80	102	143	72	19	332
Queue Length 95th (ft)	m49	120	#196	180	m94	m26	m#468
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	205		240			140	
Base Capacity (vph)	197	573	192	619	422	385	597
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	0.48	0.43	0.93	0.82	0.47	0.18	0.92

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	177	54	146	367	47	79	112	68	48	335	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	7.0	7.0		7.0	7.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00	0.72		0.93	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		0.98	
Frt	1.00	0.97		1.00	0.98			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1481	2348		1444	2534			1567	913		1478	
Flt Permitted	0.95	1.00		0.95	1.00			0.62	1.00		0.95	
Satd. Flow (perm)	1481	2348		1444	2534			999	913		1416	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	94	188	57	178	448	57	82	117	71	52	360	139
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	94	245	0	178	505	0	0	199	71	0	551	0
Confl. Peds. (#/hr)			33			38	148		165	165		148
Confl. Bikes (#/hr)			14			12						17
Heavy Vehicles (%)	6%	26%	4%	5%	20%	19%	1%	5%	10%	2%	2%	2%
Bus Blockages (#/hr)	0	0	8	0	0	8	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	11.0	21.0		11.0	21.0			37.0	37.0		37.0	
Effective Green, g (s)	12.0	22.0		12.0	22.0			38.0	38.0		38.0	
Actuated g/C Ratio	0.13	0.24		0.13	0.24			0.42	0.42		0.42	
Clearance Time (s)	8.0	8.0		8.0	8.0			5.0	5.0		5.0	
Lane Grp Cap (vph)	197	573		192	619			421	385		597	
v/s Ratio Prot	0.06	0.10		c0.12	c0.20							
v/s Ratio Perm								0.20	0.08		c0.39	
v/c Ratio	0.48	0.43		0.93	0.82			0.47	0.18		0.92	
Uniform Delay, d1	36.1	28.7		38.6	32.1			18.8	16.3		24.6	
Progression Factor	0.55	1.26		1.00	1.00			0.82	0.85		0.55	
Incremental Delay, d2	7.8	2.3		48.2	11.3			2.7	0.7		14.1	
Delay (s)	27.7	38.5		86.8	43.4			18.0	14.6		27.7	
Level of Service	C	D		F	D			B	B		C	
Approach Delay (s)		35.5			54.7			17.1			27.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	147	245	828	12	334
v/c Ratio	0.66	0.19	0.51	0.05	0.74
Control Delay	39.1	16.5	10.2	40.6	56.8
Queue Delay	0.0	0.0	1.1	0.0	0.0
Total Delay	39.1	16.5	11.2	40.6	56.8
Queue Length 50th (ft)	82	52	93	8	129
Queue Length 95th (ft)	151	71	173	16	179
Internal Link Dist (ft)		1070	174	143	1971
Turn Bay Length (ft)	170				
Base Capacity (vph)	222	1310	1618	219	450
Starvation Cap Reductn	0	0	510	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.19	0.75	0.05	0.74

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	1	121	115	88	4	129	416	163	0	3	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0				8.0			8.0		
Lane Util. Factor		1.00	0.95				0.95			1.00		
Frpb, ped/bikes		1.00	0.96				0.98			0.93		
Flpb, ped/bikes		0.93	1.00				1.00			1.00		
Frt		1.00	0.94				0.97			0.92		
Flt Protected		0.95	1.00				0.99			1.00		
Satd. Flow (prot)		1224	2579				2882			1143		
Flt Permitted		0.34	1.00				0.80			1.00		
Satd. Flow (perm)		438	2579				2314			1143		
Peak-hour factor, PHF	0.92	0.83	0.83	0.83	0.92	0.86	0.86	0.86	0.58	0.58	0.58	0.88
Adj. Flow (vph)	1	146	139	106	4	150	484	190	0	5	7	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	147	245	0	0	0	828	0	0	12	0	0
Confl. Peds. (#/hr)		56		21				56	96		46	46
Confl. Bikes (#/hr)				2				10			5	
Heavy Vehicles (%)	2%	24%	21%	2%	2%	2%	10%	0%	0%	33%	25%	0%
Turn Type	Perm	Perm	NA		custom	pm+pt	NA			NA		Perm
Protected Phases			2			1	6			8		
Permitted Phases	2	2			1	6			8			4
Actuated Green, G (s)		60.0	60.0				80.0			22.0		
Effective Green, g (s)		61.0	61.0				81.0			23.0		
Actuated g/C Ratio		0.51	0.51				0.68			0.19		
Clearance Time (s)		9.0	9.0				9.0			9.0		
Lane Grp Cap (vph)		222	1310				1642			219		
v/s Ratio Prot			0.09				c0.07			0.01		
v/s Ratio Perm		c0.34					0.27					
v/c Ratio		0.66	0.19				0.50			0.05		
Uniform Delay, d1		21.9	16.0				9.6			39.6		
Progression Factor		1.00	1.00				1.00			1.00		
Incremental Delay, d2		14.5	0.3				1.0			0.5		
Delay (s)		36.4	16.3				10.6			40.1		
Level of Service		D	B				B			D		
Approach Delay (s)			23.9				10.6			40.1		
Approach LOS			C				B			D		

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	176	109
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	8.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.92	
Flpb, ped/bikes	1.00	
Frt	0.94	
Flt Protected	1.00	
Satd. Flow (prot)	2477	
Flt Permitted	0.95	
Satd. Flow (perm)	2348	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	200	124
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	334	0
Confl. Peds. (#/hr)		96
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	32%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	22.0	
Effective Green, g (s)	23.0	
Actuated g/C Ratio	0.19	
Clearance Time (s)	9.0	
Lane Grp Cap (vph)	450	
v/s Ratio Prot		
v/s Ratio Perm	c0.14	
v/c Ratio	0.74	
Uniform Delay, d1	45.7	
Progression Factor	1.00	
Incremental Delay, d2	10.6	
Delay (s)	56.3	
Level of Service	E	
Approach Delay (s)	56.3	
Approach LOS	E	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	161	471	701	968	341
v/c Ratio	0.52	0.61	0.19	0.56	0.49
Control Delay	87.9	42.1	2.5	12.3	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.2
Total Delay	87.9	42.1	2.5	12.3	12.8
Queue Length 50th (ft)	69	165	31	174	115
Queue Length 95th (ft)	m91	201	49	m293	m184
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	495	774	3682	1719	693
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	57
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.61	0.19	0.56	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations							
Volume (vph)	131	1	33	391	631	910	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	12	11	11	12	12
Total Lost time (s)	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97			0.97	0.91	0.95	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	1.00	1.00	0.85
Flt Protected	0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)	2833			3019	4468	3217	1298
Flt Permitted	0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)	2833			3019	4468	3217	1298
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.90	0.94	0.94
Adj. Flow (vph)	160	1	37	434	701	968	341
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	161	0	0	471	701	968	341
Confl. Bikes (#/hr)							3
Heavy Vehicles (%)	19%	0%	0%	1%	1%	1%	12%
Turn Type	Prot		Prot	Prot	NA	NA	Prot
Protected Phases	2		4	4	1 4	1	1
Permitted Phases							
Actuated Green, G (s)	12.1			29.8	97.9	63.1	63.1
Effective Green, g (s)	13.1			30.8	98.9	64.1	64.1
Actuated g/C Ratio	0.11			0.26	0.82	0.53	0.53
Clearance Time (s)	5.0			5.0		5.0	5.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	309			774	3682	1718	693
v/s Ratio Prot	c0.06			c0.16	0.16	c0.30	0.26
v/s Ratio Perm							
v/c Ratio	0.52			0.61	0.19	0.56	0.49
Uniform Delay, d1	50.5			39.3	2.2	18.6	17.7
Progression Factor	1.64			1.00	1.00	0.59	0.60
Incremental Delay, d2	1.6			1.4	0.0	0.1	0.2
Delay (s)	84.1			40.7	2.2	11.1	10.8
Level of Service	F			D	A	B	B
Approach Delay (s)	84.1				17.7	11.1	
Approach LOS	F				B	B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	41	316	25	294	508	243
v/c Ratio	0.17	0.56	0.10	0.54	0.96	0.39
Control Delay	11.5	13.9	20.8	27.6	55.0	29.3
Queue Delay	0.0	3.2	0.0	0.1	0.0	0.0
Total Delay	11.5	17.0	20.8	27.7	55.0	29.3
Queue Length 50th (ft)	8	61	9	131	266	139
Queue Length 95th (ft)	m12	m90	28	212	#464	m200
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	245	562	259	545	529	630
Starvation Cap Reductn	0	155	0	0	0	0
Spillback Cap Reductn	0	0	0	11	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.78	0.10	0.55	0.96	0.39

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	38	287	4	24	243	36	68	308	71	7	132	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.94			0.91	
Flpb, ped/bikes	0.93	1.00		0.90	1.00			0.97			1.00	
Frt	1.00	1.00		1.00	0.98			0.98			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1261	1583		1413	1533			1183			1310	
Flt Permitted	0.52	1.00		0.49	1.00			0.91			0.98	
Satd. Flow (perm)	690	1583		731	1533			1083			1290	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88	0.87	0.87	0.87
Adj. Flow (vph)	41	312	4	25	256	38	77	350	81	8	152	83
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	316	0	25	294	0	0	508	0	0	243	0
Confl. Peds. (#/hr)	75		115	115		75	233		71	71		233
Confl. Bikes (#/hr)			12						361			
Heavy Vehicles (%)	16%	4%	0%	0%	3%	11%	1%	7%	4%	14%	11%	6%
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			43.0			43.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			44.0			44.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36			0.49			0.49	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	245	562		259	545			529			630	
v/s Ratio Prot		c0.20			0.19							
v/s Ratio Perm	0.06			0.03				c0.47			0.19	
v/c Ratio	0.17	0.56		0.10	0.54			0.96			0.39	
Uniform Delay, d1	19.9	23.4		19.4	23.1			22.2			14.5	
Progression Factor	0.51	0.46		1.00	1.00			1.00			1.84	
Incremental Delay, d2	1.0	2.7		0.7	3.8			30.4			1.7	
Delay (s)	11.0	13.5		20.1	26.9			52.6			28.3	
Level of Service	B	B		C	C			D			C	
Approach Delay (s)		13.2			26.4			52.6			28.3	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	618	278	46	364	79	273
v/c Ratio	0.97	0.55	0.18	0.66	0.34	0.51
Control Delay	53.5	37.3	21.7	30.7	12.2	12.0
Queue Delay	42.2	7.2	0.0	33.6	3.0	1.1
Total Delay	95.6	44.5	21.7	64.3	15.3	13.2
Queue Length 50th (ft)	325	170	17	170	15	50
Queue Length 95th (ft)	#521	235	44	270	m24	m69
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	638	504	256	553	229	540
Starvation Cap Reductn	0	178	0	0	32	110
Spillback Cap Reductn	184	0	0	201	83	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.36	0.85	0.18	1.03	0.54	0.63

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	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	75	418	39	34	195	8	1	42	248	90	73	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	12	10	12	12	11	11
Total Lost time (s)		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
Frpb, ped/bikes		0.99			1.00			1.00	0.95		1.00	0.95
Flpb, ped/bikes		0.99			0.99			0.90	1.00		0.93	1.00
Frt		0.99			1.00			1.00	0.96		1.00	0.96
Flt Protected		0.99			0.99			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1459			1202			1245	1510		1414	1475
Flt Permitted		0.91			0.87			0.53	1.00		0.42	1.00
Satd. Flow (perm)		1330			1053			700	1510		627	1475
Peak-hour factor, PHF	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	87	486	45	40	229	9	1	45	267	97	79	209
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	615	0	0	276	0	0	46	364	0	79	273
Confl. Peds. (#/hr)	116		119	119		116		107		97	97	
Confl. Bikes (#/hr)			57			6				20		
Heavy Vehicles (%)	7%	5%	3%	26%	8%	0%	2%	10%	4%	3%	3%	3%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA
Protected Phases		4			8				2			6
Permitted Phases	4			8			2	2			6	
Actuated Green, G (s)		42.0			42.0			32.0	32.0		32.0	32.0
Effective Green, g (s)		43.0			43.0			33.0	33.0		33.0	33.0
Actuated g/C Ratio		0.48			0.48			0.37	0.37		0.37	0.37
Clearance Time (s)		8.0			8.0			8.0	8.0		8.0	8.0
Lane Grp Cap (vph)		635			503			256	553		229	540
v/s Ratio Prot									c0.24			0.19
v/s Ratio Perm		c0.46			0.26			0.07			0.13	
v/c Ratio		0.97			0.55			0.18	0.66		0.34	0.51
Uniform Delay, d1		22.8			16.6			19.3	23.8		20.7	22.2
Progression Factor		1.00			1.93			1.00	1.00		0.41	0.41
Incremental Delay, d2		28.7			3.8			1.5	6.0		3.2	2.6
Delay (s)		51.6			36.0			20.9	29.8		11.7	11.7
Level of Service		D			D			C	C		B	B
Approach Delay (s)		51.6			36.0				28.8			11.7
Approach LOS		D			D				C			B

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	59
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	64
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	41
Heavy Vehicles (%)	3%
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	527	155	175	262	226	4	35	287	51
v/c Ratio	0.94	0.36	1.36	0.50	0.34	0.05	0.12	0.96	0.18
Control Delay	47.7	23.7	207.2	8.4	2.1	30.7	30.1	51.7	20.2
Queue Delay	45.6	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0
Total Delay	93.3	23.7	207.2	8.9	2.1	31.3	30.1	51.7	20.2
Queue Length 50th (ft)	318	73	~130	55	5	2	16	136	16
Queue Length 95th (ft)	m#356	m88	m#188	m76	m8	8	31	m#166	m18
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	561	425	129	522	658	73	293	299	290
Starvation Cap Reductn	142	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	65	0	24	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.36	1.36	0.57	0.34	0.08	0.12	0.96	0.18

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												
Volume (vph)	4	444	132	154	231	199	3	9	15	267	45	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	8.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.84	1.00	1.00	0.93	1.00	0.93		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.96	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1536	1196	1445	1425	1140	1570	1389		1417	1375	
Flt Permitted		1.00	1.00	0.23	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		1532	1196	354	1425	1140	348	1389		1417	1375	
Peak-hour factor, PHF	0.85	0.85	0.85	0.88	0.88	0.88	0.68	0.68	0.68	0.93	0.93	0.93
Adj. Flow (vph)	5	522	155	175	262	226	4	13	22	287	48	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	527	155	175	262	226	4	35	0	287	51	0
Confl. Peds. (#/hr)	35		75	75		35	25		70			25
Confl. Bikes (#/hr)			40									17
Heavy Vehicles (%)	0%	5%	2%	1%	12%	11%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	32.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.36	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		561	425	129	522	747	73	293		299	290	
v/s Ratio Prot					0.18	0.06		c0.03		c0.20	0.04	
v/s Ratio Perm		0.34	0.13	c0.49		0.13	0.01					
v/c Ratio		0.94	0.36	1.36	0.50	0.30	0.05	0.12		0.96	0.18	
Uniform Delay, d1		27.5	21.5	28.5	22.1	9.7	28.3	28.7		35.1	29.1	
Progression Factor		1.06	1.01	0.39	0.28	0.18	1.00	1.00		0.64	0.66	
Incremental Delay, d2		16.6	1.3	187.2	2.0	0.6	1.4	0.8		25.1	0.6	
Delay (s)		46.0	23.0	198.3	8.2	2.3	29.8	29.6		47.7	19.8	
Level of Service		D	C	F	A	A	C	C		D	B	
Approach Delay (s)		40.7			56.4			29.6			43.5	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	173	558	113	86	378	87	400	113	469	202
v/c Ratio	0.76	1.25	0.47	0.83	0.70	0.72	0.56	0.71	0.89	1.12
Control Delay	60.2	154.5	38.5	85.5	58.3	73.4	32.3	60.8	38.8	119.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	154.5	38.5	85.5	58.3	73.4	32.3	60.8	38.8	119.3
Queue Length 50th (ft)	108	~419	50	54	122	54	110	55	273	~134
Queue Length 95th (ft)	m116	m#464	m56	m#89	m166	m#107	146	m73	m#387	m#193
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	228	448	241	104	542	121	720	165	528	181
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.25	0.47	0.83	0.70	0.72	0.56	0.68	0.89	1.12

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												
Volume (vph)	149	480	97	80	316	35	77	243	113	107	446	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.71	1.00	0.99		1.00	0.95		1.00	1.00	0.87
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1613	863	1342	2713		1366	2467		1490	1425	1169
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1613	863	1342	2713		1366	2467		1490	1425	1169
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95	0.95
Adj. Flow (vph)	173	558	113	86	340	38	87	273	127	113	469	202
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	173	558	113	86	378	0	87	400	0	113	469	202
Confl. Peds. (#/hr)			150			70			60			55
Confl. Bikes (#/hr)			175			5			3			9
Heavy Vehicles (%)	3%	6%	8%	13%	9%	29%	15%	17%	13%	9%	16%	5%
Bus Blockages (#/hr)	0	0	7	0	7	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	13.0	23.0	23.0	6.0	16.0		5.6	26.3		8.7	32.4	13.0
Effective Green, g (s)	14.0	24.0	24.0	7.0	17.0		6.6	27.3		9.7	33.4	14.0
Actuated g/C Ratio	0.16	0.27	0.27	0.08	0.19		0.07	0.30		0.11	0.37	0.16
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	228	430	230	104	512		100	748		160	528	181
v/s Ratio Prot	0.12	c0.35		0.06	0.14		c0.06	0.16		0.08	c0.33	
v/s Ratio Perm			0.13									c0.17
v/c Ratio	0.76	1.30	0.49	0.83	0.74		0.87	0.53		0.71	0.89	1.12
Uniform Delay, d1	36.4	33.0	27.8	40.9	34.4		41.3	26.1		38.8	26.5	38.0
Progression Factor	1.38	1.28	1.27	1.05	1.56		1.14	1.08		1.18	0.86	0.84
Incremental Delay, d2	5.7	140.9	3.0	30.7	6.8		44.0	2.3		7.9	12.4	85.5
Delay (s)	55.8	183.0	38.4	73.5	60.5		91.1	30.5		53.6	35.3	117.4
Level of Service	E	F	D	E	E		F	C		D	D	F
Approach Delay (s)		137.6			62.9			41.3			59.1	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	82.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	676	116	177	407	81	94
v/c Ratio	1.26	0.37	0.48	0.75	0.33	0.28
Control Delay	140.4	34.1	40.6	25.2	40.2	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	140.4	34.1	40.6	25.2	40.2	10.7
Queue Length 50th (ft)	~489	47	104	235	44	2
Queue Length 95th (ft)	m#448	m49	m122	m287	89	41
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160		250	
Base Capacity (vph)	535	317	371	545	244	330
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	1.26	0.37	0.48	0.75	0.33	0.28

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	608	104	166	383	75	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	10	11
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	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	1.00
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	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1506	1233	1454	1535	1099	1100
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1506	1233	1454	1535	1099	1100
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.93	0.93
Adj. Flow (vph)	676	116	177	407	81	94
RTOR Reduction (vph)	0	44	0	0	0	49
Lane Group Flow (vph)	676	72	177	407	81	45
Confl. Peds. (#/hr)		400				
Confl. Bikes (#/hr)		283				
Heavy Vehicles (%)	6%	10%	8%	4%	38%	13%
Parking (#/hr)						3
Turn Type	NA	Over	Prot	NA	Prot	Over
Protected Phases	2	4	3	2	4	3
Permitted Phases						
Actuated Green, G (s)	31.0	19.0	22.0	31.0	19.0	22.0
Effective Green, g (s)	32.0	20.0	23.0	32.0	20.0	23.0
Actuated g/C Ratio	0.36	0.22	0.26	0.36	0.22	0.26
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	535	274	371	545	244	281
v/s Ratio Prot	c0.45	0.06	c0.12	0.27	c0.07	0.04
v/s Ratio Perm						
v/c Ratio	1.26	0.26	0.48	0.75	0.33	0.16
Uniform Delay, d1	29.0	28.9	28.4	25.4	29.4	26.0
Progression Factor	0.55	2.00	1.32	0.76	1.21	0.77
Incremental Delay, d2	120.0	0.2	2.2	4.8	3.6	1.2
Delay (s)	135.8	58.1	39.6	24.1	39.1	21.1
Level of Service	F	E	D	C	D	C
Approach Delay (s)	124.5			28.8	29.4	
Approach LOS	F			C	C	

Intersection Summary			
HCM 2000 Control Delay	77.7	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)	15.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	27	510	20	26	288
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.63	0.63	0.98	0.98	0.93	0.93
Hourly flow rate (vph)	13	43	520	20	28	310
Pedestrians	250		1			33
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	23		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			297			907
pX, platoon unblocked						
vC, conflicting volume	1147	814			791	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1147	814			791	
tC, single (s)	6.8	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.4			2.2	
p0 queue free %	91	85			96	
cM capacity (veh/h)	139	279			649	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	56	541	338
Volume Left	13	0	28
Volume Right	43	20	0
cSH	227	1700	649
Volume to Capacity	0.25	0.32	0.04
Queue Length 95th (ft)	23	0	3
Control Delay (s)	26.0	0.0	1.4
Lane LOS	D		A
Approach Delay (s)	26.0	0.0	1.4
Approach LOS	D		

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	246	414	594	342	136	149
v/c Ratio	0.84	0.33	0.88	0.73	0.48	0.71
Control Delay	60.1	15.0	40.3	32.6	40.4	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	15.0	40.3	32.6	40.4	37.4
Queue Length 50th (ft)	153	119	301	158	60	64
Queue Length 95th (ft)	m134	m92	#507	#281	m76	m78
Internal Link Dist (ft)		882	68		124	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	293	1243	677	470	282	211
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	0.33	0.88	0.73	0.48	0.71

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						
Volume (vph)	229	385	552	318	129	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	10	11	11	11	11
Total Lost time (s)	6.0	5.0	5.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.80	1.00	0.35
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)	1468	2944	1605	1115	1496	464
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1468	2944	1605	1115	1496	464
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.95	0.95
Adj. Flow (vph)	246	414	594	342	136	149
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	246	414	594	342	136	149
Confl. Peds. (#/hr)				60		266
Confl. Bikes (#/hr)				18		
Heavy Vehicles (%)	7%	3%	3%	1%	5%	7%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	2	4	4		3	
Permitted Phases				4		3 2
Actuated Green, G (s)	17.0	37.0	37.0	37.0	16.0	40.0
Effective Green, g (s)	18.0	38.0	38.0	38.0	17.0	41.0
Actuated g/C Ratio	0.20	0.42	0.42	0.42	0.19	0.46
Clearance Time (s)	7.0	6.0	6.0	6.0	7.0	
Lane Grp Cap (vph)	293	1243	677	470	282	211
v/s Ratio Prot	0.17	0.14	c0.37		0.09	
v/s Ratio Perm				0.31		c0.32
v/c Ratio	0.84	0.33	0.88	0.73	0.48	0.71
Uniform Delay, d1	34.6	17.5	23.9	21.7	32.6	19.7
Progression Factor	1.65	0.84	1.00	1.00	1.12	1.21
Incremental Delay, d2	2.8	0.1	15.0	9.5	3.1	10.1
Delay (s)	59.8	14.8	38.8	31.2	39.5	33.9
Level of Service	E	B	D	C	D	C
Approach Delay (s)		31.6	36.0		36.5	
Approach LOS		C	D		D	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	228	329	55	221	506	61	357	239
v/c Ratio	0.59	0.51	0.19	0.40	0.63	0.25	0.63	0.53
Control Delay	26.5	21.6	38.6	42.9	26.1	35.4	40.8	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	21.6	38.6	42.9	26.1	35.4	40.8	39.2
Queue Length 50th (ft)	94	130	33	134	118	35	224	149
Queue Length 95th (ft)	163	197	m57	m201	175	m45	m265	m179
Internal Link Dist (ft)		730		410	472		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	387	640	288	556	797	240	565	449
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	0.59	0.51	0.19	0.40	0.63	0.25	0.63	0.53

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												
Volume (vph)	196	210	73	53	100	112	68	248	149	58	339	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	10	11	10
Total Lost time (s)	7.0	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			0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.95		1.00	0.92			0.96		1.00	1.00	0.94
Flpb, ped/bikes	0.90	1.00		0.93	1.00			1.00		0.96	1.00	1.00
Frt	1.00	0.96		1.00	0.92			0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1334	1441		1227	1251			2551		1316	1413	1124
Flt Permitted	0.62	1.00		0.50	1.00			0.78		0.44	1.00	1.00
Satd. Flow (perm)	871	1441		650	1251			1995		603	1413	1124
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	228	244	85	55	104	117	74	270	162	61	357	239
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	228	329	0	55	221	0	0	506	0	61	357	239
Confl. Peds. (#/hr)	200		100	100		200	35		60	60		35
Confl. Bikes (#/hr)			85			7			36			
Heavy Vehicles (%)	13%	7%	12%	15%	13%	11%	3%	13%	24%	11%	17%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	8	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	39.0	39.0		39.0	39.0			35.0		35.0	35.0	35.0
Effective Green, g (s)	40.0	40.0		40.0	40.0			36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44			0.40		0.40	0.40	0.40
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0		8.0	8.0	8.0
Lane Grp Cap (vph)	387	640		288	556			798		241	565	449
v/s Ratio Prot		0.23			0.18						0.25	
v/s Ratio Perm	c0.26			0.08				c0.25		0.10		0.21
v/c Ratio	0.59	0.51		0.19	0.40			0.63		0.25	0.63	0.53
Uniform Delay, d1	18.8	18.0		15.2	16.9			21.7		18.0	21.7	20.6
Progression Factor	1.00	1.00		2.33	2.35			1.00		1.77	1.68	1.71
Incremental Delay, d2	6.4	2.9		1.3	1.8			3.8		1.4	3.0	2.5
Delay (s)	25.3	20.9		36.7	41.5			25.5		33.4	39.4	37.7
Level of Service	C	C		D	D			C		C	D	D
Approach Delay (s)		22.7			40.5			25.5			38.2	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	126.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	82	371	8	85	74	120	121	194
v/c Ratio	0.21	0.56	0.02	0.18	0.30	0.30	0.43	0.68
Control Delay	10.9	14.7	10.2	11.6	29.1	26.9	33.1	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	14.7	10.2	11.6	29.1	26.9	33.1	44.2
Queue Length 50th (ft)	19	128	2	23	33	52	73	119
Queue Length 95th (ft)	m46	230	7	40	72	99	125	#191
Internal Link Dist (ft)		410		669		920	481	
Turn Bay Length (ft)	25		25		25			
Base Capacity (vph)	396	664	387	479	247	396	283	286
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	0.21	0.56	0.02	0.18	0.30	0.30	0.43	0.68

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	271	70	6	29	36	67	99	10	68	37	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	8.0	7.0		8.0	7.0		8.0	7.0			7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.93		1.00	0.81		1.00	0.98			1.00	0.85
Flpb, ped/bikes	0.71	1.00		0.85	1.00		0.89	1.00			0.88	1.00
Frt	1.00	0.97		1.00	0.92		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1006	1221		1381	880		1201	1322			1247	954
Flt Permitted	0.70	1.00		0.50	1.00		0.68	1.00			0.73	1.00
Satd. Flow (perm)	743	1221		727	880		859	1322			945	954
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	82	295	76	8	38	47	74	109	11	78	43	194
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	82	371	0	8	85	0	74	120	0	0	121	194
Confl. Peds. (#/hr)	250		200	200		250	50		90	90		50
Confl. Bikes (#/hr)			101			5			8			11
Heavy Vehicles (%)	14%	14%	16%	0%	34%	50%	21%	14%	0%	12%	3%	9%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	48.0	48.0		48.0	48.0		26.0	26.0			26.0	26.0
Effective Green, g (s)	48.0	49.0		48.0	49.0		26.0	27.0			27.0	27.0
Actuated g/C Ratio	0.53	0.54		0.53	0.54		0.29	0.30			0.30	0.30
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0			8.0	8.0
Lane Grp Cap (vph)	396	664		387	479		248	396			283	286
v/s Ratio Prot		c0.30			0.10			0.09				
v/s Ratio Perm	0.11			0.01			0.09				0.13	c0.20
v/c Ratio	0.21	0.56		0.02	0.18		0.30	0.30			0.43	0.68
Uniform Delay, d1	11.0	13.4		9.9	10.3		24.9	24.3			25.3	27.7
Progression Factor	0.86	0.83		1.00	1.00		1.00	1.00			1.09	1.12
Incremental Delay, d2	1.0	2.9		0.1	0.8		3.1	2.0			4.4	11.5
Delay (s)	10.5	14.1		10.0	11.1		28.0	26.2			31.9	42.5
Level of Service	B	B		B	B		C	C			C	D
Approach Delay (s)		13.4			11.0			26.9			38.4	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	241	65	0	62	0	8
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.73	0.73	0.50	0.50
Hourly flow rate (vph)	265	71	0	85	0	16
Pedestrians				666	468	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				56	39	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	749					
pX, platoon unblocked						
vC, conflicting volume			804		853	1435
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			804		853	1435
tC, single (s)			4.1		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		100	62
cM capacity (veh/h)			500		201	42

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	336	85	16
Volume Left	0	0	0
Volume Right	71	0	16
cSH	1700	1700	42
Volume to Capacity	0.20	0.05	0.38
Queue Length 95th (ft)	0	0	33
Control Delay (s)	0.0	0.0	135.0
Lane LOS			F
Approach Delay (s)	0.0	0.0	135.0
Approach LOS			F

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	179	71	0	0	0	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.92	0.92	0.75	0.75
Hourly flow rate (vph)	216	86	0	0	0	56
Pedestrians					307	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			608		565	565
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			608		565	565
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	87
cM capacity (veh/h)			763		385	415

Direction, Lane #	EB 1	NB 1
Volume Total	301	56
Volume Left	0	0
Volume Right	86	56
cSH	1700	415
Volume to Capacity	0.18	0.13
Queue Length 95th (ft)	0	12
Control Delay (s)	0.0	15.0
Lane LOS		C
Approach Delay (s)	0.0	15.0
Approach LOS		C

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	876	106	0	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.42	0.42
Hourly flow rate (vph)	0	0	912	110	0	24
Pedestrians					129	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					14	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		704				
pX, platoon unblocked						
vC, conflicting volume	1152				1097	640
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1152				1097	640
tC, single (s)	4.1				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	100				100	93
cM capacity (veh/h)	516				181	342

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	608	415	24
Volume Left	0	0	0	0	0
Volume Right	0	0	0	110	24
cSH	1700	1700	1700	1700	342
Volume to Capacity	0.00	0.00	0.36	0.24	0.07
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	16.3
Lane LOS					C
Approach Delay (s)	0.0		0.0		16.3
Approach LOS					C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	598	97	0	888	255	0	0	0	0	0	95
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	643	104	0	976	280	0	0	0	0	0	106
Pedestrians								161			129	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			11	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1274										
pX, platoon unblocked												
vC, conflicting volume	1385			908			1450	2241	535	1566	2153	757
vC1, stage 1 conf vol							856	856		1245	1245	
vC2, stage 2 conf vol							593	1385		322	908	
vCu, unblocked vol	1385			908			1450	2241	535	1566	2153	757
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
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	100	100	66
cM capacity (veh/h)	447			758			167	128	490	139	143	309

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	429	319	651	605	106
Volume Left	0	0	0	0	0
Volume Right	0	104	0	280	106
cSH	1700	1700	1700	1700	309
Volume to Capacity	0.25	0.19	0.38	0.36	0.34
Queue Length 95th (ft)	0	0	0	0	37
Control Delay (s)	0.0	0.0	0.0	0.0	22.6
Lane LOS					C
Approach Delay (s)	0.0		0.0		22.6
Approach LOS					C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	43	173	0	0	38	71
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.50	0.50	0.86	0.86
Hourly flow rate (vph)	46	184	0	0	44	83
Pedestrians	64		61			47
Lane Width (ft)	13.0		0.0			13.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	6		0			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1000
pX, platoon unblocked						
vC, conflicting volume	296	111			64	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	296	111			64	
tC, single (s)	6.6	6.4			4.2	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.3	
p0 queue free %	92	77			97	
cM capacity (veh/h)	596	817			1414	

Direction, Lane #	WB 1	SB 1
Volume Total	230	127
Volume Left	46	44
Volume Right	184	0
cSH	761	1414
Volume to Capacity	0.30	0.03
Queue Length 95th (ft)	32	2
Control Delay (s)	11.8	2.8
Lane LOS	B	A
Approach Delay (s)	11.8	2.8
Approach LOS	B	

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	21	202	21	2	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.79	0.79	0.58	0.58
Hourly flow rate (vph)	21	26	256	27	3	26
Pedestrians		17	38		51	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	3		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	333				427	337
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	333				427	337
tC, single (s)	4.2				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.5
p0 queue free %	98				99	96
cM capacity (veh/h)	1153				536	628

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	48	282	29
Volume Left	21	0	3
Volume Right	0	27	26
cSH	1153	1700	616
Volume to Capacity	0.02	0.17	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	3.7	0.0	11.1
Lane LOS	A		B
Approach Delay (s)	3.7	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	7	179	42	7	44
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.66	0.66	0.75	0.75
Hourly flow rate (vph)	17	8	271	64	9	59
Pedestrians		9	22		44	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	2		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	379				411	356
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379				411	356
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				98	91
cM capacity (veh/h)	1147				559	633

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	25	335	68
Volume Left	17	0	9
Volume Right	0	64	59
cSH	1147	1700	622
Volume to Capacity	0.02	0.20	0.11
Queue Length 95th (ft)	1	0	9
Control Delay (s)	5.7	0.0	11.5
Lane LOS	A		B
Approach Delay (s)	5.7	0.0	11.5
Approach LOS			B

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	12	2	167	132	24	55
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.53	0.53	0.93	0.93	0.74	0.74
Hourly flow rate (vph)	23	4	180	142	32	74
Pedestrians	213			213	41	
Lane Width (ft)	14.0			12.0	10.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	21			18	3	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				320		
pX, platoon unblocked	0.89					
vC, conflicting volume	825	496	320			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	743	496	320			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	89	99	82			
cM capacity (veh/h)	211	377	992			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	322	107
Volume Left	23	180	0
Volume Right	4	0	74
cSH	225	992	1700
Volume to Capacity	0.12	0.18	0.06
Queue Length 95th (ft)	10	16	0
Control Delay (s)	23.1	6.1	0.0
Lane LOS	C	A	
Approach Delay (s)	23.1	6.1	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	14	1084	0	0	0	0	0	14	100
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	16	1260	0	0	0	0	0	16	114
Pedestrians		8									50	
Lane Width (ft)		0.0									14.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.80						0.80	0.80		0.80	0.80	0.80
vC, conflicting volume	1310			0			792	1343	0	1343	1343	688
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	881			0			231	922	0	922	922	101
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			100	100	100	100	92	83
cM capacity (veh/h)	579			1636			420	202	1084	165	204	679

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	436	840	130
Volume Left	16	0	0
Volume Right	0	0	114
cSH	1636	1700	528
Volume to Capacity	0.01	0.49	0.25
Queue Length 95th (ft)	1	0	24
Control Delay (s)	0.4	0.0	14.0
Lane LOS	A		B
Approach Delay (s)	0.1		14.0
Approach LOS			B

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization		85.0%	ICU Level of Service E
Analysis Period (min)		15	

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1254	12	224	36
v/c Ratio	0.67	0.03	0.55	0.09
Control Delay	12.2	28.8	39.0	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	28.8	39.0	0.9
Queue Length 50th (ft)	232	6	124	0
Queue Length 95th (ft)	305	20	200	0
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1883	406	427	414
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	0.67	0.03	0.52	0.09

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1061	93	11	206	0	0	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.98		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.99		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2796		1624	1710				1422
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2796		1624	1710				1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.72	0.72	0.72
Adj. Flow (vph)	0	0	0	0	1153	101	12	224	0	0	0	36
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	27
Lane Group Flow (vph)	0	0	0	0	1254	0	12	224	0	0	0	9
Confl. Peds. (#/hr)						72						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	4%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					66.4		22.7	22.7				22.7
Effective Green, g (s)					67.4		23.7	23.7				23.7
Actuated g/C Ratio					0.67		0.24	0.24				0.24
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1882		384	404				336
v/s Ratio Prot					c0.45		0.01	c0.13				
v/s Ratio Perm												0.01
v/c Ratio					0.67		0.03	0.55				0.03
Uniform Delay, d1					9.7		29.4	33.6				29.3
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					1.9		0.0	1.6				0.0
Delay (s)					11.6		29.4	35.2				29.4
Level of Service					B		C	D				C
Approach Delay (s)		0.0			11.6			34.9			29.4	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	598	0	0	888	0	209
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	650	0	0	965	0	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			650		1133	325
vC1, stage 1 conf vol					650	
vC2, stage 2 conf vol					483	
vCu, unblocked vol			650		1133	325
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	61
cM capacity (veh/h)			932		334	677

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1
Volume Total	325	325	483	483	261
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	261
cSH	1700	1700	1700	1700	677
Volume to Capacity	0.19	0.19	0.28	0.28	0.39
Queue Length 95th (ft)	0	0	0	0	46
Control Delay (s)	0.0	0.0	0.0	0.0	13.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.6
Approach LOS					B

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1222	0	0	28	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.94	0.94
Hourly flow rate (vph)	0	1328	0	0	30	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				664	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				664	0
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				93	100
cM capacity (veh/h)	1622				398	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	664	664	30
Volume Left	0	0	30
Volume Right	0	0	0
cSH	1700	1700	398
Volume to Capacity	0.39	0.39	0.07
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	14.8
Lane LOS			B
Approach Delay (s)	0.0		14.8
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	231	1100
v/c Ratio	0.15	0.36
Control Delay	0.2	0.3
Queue Delay	0.1	0.0
Total Delay	0.3	0.3
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1516	3032
Starvation Cap Reductn	0	0
Spillback Cap Reductn	476	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.22	0.36

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	217	1034	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1516	3032				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1516	3032				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	231	1100	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	231	1100	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	100.1	100.1				
Effective Green, g (s)	96.1	96.1				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1455	2910				
v/s Ratio Prot	0.15	c0.36				
v/s Ratio Perm						
v/c Ratio	0.16	0.38				
Uniform Delay, d1	0.1	0.1				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.1	0.1				
Delay (s)	0.1	0.2				
Level of Service	A	A				
Approach Delay (s)		0.2	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1084	23	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.94	0.94	0.85	0.85
Hourly flow rate (vph)	0	0	0	1153	27	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked					0.92	
vC, conflicting volume			0		577	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		359	0
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		95	100
cM capacity (veh/h)			1636		567	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	577	577	27
Volume Left	0	0	27
Volume Right	0	0	0
cSH	1700	1700	567
Volume to Capacity	0.34	0.34	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	0.0	11.7
Lane LOS			B
Approach Delay (s)	0.0		11.7
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	NBL	SET	NWT
Lane Group Flow (vph)	869	1505	1082
v/c Ratio	0.52	1.69	1.76
Control Delay	14.4	342.0	368.8
Queue Delay	0.0	0.0	0.0
Total Delay	14.4	342.0	368.8
Queue Length 50th (ft)	117	~432	~332
Queue Length 95th (ft)	m234	#499	m#408
Internal Link Dist (ft)	450	741	1079
Turn Bay Length (ft)	85		
Base Capacity (vph)	1675	890	616
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.52	1.69	1.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	815	19	935	374	57	982
Ideal Flow (vphpl)	1900	1900	2000	2000	2000	2000
Lane Width	10	11	12	12	12	11
Total Lost time (s)	3.0		6.0			6.0
Lane Util. Factor	0.97		*0.95			*0.95
Frt	1.00		0.96			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	2934		4862			4791
Flt Permitted	0.95		1.00			0.70
Satd. Flow (perm)	2934		4862			3377
Peak-hour factor, PHF	0.96	0.96	0.87	0.87	0.96	0.96
Adj. Flow (vph)	849	20	1075	430	59	1023
RTOR Reduction (vph)	0	0	81	0	0	0
Lane Group Flow (vph)	869	0	1424	0	0	1082
Heavy Vehicles (%)	0%	11%	1%	1%	7%	3%
Bus Blockages (#/hr)	0	0	0	9	0	0
Turn Type	Prot		NA		D.P+P	NA
Protected Phases	3		2		4	2 4
Permitted Phases					2	
Actuated Green, G (s)	50.4		12.8			17.8
Effective Green, g (s)	51.4		13.8			19.8
Actuated g/C Ratio	0.57		0.15			0.22
Clearance Time (s)	4.0		7.0			
Vehicle Extension (s)	3.0		3.0			
Lane Grp Cap (vph)	1675		745			837
v/s Ratio Prot	c0.30		c0.29			c0.09
v/s Ratio Perm						0.20
v/c Ratio	0.52		1.91			1.29
Uniform Delay, d1	11.8		38.1			35.1
Progression Factor	1.00		1.00			0.78
Incremental Delay, d2	0.3		415.0			137.8
Delay (s)	12.1		453.1			165.2
Level of Service	B		F			F
Approach Delay (s)	12.1		453.1			165.2
Approach LOS	B		F			F

Intersection Summary			
HCM 2000 Control Delay	252.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	452	494	572	47	428
v/c Ratio	1.26	1.22	0.83	0.16	0.56
Control Delay	166.2	154.4	18.2	1.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	166.2	154.4	18.2	1.3	5.7
Queue Length 50th (ft)	~325	~360	187	1	80
Queue Length 95th (ft)	#412	#558	m#263	m1	m7
Internal Link Dist (ft)	1468	719	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	359	406	687	288	758
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	1.26	1.22	0.83	0.16	0.56

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												
Volume (vph)	63	255	34	10	217	242	18	500	8	42	323	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.90			1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00			1.00		0.99	1.00	
Frt		0.99			0.93			1.00		1.00	0.98	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1516			1199			1472		1483	1588	
Flt Permitted		0.68			0.98			0.98		0.39	1.00	
Satd. Flow (perm)		1044			1181			1439		603	1588	
Peak-hour factor, PHF	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	81	327	44	11	228	255	20	543	9	47	359	69
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	452	0	0	494	0	0	572	0	47	428	0
Confl. Peds. (#/hr)	75		50	50		75	15		20	20		15
Confl. Bikes (#/hr)			17			57			3			1
Heavy Vehicles (%)	6%	5%	0%	0%	3%	0%	6%	1%	0%	5%	0%	6%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			42.0		42.0	42.0	
Effective Green, g (s)		31.0			31.0			43.0		43.0	43.0	
Actuated g/C Ratio		0.34			0.34			0.48		0.48	0.48	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		359			406			687		288	758	
v/s Ratio Prot											0.27	
v/s Ratio Perm		c0.43			0.42			c0.40		0.08		
v/c Ratio		1.26			1.22			0.83		0.16	0.56	
Uniform Delay, d1		29.5			29.5			20.4		13.3	16.8	
Progression Factor		1.00			1.50			0.46		0.08	0.31	
Incremental Delay, d2		137.3			115.7			7.3		0.1	0.3	
Delay (s)		166.8			160.0			16.6		1.2	5.6	
Level of Service		F			F			B		A	A	
Approach Delay (s)		166.8			160.0			16.6			5.1	
Approach LOS		F			F			B			A	

Intersection Summary			
HCM 2000 Control Delay	83.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	335	191	196	157	497
v/c Ratio	1.16	0.76	0.73	0.73	1.07
Control Delay	125.6	46.8	42.6	58.4	92.2
Queue Delay	0.5	0.0	0.0	0.0	12.1
Total Delay	126.1	46.8	42.6	58.4	104.3
Queue Length 50th (ft)	~235	62	63	87	~316
Queue Length 95th (ft)	m#183	#107	#100	#180	#506
Internal Link Dist (ft)	719		195	1971	
Turn Bay Length (ft)					150
Base Capacity (vph)	289	251	270	214	465
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	11	0	0	0	21
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.21	0.76	0.73	0.73	1.12

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	241	54	155	159	148	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	10	11
Total Lost time (s)	4.0		5.0	5.0	3.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1374		1510	1621	1486	1351
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	1374		1510	1621	1486	1351
Peak-hour factor, PHF	0.88	0.88	0.81	0.81	0.94	0.94
Adj. Flow (vph)	274	61	191	196	157	497
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	335	0	191	196	157	497
Confl. Bikes (#/hr)		16				
Heavy Vehicles (%)	3%	8%	4%	2%	2%	4%
Parking (#/hr)	2	2				
Turn Type	NA		Split	NA	Perm	pm+ov
Protected Phases	4 5		1	1		1
Permitted Phases					6	6
Actuated Green, G (s)	19.0		14.0	14.0	12.0	26.0
Effective Green, g (s)	20.0		15.0	15.0	13.0	28.0
Actuated g/C Ratio	0.22		0.17	0.17	0.14	0.31
Clearance Time (s)			6.0	6.0	4.0	6.0
Lane Grp Cap (vph)	305		251	270	214	420
v/s Ratio Prot	c0.24		0.13	0.12		c0.20
v/s Ratio Perm					0.11	0.17
v/c Ratio	1.10		0.76	0.73	0.73	1.18
Uniform Delay, d1	35.0		35.8	35.6	36.8	31.0
Progression Factor	1.65		0.72	0.72	1.00	1.00
Incremental Delay, d2	49.6		19.1	15.4	19.9	104.4
Delay (s)	107.3		44.7	40.9	56.7	135.4
Level of Service	F		D	D	E	F
Approach Delay (s)	107.3			42.8	116.5	
Approach LOS	F			D	F	

Intersection Summary			
HCM 2000 Control Delay	93.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	84	822	86	210	836	236	540	181
v/c Ratio	0.97	0.53	0.18	0.27	0.74	0.98	0.43	0.37
Control Delay	44.1	5.8	3.0	27.9	30.7	49.4	0.9	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	44.1	5.8	3.0	27.9	30.7	49.4	1.0	13.5
Queue Length 50th (ft)	29	13	4	48	217	127	0	31
Queue Length 95th (ft)	m9	m9	m3	79	287	m111	m0	45
Internal Link Dist (ft)		1079			832	195		257
Turn Bay Length (ft)	250		175	200			100	
Base Capacity (vph)	87	1538	483	789	1133	242	1244	495
Starvation Cap Reductn	0	0	0	0	0	0	98	0
Spillback Cap Reductn	0	0	0	20	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.53	0.18	0.27	0.74	0.98	0.47	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	5	72	748	78	197	784	2	164	53	497	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	11	12	13	12	12	11	11	11	12
Total Lost time (s)		3.0	3.0	3.0	5.0	3.0			3.0	5.0		3.0
Lane Util. Factor		1.00	0.91	1.00	0.97	0.95			1.00	0.88		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	0.99		0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.91
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.96	1.00		1.00
Satd. Flow (prot)		1568	4468	1405	3090	3290			1514	2363		1520
Flt Permitted		0.15	1.00	1.00	0.95	1.00			0.56	1.00		0.99
Satd. Flow (perm)		252	4468	1405	3090	3290			873	2363		1503
Peak-hour factor, PHF	0.92	0.91	0.91	0.91	0.94	0.94	0.94	0.92	0.92	0.92	0.66	0.66
Adj. Flow (vph)	5	79	822	86	210	834	2	178	58	540	8	53
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	37	0	79
Lane Group Flow (vph)	0	84	822	86	210	836	0	0	236	503	0	102
Confl. Bikes (#/hr)							13			3		
Heavy Vehicles (%)	2%	0%	1%	0%	2%	2%	0%	3%	12%	4%	0%	0%
Turn Type	Perm	Perm	NA	Prot	Prot	NA		Perm	NA	pm+ov	Perm	NA
Protected Phases			3 4	3 4	1 2	3 4			5 6	1 2		5 6
Permitted Phases	3 4	3 4						5 6		5 6	5 6	
Actuated Green, G (s)		29.0	29.0	29.0	24.0	29.0			24.0	48.0		24.0
Effective Green, g (s)		30.0	30.0	30.0	25.0	30.0			25.0	47.0		25.0
Actuated g/C Ratio		0.33	0.33	0.33	0.28	0.33			0.28	0.52		0.28
Clearance Time (s)												
Lane Grp Cap (vph)		84	1489	468	858	1096			242	1234		417
v/s Ratio Prot			0.18	0.06	0.07	0.25				c0.11		
v/s Ratio Perm		c0.33							c0.27	0.10		0.07
v/c Ratio		1.00	0.55	0.18	0.24	0.76			0.98	0.41		0.25
Uniform Delay, d1		30.0	24.5	21.3	25.2	26.8			32.2	13.1		25.2
Progression Factor		0.39	0.24	0.14	1.00	1.00			1.06	0.09		1.00
Incremental Delay, d2		29.5	0.1	0.1	0.7	5.0			12.4	0.1		1.4
Delay (s)		41.2	5.9	3.0	25.9	31.9			46.7	1.2		26.6
Level of Service		D	A	A	C	C			D	A		C
Approach Delay (s)			8.7			30.7			15.1			26.6
Approach LOS			A			C			B			C

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	79
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.66
Adj. Flow (vph)	120
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Bikes (#/hr)	13
Heavy Vehicles (%)	1%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWT
Lane Group Flow (vph)	396	587	294	223	600	395	421	1030	323	728
v/c Ratio	1.11	0.65	0.91	0.57	0.74	0.60	1.01	1.20	0.80	1.08
Control Delay	124.3	49.3	80.9	47.5	49.5	24.4	88.4	140.6	54.8	104.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	124.3	49.3	80.9	47.5	49.5	24.4	88.4	140.6	54.8	104.4
Queue Length 50th (ft)	~349	156	226	154	228	181	~338	~516	242	~328
Queue Length 95th (ft)	#536	196	#383	219	271	250	#507	#606	#347	#454
Internal Link Dist (ft)		832			440			1843		515
Turn Bay Length (ft)	200		400				600			
Base Capacity (vph)	358	901	322	389	813	656	417	855	403	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.65	0.91	0.57	0.74	0.60	1.01	1.20	0.80	1.08

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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	352	522	262	187	504	332	362	886	278	176	386	93
Ideal Flow (vphpl)	2100	1900	1900	1900	2100	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	10	10	10	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00		0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1872	4916	1759	1668	3616	1457	1668	3421	1615		3301	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1872	4916	1759	1668	3616	1457	1668	3421	1615		3301	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.86	0.86	0.86	0.90	0.90	0.90
Adj. Flow (vph)	396	587	294	223	600	395	421	1030	323	196	429	103
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	0	0	11	0
Lane Group Flow (vph)	396	587	294	223	600	358	421	1030	323	0	717	0
Confl. Peds. (#/hr)							158		33			158
Confl. Bikes (#/hr)						27						6
Heavy Vehicles (%)	3%	2%	1%	1%	3%	2%	1%	2%	0%	1%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Prot	Split	NA	
Protected Phases	5	2		1	6	4	8	8	8	4	4	
Permitted Phases			2			6						
Actuated Green, G (s)	22.0	21.0	21.0	27.0	26.0	49.0	29.0	29.0	29.0		23.0	
Effective Green, g (s)	23.0	22.0	22.0	28.0	27.0	51.0	30.0	30.0	30.0		24.0	
Actuated g/C Ratio	0.19	0.18	0.18	0.23	0.22	0.42	0.25	0.25	0.25		0.20	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	358	901	322	389	813	667	417	855	403		660	
v/s Ratio Prot	c0.21	0.12		0.13	c0.17	0.11	0.25	c0.30	0.20		c0.22	
v/s Ratio Perm			0.17			0.14						
v/c Ratio	1.11	0.65	0.91	0.57	0.74	0.54	1.01	1.20	0.80		1.09	
Uniform Delay, d1	48.5	45.4	48.1	40.7	43.2	25.7	45.0	45.0	42.2		48.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.92		1.00	
Incremental Delay, d2	79.3	3.6	32.2	1.3	5.9	0.4	45.7	102.8	10.0		60.7	
Delay (s)	127.8	49.1	80.3	42.0	49.2	26.1	87.8	145.3	49.0		108.7	
Level of Service	F	D	F	D	D	C	F	F	D		F	
Approach Delay (s)		80.7			40.4			114.1			108.7	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	86.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	687	444	263	307	84
v/c Ratio	0.35	0.48	0.92	0.82	0.21
Control Delay	20.6	34.2	71.5	51.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	34.2	71.5	51.2	4.5
Queue Length 50th (ft)	204	126	146	165	0
Queue Length 95th (ft)	252	m166	#293	200	10
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1942	920	287	375	406
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	0.35	0.48	0.92	0.82	0.21

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	598	308	59	24	0	194	54	140	84	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		5.0	5.0				6.0			3.5	3.5
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.92				1.00			1.00	0.98
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.97				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2963	2589				1232			1501	1300
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2963	2589				1232			1501	1300
Peak-hour factor, PHF	0.87	0.87	0.88	0.88	0.88	0.94	0.94	0.94	0.73	0.73	0.73
Adj. Flow (vph)	0	687	350	67	27	0	206	57	192	115	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	687	444	0	0	0	263	0	0	307	21
Confl. Peds. (#/hr)	48			64	48			64			8
Confl. Bikes (#/hr)				23	23			19			1
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%	2%	0%	1%	1%	2%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		58.0	31.0				21.0			21.5	21.5
Effective Green, g (s)		59.0	32.0				21.0			22.5	22.5
Actuated g/C Ratio		0.66	0.36				0.23			0.25	0.25
Clearance Time (s)			6.0				6.0			4.5	4.5
Lane Grp Cap (vph)		1942	920				287			375	325
v/s Ratio Prot		0.23	c0.17				c0.21			c0.20	
v/s Ratio Perm											0.02
v/c Ratio		0.35	0.48				0.92			0.82	0.06
Uniform Delay, d1		7.0	22.6				33.6			31.8	25.7
Progression Factor		2.87	1.41				1.00			1.00	1.00
Incremental Delay, d2		0.3	1.8				35.4			17.8	0.4
Delay (s)		20.3	33.7				69.1			49.6	26.1
Level of Service		C	C				E			D	C
Approach Delay (s)		20.3	33.7			69.1				44.6	
Approach LOS		C	C			E				D	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	297	591	83	272	401	155	327
v/c Ratio	0.69	0.53	0.58	0.42	0.90	0.49	0.81
Control Delay	38.9	25.9	55.7	31.8	58.9	36.7	62.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	25.9	55.7	31.8	58.9	36.7	62.1
Queue Length 50th (ft)	165	147	46	69	228	84	192
Queue Length 95th (ft)	m252	m200	#105	107	#360	m135	m#294
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	205		240			140	
Base Capacity (vph)	431	1109	144	640	447	319	402
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	0.69	0.53	0.58	0.42	0.90	0.49	0.81

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	452	80	76	214	36	73	272	133	41	201	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	2.0	7.0		2.0	7.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.97			1.00	0.68		0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.98	1.00		0.99	
Frt	1.00	0.98		1.00	0.98			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1555	2700		1444	2748			1587	929		1486	
Flt Permitted	0.95	1.00		0.95	1.00			0.81	1.00		0.78	
Satd. Flow (perm)	1555	2700		1444	2748			1300	929		1169	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.86	0.86	0.86	0.98	0.98	0.98
Adj. Flow (vph)	297	502	89	83	233	39	85	316	155	42	205	80
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	297	591	0	83	272	0	0	401	155	0	327	0
Confl. Peds. (#/hr)	56		32			56	152		218	216		150
Confl. Bikes (#/hr)			11			20						11
Heavy Vehicles (%)	1%	7%	1%	5%	8%	0%	0%	1%	3%	5%	1%	3%
Bus Blockages (#/hr)	0	8	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	24.0	36.0		8.0	20.0			30.0	30.0		30.0	
Effective Green, g (s)	25.0	37.0		9.0	21.0			31.0	31.0		31.0	
Actuated g/C Ratio	0.28	0.41		0.10	0.23			0.34	0.34		0.34	
Clearance Time (s)	3.0	8.0		3.0	8.0			5.0	5.0		5.0	
Lane Grp Cap (vph)	431	1110		144	641			447	319		402	
v/s Ratio Prot	c0.19	c0.22		0.06	0.10							
v/s Ratio Perm								c0.31	0.17		0.28	
v/c Ratio	0.69	0.53		0.58	0.42			0.90	0.49		0.81	
Uniform Delay, d1	29.0	20.0		38.7	29.4			28.0	23.2		26.9	
Progression Factor	1.01	1.18		1.00	1.00			1.28	1.31		1.79	
Incremental Delay, d2	8.7	1.8		15.7	2.1			21.7	4.8		12.7	
Delay (s)	38.0	25.5		54.4	31.4			57.5	35.2		60.9	
Level of Service	D	C		D	C			E	D		E	
Approach Delay (s)		29.7			36.8			51.3			60.9	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	299	315	539	28	378
v/c Ratio	0.95	0.21	0.34	0.09	0.73
Control Delay	70.1	16.7	3.4	41.1	54.7
Queue Delay	0.0	0.0	0.3	0.2	4.7
Total Delay	70.1	16.7	3.7	41.3	59.4
Queue Length 50th (ft)	213	68	14	18	145
Queue Length 95th (ft)	#408	96	34	30	202
Internal Link Dist (ft)		1070	174	143	1971
Turn Bay Length (ft)	170				
Base Capacity (vph)	314	1504	1586	299	520
Starvation Cap Reductn	0	0	515	0	0
Spillback Cap Reductn	0	0	0	99	86
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.95	0.21	0.50	0.14	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	1	274	232	58	31	245	220	0	11	6	4	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0			9.0			8.0			8.0
Lane Util. Factor		1.00	0.95			0.95			1.00			0.95
Frpb, ped/bikes		1.00	0.98			0.87			0.96			0.94
Flpb, ped/bikes		0.87	1.00			1.00			1.00			1.00
Frt		1.00	0.97			0.93			0.95			0.97
Flt Protected		0.95	1.00			1.00			1.00			1.00
Satd. Flow (prot)		1302	2960			2562			1560			2849
Flt Permitted		0.45	1.00			0.91			1.00			0.95
Satd. Flow (perm)		618	2960			2352			1560			2716
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.61	0.61	0.61	0.91	0.91
Adj. Flow (vph)	1	298	252	63	34	266	239	0	18	10	4	289
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	299	315	0	0	539	0	0	28	0	0	378
Confl. Peds. (#/hr)		76		26	26		75	107		45	45	
Confl. Bikes (#/hr)				1			3			5		
Heavy Vehicles (%)	2%	8%	5%	0%	3%	3%	1%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	NA		pm+pt	NA			NA		Perm	NA
Protected Phases			2		1	6			8			4
Permitted Phases	2	2			6			8			4	
Actuated Green, G (s)		60.0	60.0			79.0			22.0			22.0
Effective Green, g (s)		61.0	61.0			80.0			23.0			23.0
Actuated g/C Ratio		0.51	0.51			0.67			0.19			0.19
Clearance Time (s)		9.0	9.0			10.0			9.0			9.0
Lane Grp Cap (vph)		314	1504			1600			299			520
v/s Ratio Prot			0.11			c0.05			0.02			
v/s Ratio Perm		c0.48				0.17						c0.14
v/c Ratio		0.95	0.21			0.34			0.09			0.73
Uniform Delay, d1		28.1	16.2			8.6			39.9			45.6
Progression Factor		1.00	1.00			0.34			1.00			1.00
Incremental Delay, d2		40.0	0.3			0.5			0.6			8.6
Delay (s)		68.1	16.5			3.4			40.5			54.2
Level of Service		E	B			A			D			D
Approach Delay (s)			41.6			3.4			40.5			54.2
Approach LOS			D			A			D			D

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	77
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	85
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	17%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	265	431	1172	897	155
v/c Ratio	0.62	0.56	0.36	0.65	0.26
Control Delay	71.0	42.2	8.2	33.4	28.9
Queue Delay	1.2	0.0	0.0	0.0	0.0
Total Delay	72.2	42.2	8.2	33.4	28.9
Queue Length 50th (ft)	113	140	80	266	69
Queue Length 95th (ft)	m158	204	198	m363	m105
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	511	770	3255	1386	590
Starvation Cap Reductn	98	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.56	0.36	0.65	0.26

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations								
Volume (vph)	2	237	3	21	362	1043	771	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	14	12	11	11	12	12
Total Lost time (s)		5.0			5.0	5.0	5.0	5.0
Lane Util. Factor		0.97			0.97	0.91	0.95	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	1.00	1.00	0.85
Flt Protected		0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)		3233			3046	4513	3249	1384
Flt Permitted		0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)		3232			3046	4513	3249	1384
Peak-hour factor, PHF	0.92	0.91	0.91	0.89	0.89	0.89	0.86	0.86
Adj. Flow (vph)	2	260	3	24	407	1172	897	155
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	431	1172	897	155
Confl. Peds. (#/hr)		1			75			75
Confl. Bikes (#/hr)								5
Heavy Vehicles (%)	2%	4%	0%	0%	0%	0%	0%	5%
Turn Type	Perm	Prot		Prot	Prot	NA	NA	Prot
Protected Phases		2		4	4	1 4	1	1
Permitted Phases	2							
Actuated Green, G (s)		14.8			29.3	83.8	48.5	48.5
Effective Green, g (s)		15.8			30.3	84.8	49.5	49.5
Actuated g/C Ratio		0.13			0.25	0.71	0.41	0.41
Clearance Time (s)		6.0			6.0		6.0	6.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0
Lane Grp Cap (vph)		425			769	3189	1340	570
v/s Ratio Prot					c0.14	0.26	c0.28	0.11
v/s Ratio Perm		c0.08						
v/c Ratio		0.62			0.56	0.37	0.67	0.27
Uniform Delay, d1		49.3			39.1	7.0	28.6	23.3
Progression Factor		1.32			1.00	1.00	1.06	1.07
Incremental Delay, d2		2.8			0.9	0.1	1.5	0.6
Delay (s)		67.7			40.0	7.0	31.8	25.6
Level of Service		E			D	A	C	C
Approach Delay (s)		67.7				15.9	30.9	
Approach LOS		E				B	C	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	94	387	25	301	348	478
v/c Ratio	0.28	0.59	0.10	0.48	0.75	0.86
Control Delay	9.0	10.7	17.7	22.7	33.5	37.4
Queue Delay	1.1	2.2	0.0	0.1	0.0	0.1
Total Delay	10.1	12.9	17.7	22.8	33.5	37.5
Queue Length 50th (ft)	14	60	9	123	161	264
Queue Length 95th (ft)	m21	m81	25	195	#298	#421
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	330	661	252	624	465	558
Starvation Cap Reductn	107	156	0	0	0	1
Spillback Cap Reductn	0	0	0	16	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.77	0.10	0.50	0.75	0.86

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	89	360	8	22	193	75	48	195	67	10	288	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.96			0.97			0.86	
Flpb, ped/bikes	0.93	1.00		0.89	1.00			0.98			1.00	
Frt	1.00	1.00		1.00	0.96			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1426	1608		1329	1519			1228			1302	
Flt Permitted	0.54	1.00		0.44	1.00			0.87			0.99	
Satd. Flow (perm)	804	1608		614	1519			1075			1289	
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	94	379	8	25	217	84	54	219	75	11	320	147
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	94	387	0	25	301	0	0	348	0	0	478	0
Confl. Peds. (#/hr)	93		168	168		93	247		95	95		247
Confl. Bikes (#/hr)			28			17			36			231
Heavy Vehicles (%)	2%	2%	0%	5%	0%	0%	0%	6%	0%	0%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	36.0	36.0		36.0	36.0			38.0			38.0	
Effective Green, g (s)	37.0	37.0		37.0	37.0			39.0			39.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.43			0.43	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	330	661		252	624			465			558	
v/s Ratio Prot		c0.24			0.20							
v/s Ratio Perm	0.12			0.04				0.32			c0.37	
v/c Ratio	0.28	0.59		0.10	0.48			0.75			0.86	
Uniform Delay, d1	17.7	20.6		16.3	19.5			21.4			23.0	
Progression Factor	0.41	0.38		1.00	1.00			1.00			0.94	
Incremental Delay, d2	1.5	2.6		0.8	2.7			10.5			14.0	
Delay (s)	8.7	10.4		17.1	22.1			31.9			35.6	
Level of Service	A	B		B	C			C			D	
Approach Delay (s)		10.1			21.7			31.9			35.6	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	464	498	80	452	15	289
v/c Ratio	0.91	0.94	0.25	0.67	0.06	0.46
Control Delay	49.8	57.0	19.6	26.9	8.6	11.4
Queue Delay	48.0	46.9	0.0	16.3	0.2	1.0
Total Delay	97.8	103.8	19.6	43.2	8.8	12.4
Queue Length 50th (ft)	240	253	29	201	3	57
Queue Length 95th (ft)	#354	m#400	63	312	m5	m79
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	508	528	317	676	238	635
Starvation Cap Reductn	0	190	0	0	0	158
Spillback Cap Reductn	120	0	0	213	75	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.20	1.47	0.25	0.98	0.09	0.61

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	293	16	25	404	19	76	375	54	13	187	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	10	12	12	11	11	12
Total Lost time (s)		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	
Frpb, ped/bikes		0.99			0.99		1.00	0.98		1.00	0.95	
Flpb, ped/bikes		0.99			1.00		0.90	1.00		0.94	1.00	
Frt		0.99			0.99		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1492			1304		1329	1603		1473	1506	
Flt Permitted		0.80			0.96		0.54	1.00		0.36	1.00	
Satd. Flow (perm)		1201			1249		752	1603		565	1506	
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	78	366	20	28	449	21	80	395	57	15	210	79
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	462	0	0	496	0	80	452	0	15	289	0
Confl. Peds. (#/hr)	99		160	160		99	124		111	111		124
Confl. Bikes (#/hr)			15			85			42			19
Heavy Vehicles (%)	2%	4%	6%	0%	2%	0%	3%	2%	4%	0%	0%	0%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			37.0		37.0	37.0		37.0	37.0	
Effective Green, g (s)		38.0			38.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
Clearance Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Lane Grp Cap (vph)		507			527		317	676		238	635	
v/s Ratio Prot								c0.28			0.19	
v/s Ratio Perm		0.38			c0.40		0.11			0.03		
v/c Ratio		0.91			0.94		0.25	0.67		0.06	0.46	
Uniform Delay, d1		24.4			24.9		16.8	20.9		15.4	18.6	
Progression Factor		1.00			1.41		1.00	1.00		0.51	0.49	
Incremental Delay, d2		23.2			20.7		1.9	5.2		0.4	2.0	
Delay (s)		47.6			55.8		18.7	26.1		8.3	11.1	
Level of Service		D			E		B	C		A	B	
Approach Delay (s)		47.6			55.8			25.0			10.9	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	409	18	33	411	349	71	127	309	26
v/c Ratio	0.73	0.04	0.16	0.71	0.53	0.97	0.37	1.03	0.11
Control Delay	33.7	19.5	10.1	14.8	9.3	139.1	34.0	86.4	22.3
Queue Delay	55.3	0.0	0.0	38.2	0.2	45.9	0.8	0.0	0.0
Total Delay	89.0	19.5	10.1	53.0	9.5	185.1	34.9	86.4	22.3
Queue Length 50th (ft)	236	9	4	83	36	40	62	~194	8
Queue Length 95th (ft)	m270	m11	m6	m120	m59	#111	103	m#324	m16
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	559	456	208	579	654	73	344	299	238
Starvation Cap Reductn	201	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	189	33	20	73	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.04	0.16	1.05	0.56	1.34	0.47	1.03	0.11

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.

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												
Volume (vph)	12	332	15	30	374	318	58	101	3	281	9	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	7.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.92	1.00	1.00	0.86	1.00	0.99		1.00	0.89	
Flpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.91	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1558	1246	1470	1580	1132	1570	1632		1417	1132	
Flt Permitted		0.98	1.00	0.37	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		1527	1246	569	1580	1132	348	1632		1417	1132	
Peak-hour factor, PHF	0.84	0.84	0.84	0.91	0.91	0.91	0.82	0.82	0.82	0.91	0.91	0.91
Adj. Flow (vph)	14	395	18	33	411	349	71	123	4	309	10	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	409	18	33	411	349	71	127	0	309	26	0
Confl. Peds. (#/hr)	82		45	45		82	60		156			60
Confl. Bikes (#/hr)			1						18			5
Heavy Vehicles (%)	8%	3%	7%	0%	1%	3%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	33.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.37	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		559	456	208	579	742	73	344		299	238	
v/s Ratio Prot					0.26	0.10		0.08		c0.22	0.02	
v/s Ratio Perm		c0.27	0.01	0.06		0.21	c0.20					
v/c Ratio		0.73	0.04	0.16	0.71	0.47	0.97	0.37		1.03	0.11	
Uniform Delay, d1		24.7	18.3	19.2	24.4	11.0	35.2	30.4		35.5	28.7	
Progression Factor		1.15	1.05	0.46	0.43	0.95	1.00	1.00		0.71	0.73	
Incremental Delay, d2		4.2	0.1	0.9	3.9	1.1	97.9	3.0		57.5	0.8	
Delay (s)		32.5	19.3	9.7	14.5	11.6	133.1	33.4		82.6	21.9	
Level of Service		C	B	A	B	B	F	C		F	C	
Approach Delay (s)		32.0			13.0			69.2			77.9	
Approach LOS		C			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	438	61	186	566	131	625	80	354	177
v/c Ratio	0.67	1.00	0.22	1.13	0.80	0.71	0.76	0.63	0.82	1.02
Control Delay	55.7	58.6	23.6	154.0	41.7	55.7	43.2	50.8	39.5	109.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	58.6	23.6	154.0	41.7	55.7	43.2	50.8	39.5	109.0
Queue Length 50th (ft)	81	208	18	~149	144	69	195	37	166	~129
Queue Length 95th (ft)	m97	m#350	m27	#265	192	m#120	240	m#70	m238	m#221
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	232	439	277	165	706	191	824	128	463	173
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.00	0.22	1.13	0.80	0.69	0.76	0.63	0.76	1.02

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												
Volume (vph)	147	412	57	158	457	24	111	426	105	74	326	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.72	1.00	0.98		1.00	0.96		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1522	959	1458	2890		1570	2746		1450	1605	1140
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1522	959	1458	2890		1570	2746		1450	1605	1140
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	156	438	61	186	538	28	131	501	124	80	354	177
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	156	438	61	186	566	0	131	625	0	80	354	177
Confl. Peds. (#/hr)			200			150			75			75
Confl. Bikes (#/hr)			55			182			13			19
Heavy Vehicles (%)	3%	6%	2%	4%	3%	29%	0%	6%	7%	12%	3%	2%
Bus Blockages (#/hr)	0	6	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	13.2	23.4	23.4	9.2	19.4		9.6	25.8		5.6	24.8	13.2
Effective Green, g (s)	14.2	24.4	24.4	10.2	20.4		10.6	26.8		6.6	25.8	14.2
Actuated g/C Ratio	0.16	0.27	0.27	0.11	0.23		0.12	0.30		0.07	0.29	0.16
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	232	412	259	165	655		184	817		106	460	179
v/s Ratio Prot	0.11	c0.29		0.13	0.20		c0.08	c0.23		0.06	0.22	
v/s Ratio Perm			0.06									c0.16
v/c Ratio	0.67	1.06	0.24	1.13	0.86		0.71	0.76		0.75	0.77	0.99
Uniform Delay, d1	35.7	32.8	25.5	39.9	33.5		38.2	28.7		40.9	29.4	37.8
Progression Factor	1.27	0.82	0.90	1.30	1.01		0.95	1.26		0.77	0.82	0.97
Incremental Delay, d2	3.7	49.0	1.0	105.9	13.3		10.5	3.7		21.7	6.3	56.9
Delay (s)	49.2	76.0	24.1	157.7	47.0		46.9	39.9		53.0	30.3	93.5
Level of Service	D	E	C	F	D		D	D		D	C	F
Approach Delay (s)		64.8			74.4			41.1			51.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	58.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	611	66	119	357	165	156
v/c Ratio	1.09	0.19	0.66	0.64	0.49	0.43
Control Delay	78.7	20.8	54.6	35.4	26.4	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.7	20.8	54.6	35.4	26.4	33.6
Queue Length 50th (ft)	~376	14	55	211	49	59
Queue Length 95th (ft)	m#446	m19	m84	m275	76	112
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160		250	
Base Capacity (vph)	561	339	180	561	336	360
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	1.09	0.19	0.66	0.64	0.49	0.43

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	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations									
Volume (vph)	3	541	59	3	113	346	1	141	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	10	12	11	10	12	10	11
Total Lost time (s)		3.0	6.0		6.0	3.0		6.0	6.0
Lane Util. Factor		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	1.00
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		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1580	1330		1554	1580		1516	1219
Flt Permitted		1.00	1.00		0.43	1.00		0.95	1.00
Satd. Flow (perm)		1578	1330		709	1580		1516	1219
Peak-hour factor, PHF	0.92	0.89	0.89	0.92	0.97	0.97	0.92	0.86	0.86
Adj. Flow (vph)	3	608	66	3	116	357	1	164	156
RTOR Reduction (vph)	0	0	44	0	0	0	0	0	49
Lane Group Flow (vph)	0	611	22	0	119	357	0	165	107
Confl. Peds. (#/hr)			898						407
Confl. Bikes (#/hr)			52						
Heavy Vehicles (%)	2%	1%	2%	2%	1%	1%	2%	0%	2%
Parking (#/hr)									3
Turn Type	Perm	NA	Over	custom	Prot	NA	D.Pm	Prot	Over
Protected Phases		2	4!		3	2		4	3!
Permitted Phases	2			3!			4!		
Actuated Green, G (s)		31.0	19.0		22.0	31.0		19.0	22.0
Effective Green, g (s)		32.0	20.0		23.0	32.0		20.0	23.0
Actuated g/C Ratio		0.36	0.22		0.26	0.36		0.22	0.26
Clearance Time (s)		4.0	7.0		7.0	4.0		7.0	7.0
Lane Grp Cap (vph)		561	295		181	561		336	311
v/s Ratio Prot			0.02			0.23			0.09
v/s Ratio Perm		c0.39			c0.17			0.11	
v/c Ratio		1.09	0.08		0.66	0.64		0.49	0.34
Uniform Delay, d1		29.0	27.7		30.0	24.2		30.6	27.3
Progression Factor		0.75	1.90		1.29	1.25		0.69	1.78
Incremental Delay, d2		54.2	0.2		13.3	4.1		5.0	2.9
Delay (s)		76.0	52.9		51.9	34.4		25.9	51.7
Level of Service		E	D		D	C		C	D
Approach Delay (s)		73.8				38.8		38.4	
Approach LOS		E				D		D	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	45	56	370	12	13	440
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.90	0.90	0.91	0.91
Hourly flow rate (vph)	58	72	411	13	14	484
Pedestrians	300		5			34
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	27		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			296			907
pX, platoon unblocked						
vC, conflicting volume	1235	752			724	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1235	752			724	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	58	75			98	
cM capacity (veh/h)	137	293			647	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	129	424	498
Volume Left	58	0	14
Volume Right	72	13	0
cSH	194	1700	647
Volume to Capacity	0.67	0.25	0.02
Queue Length 95th (ft)	100	0	2
Control Delay (s)	54.2	0.0	0.6
Lane LOS	F		A
Approach Delay (s)	54.2	0.0	0.6
Approach LOS	F		

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	227	619	422	171	420	148
v/c Ratio	0.64	0.60	0.78	0.70	1.11	0.27
Control Delay	35.6	12.4	39.0	43.6	106.8	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	12.4	39.0	43.6	106.8	9.6
Queue Length 50th (ft)	139	72	214	84	~276	28
Queue Length 95th (ft)	m151	m80	#361	#183	m#440	m49
Internal Link Dist (ft)		882	68		136	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	356	1026	540	245	380	544
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	0.64	0.60	0.78	0.70	1.11	0.27

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						
Volume (vph)	202	551	409	166	386	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	11	11	11
Total Lost time (s)	4.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.54	1.00	0.83
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)	1458	3079	1621	737	1555	1155
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1458	3079	1621	737	1555	1155
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.92	0.92
Adj. Flow (vph)	227	619	422	171	420	148
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	227	619	422	171	420	148
Confl. Peds. (#/hr)				111		116
Confl. Bikes (#/hr)				175		
Heavy Vehicles (%)	4%	2%	2%	3%	1%	1%
Turn Type	Prot	NA	NA	Perm	Prot	custom
Protected Phases	1	3	3		2	2
Permitted Phases				3		1
Actuated Green, G (s)	21.0	29.0	29.0	29.0	21.0	42.0
Effective Green, g (s)	22.0	30.0	30.0	30.0	22.0	44.0
Actuated g/C Ratio	0.24	0.33	0.33	0.33	0.24	0.49
Clearance Time (s)	5.0	7.0	7.0	7.0	7.0	7.0
Lane Grp Cap (vph)	356	1026	540	245	380	564
v/s Ratio Prot	c0.16	0.20	c0.26		c0.27	0.06
v/s Ratio Perm				0.23		0.06
v/c Ratio	0.64	0.60	0.78	0.70	1.11	0.26
Uniform Delay, d1	30.4	25.0	27.0	26.1	34.0	13.5
Progression Factor	1.01	0.44	1.00	1.00	0.87	0.68
Incremental Delay, d2	4.1	1.3	10.7	15.3	75.9	1.0
Delay (s)	34.8	12.2	37.8	41.3	105.4	10.2
Level of Service	C	B	D	D	F	B
Approach Delay (s)		18.3	38.8		80.6	
Approach LOS		B	D		F	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	264	358	62	181	550	50	346	167
v/c Ratio	0.69	0.50	0.23	0.25	0.67	0.26	0.59	0.49
Control Delay	29.7	19.2	11.4	10.4	29.0	22.1	21.6	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	19.2	11.4	10.4	29.0	22.1	21.6	22.6
Queue Length 50th (ft)	112	134	15	44	136	14	93	45
Queue Length 95th (ft)	#222	214	30	66	168	m18	m116	m57
Internal Link Dist (ft)		749		410	521		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	384	715	270	723	816	196	588	338
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	0.69	0.50	0.23	0.25	0.67	0.26	0.59	0.49

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	253	269	75	52	130	22	37	267	141	1	47	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	12	10	11
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			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.91		1.00	0.95			0.91			1.00	1.00
Flpb, ped/bikes	0.75	1.00		0.79	1.00			0.99			0.89	1.00
Frt	1.00	0.97		1.00	0.98			0.95			1.00	1.00
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (prot)	1187	1499		1104	1516			2560			1298	1605
Flt Permitted	0.64	1.00		0.49	1.00			0.87			0.39	1.00
Satd. Flow (perm)	804	1499		567	1516			2225			537	1605
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.81	0.81	0.81	0.92	0.95	0.95
Adj. Flow (vph)	264	280	78	62	155	26	46	330	174	1	49	346
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	264	358	0	62	181	0	0	550	0	0	50	346
Confl. Peds. (#/hr)	635		347	347		635	203		179		179	
Confl. Bikes (#/hr)			29			36			39			
Heavy Vehicles (%)	6%	1%	0%	8%	1%	5%	0%	7%	11%	2%	4%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		2			6			4				8
Permitted Phases	2			6			4			8	8	
Actuated Green, G (s)	42.0	42.0		42.0	42.0			32.0			32.0	32.0
Effective Green, g (s)	43.0	43.0		43.0	43.0			33.0			33.0	33.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.37			0.37	0.37
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0			8.0	8.0
Lane Grp Cap (vph)	384	716		270	724			815			196	588
v/s Ratio Prot		0.24			0.12							0.22
v/s Ratio Perm	c0.33			0.11				c0.25			0.09	
v/c Ratio	0.69	0.50		0.23	0.25			0.67			0.26	0.59
Uniform Delay, d1	18.3	16.1		13.8	13.9			24.0			19.9	23.0
Progression Factor	1.00	1.00		0.64	0.67			1.00			0.96	0.81
Incremental Delay, d2	9.7	2.5		1.9	0.8			4.4			1.7	2.4
Delay (s)	27.9	18.6		10.8	10.1			28.4			20.9	21.0
Level of Service	C	B		B	B			C			C	C
Approach Delay (s)		22.6			10.3			28.4				21.2
Approach LOS		C			B			C				C

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	159
Ideal Flow (vphpl)	1900
Lane Width	10
Total Lost time (s)	7.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.70
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	922
Flt Permitted	1.00
Satd. Flow (perm)	922
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	167
RTOR Reduction (vph)	0
Lane Group Flow (vph)	167
Confl. Peds. (#/hr)	203
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	32.0
Effective Green, g (s)	33.0
Actuated g/C Ratio	0.37
Clearance Time (s)	8.0
Lane Grp Cap (vph)	338
v/s Ratio Prot	
v/s Ratio Perm	0.18
v/c Ratio	0.49
Uniform Delay, d1	22.0
Progression Factor	0.85
Incremental Delay, d2	2.8
Delay (s)	21.6
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	40	457	6	94	84	194	154	114
v/c Ratio	0.14	0.68	0.02	0.17	0.41	0.40	0.42	0.30
Control Delay	11.6	19.8	11.8	12.8	31.2	26.0	14.7	28.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	19.8	11.8	12.8	31.2	26.0	14.7	28.2
Queue Length 50th (ft)	12	141	2	27	37	84	42	57
Queue Length 95th (ft)	m22	295	8	52	74	130	56	m93
Internal Link Dist (ft)		410		639		920	481	
Turn Bay Length (ft)	25		25		25			
Base Capacity (vph)	277	671	250	566	206	491	365	386
Starvation Cap Reductn	0	6	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	0.14	0.69	0.02	0.17	0.41	0.40	0.42	0.30

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												
Volume (vph)	37	343	77	5	44	37	70	149	12	47	73	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	8.0	7.0		8.0	7.0		8.0	7.0			7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.88		1.00	0.72		1.00	0.96			1.00	0.62
Flpb, ped/bikes	0.48	1.00		0.71	1.00		0.59	1.00			0.86	1.00
Frt	1.00	0.97		1.00	0.93		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	757	1313		1156	1109		924	1475			1331	757
Flt Permitted	0.70	1.00		0.41	1.00		0.66	1.00			0.81	1.00
Satd. Flow (perm)	555	1313		500	1109		641	1475			1094	757
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.83	0.83	0.83	0.78	0.78	0.78
Adj. Flow (vph)	40	373	84	6	51	43	84	180	14	60	94	114
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	40	457	0	6	94	0	84	194	0	0	154	114
Confl. Peds. (#/hr)	685		789	789		685	263		218	218		263
Confl. Bikes (#/hr)			39			42			19			4
Heavy Vehicles (%)	3%	1%	1%	0%	2%	3%	3%	0%	0%	2%	1%	0%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	custom
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		6
Actuated Green, G (s)	45.0	45.0		45.0	45.0		29.0	29.0			29.0	45.0
Effective Green, g (s)	45.0	46.0		45.0	46.0		29.0	30.0			30.0	46.0
Actuated g/C Ratio	0.50	0.51		0.50	0.51		0.32	0.33			0.33	0.51
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0			8.0	8.0
Lane Grp Cap (vph)	277	671		250	566		206	491			364	386
v/s Ratio Prot		c0.35			0.08			0.13				
v/s Ratio Perm	0.07			0.01			0.13				c0.14	0.15
v/c Ratio	0.14	0.68		0.02	0.17		0.41	0.40			0.42	0.30
Uniform Delay, d1	12.1	16.5		11.4	11.8		23.8	23.0			23.3	12.7
Progression Factor	0.83	0.86		1.00	1.00		1.00	1.00			0.47	1.97
Incremental Delay, d2	0.9	4.7		0.2	0.6		5.9	2.4			3.4	1.9
Delay (s)	11.0	19.0		11.6	12.4		29.7	25.4			14.3	26.8
Level of Service	B	B		B	B		C	C			B	C
Approach Delay (s)		18.3			12.3			26.7			19.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	333	54	0	73	0	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.89	0.89
Hourly flow rate (vph)	366	59	0	77	0	28
Pedestrians				182	587	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				15	49	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	719					
pX, platoon unblocked			0.97		0.97	0.97
vC, conflicting volume			1012		1059	1165
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			995		1044	1153
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	72
cM capacity (veh/h)			347		126	102

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	425	77	28
Volume Left	0	0	0
Volume Right	59	0	28
cSH	1700	347	102
Volume to Capacity	0.25	0.00	0.28
Queue Length 95th (ft)	0	0	26
Control Delay (s)	0.0	0.0	53.5
Lane LOS			F
Approach Delay (s)	0.0	0.0	53.5
Approach LOS			F

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	317	41	0	0	0	51
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.74	0.74
Hourly flow rate (vph)	341	44	0	0	0	69
Pedestrians					291	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					20	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			676		654	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			676		654	654
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	81
cM capacity (veh/h)			738		347	372

Direction, Lane #	EB 1	NB 1
Volume Total	385	69
Volume Left	0	0
Volume Right	44	69
cSH	1700	372
Volume to Capacity	0.23	0.19
Queue Length 95th (ft)	0	17
Control Delay (s)	0.0	16.8
Lane LOS		C
Approach Delay (s)	0.0	16.8
Approach LOS		C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	539	15	0	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.99	0.99	0.60	0.60
Hourly flow rate (vph)	0	0	544	15	0	40
Pedestrians					189	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		703				
pX, platoon unblocked						
vC, conflicting volume	749				741	469
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	749				741	469
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	91
cM capacity (veh/h)	676				281	423

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	363	197	40
Volume Left	0	0	0	0	0
Volume Right	0	0	0	15	40
cSH	1700	1700	1700	1700	423
Volume to Capacity	0.00	0.00	0.21	0.12	0.09
Queue Length 95th (ft)	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	14.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		14.4
Approach LOS					B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1130	226	0	484	135	0	0	0	0	0	69
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.61	0.61	0.61
Hourly flow rate (vph)	0	1189	238	0	509	142	0	0	0	0	0	113
Pedestrians								317			189	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			16	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1273										
pX, platoon unblocked												
vC, conflicting volume	841			1744			1993	2466	1031	1364	2514	515
vC1, stage 1 conf vol							1625	1625		770	770	
vC2, stage 2 conf vol							368	841		595	1744	
vCu, unblocked vol	841			1744			1993	2466	1031	1364	2514	515
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			100			100	100	100	100	100	73
cM capacity (veh/h)	677			365			85	107	230	203	101	414

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	793	634	340	312	113
Volume Left	0	0	0	0	0
Volume Right	0	238	0	142	113
cSH	1700	1700	1700	1700	414
Volume to Capacity	0.47	0.37	0.20	0.18	0.27
Queue Length 95th (ft)	0	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	0.0	16.9
Lane LOS					C
Approach Delay (s)	0.0		0.0		16.9
Approach LOS					C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Volume (veh/h)	84	227	0	0	4	37	113
Sign Control	Stop		Free				Free
Grade	0%		0%				0%
Peak Hour Factor	0.84	0.84	0.92	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	100	270	0	0	0	44	133
Pedestrians	98		152				197
Lane Width (ft)	13.0		0.0				13.0
Walking Speed (ft/s)	4.0		4.0				4.0
Percent Blockage	9		0				18
Right turn flare (veh)							
Median type			None				None
Median storage veh)							
Upstream signal (ft)							1000
pX, platoon unblocked					0.00		
vC, conflicting volume	470	295			0	98	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	470	295			0	98	
tC, single (s)	6.4	6.2			0.0	4.1	
tC, 2 stage (s)							
tF (s)	3.5	3.3			0.0	2.2	
p0 queue free %	80	52			0	97	
cM capacity (veh/h)	489	558			0	1374	

Direction, Lane #	WB 1	SB 1
Volume Total	370	176
Volume Left	100	44
Volume Right	270	0
cSH	537	1374
Volume to Capacity	0.69	0.03
Queue Length 95th (ft)	133	2
Control Delay (s)	25.2	2.1
Lane LOS	D	A
Approach Delay (s)	25.2	2.1
Approach LOS	D	

Intersection Summary			
Average Delay	17.8		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	27	276	9	2	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.98	0.98	0.67	0.67
Hourly flow rate (vph)	14	34	282	9	3	52
Pedestrians		20	35		122	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		2	3		10	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	413				504	428
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	413				504	428
tC, single (s)	4.3				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.3
p0 queue free %	99				99	90
cM capacity (veh/h)	957				456	550

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	48	291	55
Volume Left	14	0	3
Volume Right	0	9	52
cSH	957	1700	544
Volume to Capacity	0.01	0.17	0.10
Queue Length 95th (ft)	1	0	8
Control Delay (s)	2.6	0.0	12.4
Lane LOS	A		B
Approach Delay (s)	2.6	0.0	12.4
Approach LOS			B

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	19	196	32	21	84
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.72	0.72	0.89	0.89	0.79	0.79
Hourly flow rate (vph)	14	26	220	36	27	106
Pedestrians		5	36		104	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	3		9	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	360				432	347
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360				432	347
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	83
cM capacity (veh/h)	1090				511	633

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	40	256	133
Volume Left	14	0	27
Volume Right	0	36	106
cSH	1090	1700	604
Volume to Capacity	0.01	0.15	0.22
Queue Length 95th (ft)	1	0	21
Control Delay (s)	2.9	0.0	12.6
Lane LOS	A		B
Approach Delay (s)	2.9	0.0	12.6
Approach LOS			B

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Volume (veh/h)	22	18	120	57	1	49	108
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Peak Hour Factor	0.71	0.71	0.83	0.83	0.92	0.85	0.85
Hourly flow rate (vph)	31	25	145	69	0	58	127
Pedestrians	42			71		86	
Lane Width (ft)	14.0			12.0		10.0	
Walking Speed (ft/s)	4.0			4.0		4.0	
Percent Blockage	4			6		6	
Right turn flare (veh)							
Median type				None		None	
Median storage veh)							
Upstream signal (ft)				320			
pX, platoon unblocked	0.94				0.00		
vC, conflicting volume	607	234	227		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	553	234	227		0		
tC, single (s)	6.4	6.3	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.4	2.2		0.0		
p0 queue free %	92	96	89		0		
cM capacity (veh/h)	376	717	1293		0		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	56	213	185
Volume Left	31	145	0
Volume Right	25	0	127
cSH	478	1293	1700
Volume to Capacity	0.12	0.11	0.11
Queue Length 95th (ft)	10	9	0
Control Delay (s)	13.5	5.8	0.0
Lane LOS	B	A	
Approach Delay (s)	13.5	5.8	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	65	1263	0	0	0	0	0	39	157
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	73	1419	0	0	0	0	0	43	174
Pedestrians		49										
Lane Width (ft)		0.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.67						0.67	0.67		0.67	0.67	0.67
vC, conflicting volume	1419			0			1101	1565	0	1565	1565	759
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	653			0			180	870	0	870	870	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			96			100	100	100	100	77	76
cM capacity (veh/h)	626			1636			310	186	1084	159	188	720

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	546	946	218
Volume Left	73	0	0
Volume Right	0	0	174
cSH	1636	1700	460
Volume to Capacity	0.04	0.56	0.47
Queue Length 95th (ft)	4	0	62
Control Delay (s)	1.4	0.0	19.6
Lane LOS	A		C
Approach Delay (s)	0.5		19.6
Approach LOS			C

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1490	24	144	93
v/c Ratio	0.80	0.06	0.35	0.24
Control Delay	16.3	29.2	34.3	20.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.3	29.2	34.3	20.4
Queue Length 50th (ft)	326	12	75	27
Queue Length 95th (ft)	421	21	100	51
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1874	396	408	382
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	0.80	0.06	0.35	0.24

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1251	75	14	102	0	0	0	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.98		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.99		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2797		1624	1676				1450
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2797		1624	1676				1450
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.58	0.71	0.92	0.73	0.73	0.73
Adj. Flow (vph)	0	0	0	0	1406	84	24	144	0	0	0	93
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	29
Lane Group Flow (vph)	0	0	0	0	1490	0	24	144	0	0	0	64
Confl. Peds. (#/hr)						117						
Confl. Bikes (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	2%	0%	2%	2%	0%	0%	2%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					67.9		24.0	24.0				24.0
Effective Green, g (s)					68.9		25.0	25.0				25.0
Actuated g/C Ratio					0.67		0.24	0.24				0.24
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1872		394	407				352
v/s Ratio Prot					c0.53		0.01	c0.09				
v/s Ratio Perm												0.04
v/c Ratio					0.80		0.06	0.35				0.18
Uniform Delay, d1					12.0		29.9	32.3				30.9
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					3.6		0.1	0.5				0.3
Delay (s)					15.6		30.0	32.8				31.1
Level of Service					B		C	C				C
Approach Delay (s)		0.0			15.6			32.4			31.1	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	1130	0	0	484	0	376
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	1228	0	0	526	0	470
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1228		1491	614
vC1, stage 1 conf vol					1228	
vC2, stage 2 conf vol					263	
vCu, unblocked vol			1228		1491	614
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	0
cM capacity (veh/h)			563		203	437

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1
Volume Total	614	614	263	263	470
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	470
cSH	1700	1700	1700	1700	437
Volume to Capacity	0.36	0.36	0.15	0.15	1.08
Queue Length 95th (ft)	0	0	0	0	387
Control Delay (s)	0.0	0.0	0.0	0.0	95.5
Lane LOS					F
Approach Delay (s)	0.0		0.0		95.5
Approach LOS					F

Intersection Summary			
Average Delay	20.2		
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1567	0	0	104	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.96	0.92	0.92	0.69	0.69
Hourly flow rate (vph)	0	1632	0	0	151	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				816	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				816	0
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				53	100
cM capacity (veh/h)	1622				319	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	816	816	151
Volume Left	0	0	151
Volume Right	0	0	0
cSH	1700	1700	319
Volume to Capacity	0.48	0.48	0.47
Queue Length 95th (ft)	0	0	60
Control Delay (s)	0.0	0.0	26.0
Lane LOS			D
Approach Delay (s)	0.0		26.0
Approach LOS			D

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	123	1655
v/c Ratio	0.08	0.55
Control Delay	0.1	0.7
Queue Delay	0.0	0.0
Total Delay	0.1	0.7
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1474	2978
Starvation Cap Reductn	0	0
Spillback Cap Reductn	411	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.12	0.56

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	116	1556	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1486	3002				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1486	3002				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	123	1655	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	123	1655	0	0	0	0
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	102.9	102.9				
Effective Green, g (s)	98.9	98.9				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1428	2885				
v/s Ratio Prot	0.08	c0.55				
v/s Ratio Perm						
v/c Ratio	0.09	0.57				
Uniform Delay, d1	0.1	0.2				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.0	0.3				
Delay (s)	0.1	0.5				
Level of Service	A	A				
Approach Delay (s)		0.4	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1263	30	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.91	0.88	0.62	0.95
Hourly flow rate (vph)	0	0	0	1435	48	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked					0.76	
vC, conflicting volume			0		718	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		3	0
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		94	100
cM capacity (veh/h)			1636		780	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	718	718	48
Volume Left	0	0	48
Volume Right	0	0	0
cSH	1700	1700	780
Volume to Capacity	0.42	0.42	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	9.9
Lane LOS			A
Approach Delay (s)	0.0		9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

Build Conditions

Lane Group	NBL	SET	NWT
Lane Group Flow (vph)	225	2424	435
v/c Ratio	0.17	1.25	0.32
Control Delay	23.2	141.0	5.3
Queue Delay	0.0	0.0	0.0
Total Delay	23.2	141.0	5.3
Queue Length 50th (ft)	36	~620	10
Queue Length 95th (ft)	m78	#718	14
Internal Link Dist (ft)	450	1169	1079
Turn Bay Length (ft)	85		
Base Capacity (vph)	1301	1946	1369
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	35	38
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.17	1.27	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	NBL	NBR	SET	SER	NWU	NWL	NWT
Lane Configurations							
Volume (vph)	157	25	1583	671	22	51	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	12	12	12	12	11
Total Lost time (s)	3.0		3.0				3.0
Lane Util. Factor	0.97		0.91				0.91
Frpb, ped/bikes	1.00		0.99				1.00
Flpb, ped/bikes	1.00		1.00				1.00
Frt	0.98		0.96				1.00
Flt Protected	0.96		1.00				0.99
Satd. Flow (prot)	3066		4787				4495
Flt Permitted	0.96		1.00				0.66
Satd. Flow (perm)	3066		4787				3009
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.91	0.91	0.91
Adj. Flow (vph)	194	31	1702	722	24	56	355
RTOR Reduction (vph)	0	0	90	0	0	0	0
Lane Group Flow (vph)	225	0	2334	0	0	0	435
Confl. Bikes (#/hr)				6			
Heavy Vehicles (%)	3%	20%	3%	2%	0%	12%	11%
Bus Blockages (#/hr)	0	0	0	10	0	0	0
Turn Type	Prot		NA		Prot	D.P+P	NA
Protected Phases	3		2		4	4	2 4
Permitted Phases						2	
Actuated Green, G (s)	37.2		30.8				35.8
Effective Green, g (s)	38.2		31.8				37.8
Actuated g/C Ratio	0.42		0.35				0.42
Clearance Time (s)	4.0		4.0				
Vehicle Extension (s)	3.0		3.0				
Lane Grp Cap (vph)	1301		1691				1362
v/s Ratio Prot	c0.07		c0.49				c0.02
v/s Ratio Perm							0.11
v/c Ratio	0.17		1.38				0.32
Uniform Delay, d1	16.1		29.1				17.5
Progression Factor	1.26		1.00				0.32
Incremental Delay, d2	0.2		174.9				0.6
Delay (s)	20.5		204.0				6.1
Level of Service	C		F				A
Approach Delay (s)	20.5		204.0				6.1
Approach LOS	C		F				A

Intersection Summary			
HCM 2000 Control Delay	162.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	367	310	221	60	672
v/c Ratio	0.77	0.74	0.48	0.13	0.93
Control Delay	38.0	49.4	20.9	33.5	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	49.4	20.9	33.5	49.5
Queue Length 50th (ft)	181	132	78	35	399
Queue Length 95th (ft)	#323	m150	114	m31	m332
Internal Link Dist (ft)	1468	719	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	477	419	461	446	725
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	0.74	0.48	0.13	0.93

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	252	54	41	205	36	19	132	19	58	597	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.97			0.99		1.00	0.99	
Flpb, ped/bikes		0.99			0.99			1.00		0.97	1.00	
Frt		0.98			0.98			0.98		1.00	0.99	
Flt Protected		0.99			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1387			1270			1392		1445	1593	
Flt Permitted		0.93			0.89			0.72		0.65	1.00	
Satd. Flow (perm)		1300			1142			1013		981	1593	
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.77	0.77	0.77	0.96	0.96	0.96
Adj. Flow (vph)	38	271	58	45	225	40	25	171	25	60	622	50
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	367	0	0	310	0	0	221	0	60	672	0
Confl. Peds. (#/hr)	174		67	67		174	61		42	42		61
Confl. Bikes (#/hr)			89			7			2			10
Heavy Vehicles (%)	14%	11%	8%	10%	7%	0%	5%	4%	5%	5%	1%	13%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.0			32.0			40.0		40.0	40.0	
Effective Green, g (s)		33.0			33.0			41.0		41.0	41.0	
Actuated g/C Ratio		0.37			0.37			0.46		0.46	0.46	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		476			418			461		446	725	
v/s Ratio Prot											c0.42	
v/s Ratio Perm		c0.28			0.27			0.22		0.06		
v/c Ratio		0.77			0.74			0.48		0.13	0.93	
Uniform Delay, d1		25.2			24.8			17.1		14.2	23.1	
Progression Factor		1.00			1.71			1.02		2.28	2.03	
Incremental Delay, d2		11.5			5.5			2.6		0.1	2.6	
Delay (s)		36.6			47.8			20.0		32.4	49.4	
Level of Service		D			D			C		C	D	
Approach Delay (s)		36.6			47.8			20.0			48.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	292	371	282	39	148
v/c Ratio	0.98	1.10	0.97	0.19	0.36
Control Delay	76.7	109.5	79.5	36.4	25.4
Queue Delay	0.0	1.2	1.4	0.0	0.0
Total Delay	76.7	110.6	80.9	36.4	25.4
Queue Length 50th (ft)	181	~150	98	20	62
Queue Length 95th (ft)	m#299	#384	#295	45	103
Internal Link Dist (ft)	719		195	1971	
Turn Bay Length (ft)					175
Base Capacity (vph)	298	338	291	209	407
Starvation Cap Reductn	0	9	2	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.98	1.13	0.98	0.19	0.36

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	217	55	334	254	32	121
Ideal Flow (vphpl)	1900	1900	2200	1900	1900	1900
Lane Width	11	12	12	11	10	11
Total Lost time (s)	4.0		5.0	5.0	3.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.97		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.97	1.00	0.95	1.00
Satd. Flow (prot)	1415		2032	1749	1452	1183
Flt Permitted	1.00		0.97	1.00	0.95	1.00
Satd. Flow (perm)	1415		2032	1749	1452	1183
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.82	0.82
Adj. Flow (vph)	233	59	371	282	39	148
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	292	0	371	282	39	148
Confl. Bikes (#/hr)		77				
Heavy Vehicles (%)	7%	17%	5%	5%	16%	32%
Parking (#/hr)	2	2				
Turn Type	NA		Split	NA	Perm	pm+ov
Protected Phases	4 5		1	1		1
Permitted Phases					6	6
Actuated Green, G (s)	19.0		14.0	14.0	12.0	26.0
Effective Green, g (s)	20.0		15.0	15.0	13.0	28.0
Actuated g/C Ratio	0.22		0.17	0.17	0.14	0.31
Clearance Time (s)			6.0	6.0	4.0	6.0
Lane Grp Cap (vph)	314		338	291	209	368
v/s Ratio Prot	c0.21		c0.18	0.16		c0.07
v/s Ratio Perm					0.03	0.06
v/c Ratio	0.93		1.10	0.97	0.19	0.40
Uniform Delay, d1	34.3		37.5	37.3	33.9	24.4
Progression Factor	0.94		0.95	0.98	1.00	1.00
Incremental Delay, d2	29.8		73.4	40.7	2.0	3.3
Delay (s)	62.1		109.2	77.1	35.8	27.7
Level of Service	E		F	E	D	C
Approach Delay (s)	62.1			95.3	29.4	
Approach LOS	E			F	C	

Intersection Summary			
HCM 2000 Control Delay	75.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	90	1457	110	511	374	60	292	107
v/c Ratio	0.35	0.95	0.28	0.67	0.34	0.20	0.25	0.26
Control Delay	23.1	32.3	21.0	35.1	22.3	12.0	1.4	16.3
Queue Delay	0.0	0.0	0.2	0.6	0.0	0.0	0.0	0.2
Total Delay	23.1	32.3	21.2	35.6	22.3	12.0	1.4	16.5
Queue Length 50th (ft)	54	331	66	134	79	5	0	25
Queue Length 95th (ft)	m45	m265	m53	183	113	m14	m0	67
Internal Link Dist (ft)		1079			832	195		257
Turn Bay Length (ft)	250		175	200			100	
Base Capacity (vph)	254	1538	399	766	1094	307	1163	417
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	51	59	0	0	0	66
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.95	0.32	0.72	0.34	0.20	0.25	0.30

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												
Volume (vph)	84	1355	102	450	300	29	21	36	277	14	39	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	13	12	12	11	11	11	12	12
Total Lost time (s)	3.0	3.0	3.0	5.0	3.0			2.0	5.0		2.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95			1.00	0.88		1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98	1.00		0.99	
Satd. Flow (prot)	1555	4468	1161	3001	3154			1156	2209		1357	
Flt Permitted	0.45	1.00	1.00	0.95	1.00			0.91	1.00		0.97	
Satd. Flow (perm)	741	4468	1161	3001	3154			1067	2209		1325	
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	90	1457	110	511	341	33	22	38	292	15	43	49
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	35	0	34	0
Lane Group Flow (vph)	90	1457	110	511	366	0	0	60	257	0	73	0
Confl. Bikes (#/hr)			17			2			15			6
Heavy Vehicles (%)	1%	1%	21%	5%	5%	3%	43%	39%	11%	7%	26%	11%
Turn Type	Perm	NA	Prot	Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases		3 4	3 4	1 2	3 4			5 6	1 2		5 6	
Permitted Phases	3 4						5 6		5 6	5 6		
Actuated Green, G (s)	29.0	29.0	29.0	24.0	29.0			24.0	48.0		24.0	
Effective Green, g (s)	30.0	30.0	30.0	25.0	30.0			26.0	47.0		26.0	
Actuated g/C Ratio	0.33	0.33	0.33	0.28	0.33			0.29	0.52		0.29	
Clearance Time (s)												
Lane Grp Cap (vph)	247	1489	387	833	1051			308	1153		382	
v/s Ratio Prot		c0.33	0.09	c0.17	0.12				c0.06			
v/s Ratio Perm	0.12							c0.06	0.05		0.05	
v/c Ratio	0.36	0.98	0.28	0.61	0.35			0.19	0.22		0.19	
Uniform Delay, d1	22.8	29.7	22.1	28.3	22.6			24.1	11.6		24.1	
Progression Factor	0.98	1.04	0.95	1.00	1.00			0.45	0.14		1.00	
Incremental Delay, d2	0.4	3.6	0.2	3.4	0.9			0.9	0.3		1.1	
Delay (s)	22.7	34.4	21.1	31.7	23.5			11.7	1.9		25.2	
Level of Service	C	C	C	C	C			B	A		C	
Approach Delay (s)		32.8			28.2			3.6			25.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWT
Lane Group Flow (vph)	139	1015	564	263	581	298	149	409	217	1272
v/c Ratio	0.84	0.89	0.82	1.57	0.72	0.30	0.52	0.68	0.49	1.09
Control Delay	92.5	55.9	27.0	317.2	48.2	8.7	56.5	57.3	17.4	93.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.5	55.9	27.0	317.2	48.2	8.7	56.5	57.3	17.4	93.2
Queue Length 50th (ft)	108	280	158	~288	219	72	110	162	7	~583
Queue Length 95th (ft)	#246	#380	#361	#457	284	120	171	206	74	#723
Internal Link Dist (ft)		832			440			1843		515
Turn Bay Length (ft)	200		400				600			
Base Capacity (vph)	165	1136	686	168	809	996	314	658	467	1162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.89	0.82	1.57	0.72	0.30	0.47	0.62	0.46	1.09

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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	132	964	536	245	540	277	128	352	187	326	728	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	12	12	12	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1646	4868	1759	1687	3471	1568	1574	3292	1468		3297	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1646	4868	1759	1687	3471	1568	1574	3292	1468		3297	
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.94	0.94	0.94
Adj. Flow (vph)	139	1015	564	263	581	298	149	409	217	347	774	151
RTOR Reduction (vph)	0	0	275	0	0	32	0	0	177	0	8	0
Lane Group Flow (vph)	139	1015	289	263	581	266	149	409	40	0	1264	0
Confl. Peds. (#/hr)							120		11			50
Confl. Bikes (#/hr)									1			11
Heavy Vehicles (%)	6%	3%	1%	7%	4%	3%	7%	6%	10%	3%	5%	7%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Prot	Split	NA	
Protected Phases	5	2		1	6	4	8	8	8	4	4	
Permitted Phases			2			6						
Actuated Green, G (s)	11.0	27.0	27.0	11.0	27.0	68.0	21.0	21.0	21.0		41.0	
Effective Green, g (s)	12.0	28.0	28.0	12.0	28.0	70.0	22.0	22.0	22.0		42.0	
Actuated g/C Ratio	0.10	0.23	0.23	0.10	0.23	0.58	0.18	0.18	0.18		0.35	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0		2.0	
Lane Grp Cap (vph)	164	1135	410	168	809	966	288	603	269		1153	
v/s Ratio Prot	0.08	c0.21		c0.16	0.17	0.10	0.09	c0.12	0.03		c0.38	
v/s Ratio Perm			0.16			0.07						
v/c Ratio	0.85	0.89	0.70	1.57	0.72	0.28	0.52	0.68	0.15		1.10	
Uniform Delay, d1	53.1	44.6	42.2	54.0	42.4	12.4	44.2	45.7	41.1		39.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.13	1.12	2.48		1.00	
Incremental Delay, d2	30.2	10.9	9.7	281.3	2.6	0.1	1.5	3.0	0.3		56.7	
Delay (s)	83.3	55.5	51.9	335.3	44.9	12.5	51.5	54.3	102.3		95.7	
Level of Service	F	E	D	F	D	B	D	D	F		F	
Approach Delay (s)		56.6			103.3			67.2			95.7	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	493	591	359	201	29
v/c Ratio	0.25	0.68	0.85	0.77	0.12
Control Delay	4.9	22.2	44.5	56.0	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	22.2	44.5	56.0	32.8
Queue Length 50th (ft)	61	123	155	110	14
Queue Length 95th (ft)	m99	m170	#303	#215	38
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1989	871	420	262	232
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	0.25	0.68	0.85	0.77	0.13

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	439	437	97	39	0	271	45	133	46	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		4.5	4.5				4.5			4.5	4.5
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.93				1.00			1.00	0.96
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.96				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2755	2377				1210			1476	1309
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2755	2377				1210			1476	1309
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.97	0.88	0.88	0.88	0.89	0.89	0.89
Adj. Flow (vph)	0	493	451	100	40	0	308	51	149	52	29
RTOR Reduction (vph)	0	0	0	0	0	0	51	0	0	0	0
Lane Group Flow (vph)	0	493	591	0	0	0	308	0	0	201	29
Confl. Peds. (#/hr)					102			41			6
Confl. Bikes (#/hr)				8	8			24			11
Heavy Vehicles (%)	0%	14%	18%	0%	3%	0%	4%	0%	3%	2%	0%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		65.0	33.0				27.5			16.0	16.0
Effective Green, g (s)		65.0	33.0				27.5			16.0	16.0
Actuated g/C Ratio		0.72	0.37				0.31			0.18	0.18
Clearance Time (s)			4.5				4.5			4.5	4.5
Lane Grp Cap (vph)		1989	871				369			262	232
v/s Ratio Prot		0.18	c0.25				c0.25			c0.14	
v/s Ratio Perm											0.02
v/c Ratio		0.25	0.68				0.84			0.77	0.12
Uniform Delay, d1		4.2	24.0				29.1			35.2	31.1
Progression Factor		1.09	0.77				1.00			1.00	1.00
Incremental Delay, d2		0.2	3.2				19.6			19.1	1.1
Delay (s)		4.9	21.8				48.7			54.4	32.2
Level of Service		A	C				D			D	C
Approach Delay (s)		4.9	21.8			48.7				51.6	
Approach LOS		A	C			D				D	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	100	253	215	505	206	75	626
v/c Ratio	0.76	0.46	1.22	0.75	0.57	0.18	1.03
Control Delay	63.9	43.2	176.4	38.4	16.8	8.8	48.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	43.2	176.4	38.4	16.8	8.8	48.2
Queue Length 50th (ft)	42	82	~152	138	77	23	~394
Queue Length 95th (ft)	m#124	m121	#256	174	m106	m27	m#476
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	200		250			140	
Base Capacity (vph)	131	548	176	673	361	419	608
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	0.76	0.46	1.22	0.75	0.57	0.18	1.03

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												
Volume (vph)	94	184	54	176	367	47	80	118	72	48	416	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	8.0	8.0		8.0	8.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00	0.80		0.96	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.98	1.00		0.99	
Frt	1.00	0.97		1.00	0.98			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1481	2349		1444	2525			1538	1020		1538	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.96	
Satd. Flow (perm)	1481	2349		1444	2525			881	1020		1478	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	100	196	57	215	448	57	83	123	75	52	447	127
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	253	0	215	505	0	0	206	75	0	626	0
Confl. Peds. (#/hr)			33			38	148		165	165		148
Confl. Bikes (#/hr)			14			12						17
Heavy Vehicles (%)	6%	26%	4%	5%	20%	19%	1%	5%	10%	2%	2%	2%
Bus Blockages (#/hr)	0	0	8	0	0	8	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.0	20.0		10.0	23.0			36.0	36.0		36.0	
Effective Green, g (s)	8.0	21.0		11.0	24.0			37.0	37.0		37.0	
Actuated g/C Ratio	0.09	0.23		0.12	0.27			0.41	0.41		0.41	
Clearance Time (s)	9.0	9.0		9.0	9.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	131	548		176	673			362	419		607	
v/s Ratio Prot	0.07	0.11		c0.15	c0.20							
v/s Ratio Perm								0.23	0.07		c0.42	
v/c Ratio	0.76	0.46		1.22	0.75			0.57	0.18		1.03	
Uniform Delay, d1	40.1	29.6		39.5	30.3			20.4	16.8		26.5	
Progression Factor	0.68	1.34		1.00	1.00			0.60	0.47		0.48	
Incremental Delay, d2	33.0	2.7		139.9	7.5			1.2	0.1		31.9	
Delay (s)	60.4	42.6		179.4	37.8			13.5	8.1		44.6	
Level of Service	E	D		F	D			B	A		D	
Approach Delay (s)		47.6			80.1			12.0			44.6	
Approach LOS		D			F			B			D	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	153	253	828	12	210	158
v/c Ratio	0.52	0.14	0.50	0.05	0.61	0.92
Control Delay	15.1	5.2	8.1	38.9	51.7	99.5
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	15.1	5.2	8.8	38.9	51.7	99.5
Queue Length 50th (ft)	46	27	88	8	149	121
Queue Length 95th (ft)	90	37	122	16	227	#246
Internal Link Dist (ft)		1070	174	143	1971	
Turn Bay Length (ft)	170					200
Base Capacity (vph)	292	1869	1661	238	344	171
Starvation Cap Reductn	0	0	468	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	0.52	0.14	0.69	0.05	0.61	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	1	126	117	93	4	129	416	163	0	3	4	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				3.5			4.0		
Lane Util. Factor		1.00	0.95				0.95			1.00		
Frpb, ped/bikes		1.00	0.96				0.95			0.93		
Flpb, ped/bikes		0.95	1.00				1.00			1.00		
Frt		1.00	0.93				0.97			0.92		
Flt Protected		0.95	1.00				0.99			1.00		
Satd. Flow (prot)		1243	2577				2772			1143		
Flt Permitted		0.31	1.00				0.81			1.00		
Satd. Flow (perm)		410	2577				2277			1143		
Peak-hour factor, PHF	0.92	0.83	0.83	0.83	0.92	0.86	0.86	0.86	0.58	0.58	0.58	0.88
Adj. Flow (vph)	1	152	141	112	4	150	484	190	0	5	7	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	153	253	0	0	0	828	0	0	12	0	0
Confl. Peds. (#/hr)		56		21				56	96		46	46
Confl. Bikes (#/hr)				2				10			5	
Heavy Vehicles (%)	2%	24%	21%	2%	2%	2%	10%	0%	0%	33%	25%	0%
Turn Type	Perm	Perm	NA		pm+pt	pm+pt	NA			NA		Perm
Protected Phases			2		1	1	6			8		
Permitted Phases	2	2			6	6			8			4
Actuated Green, G (s)		86.0	86.0				86.5			24.0		
Effective Green, g (s)		87.0	87.0				87.5			25.0		
Actuated g/C Ratio		0.72	0.72				0.73			0.21		
Clearance Time (s)		5.0	5.0				4.5			5.0		
Vehicle Extension (s)		3.0	3.0				3.0			3.0		
Lane Grp Cap (vph)		297	1868				1660			238		
v/s Ratio Prot			0.10							0.01		
v/s Ratio Perm		c0.37					0.36					
v/c Ratio		0.52	0.14				0.50			0.05		
Uniform Delay, d1		7.2	5.0				6.9			38.0		
Progression Factor		1.00	1.00				1.02			1.00		
Incremental Delay, d2		6.3	0.2				0.2			0.4		
Delay (s)		13.5	5.2				7.2			38.4		
Level of Service		B	A				A			D		
Approach Delay (s)			8.3				7.2			38.4		
Approach LOS			A				A			D		

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	176	139
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	5.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.78
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1666	855
Flt Permitted	0.99	1.00
Satd. Flow (perm)	1653	855
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	200	158
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	210	158
Confl. Peds. (#/hr)		96
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	32%
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	24.0	24.0
Effective Green, g (s)	25.0	24.0
Actuated g/C Ratio	0.21	0.20
Clearance Time (s)	5.0	5.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	344	171
v/s Ratio Prot		
v/s Ratio Perm	0.13	c0.18
v/c Ratio	0.61	0.92
Uniform Delay, d1	43.1	47.1
Progression Factor	1.00	1.00
Incremental Delay, d2	7.8	51.2
Delay (s)	50.9	98.3
Level of Service	D	F
Approach Delay (s)	71.3	
Approach LOS	E	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	163	478	712	1038	341
v/c Ratio	0.27	0.54	0.22	0.82	0.68
Control Delay	35.1	38.5	5.9	46.1	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	38.5	5.9	46.1	43.5
Queue Length 50th (ft)	43	160	60	419	239
Queue Length 95th (ft)	60	215	75	m358	m221
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	614	880	3202	1259	501
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	0.27	0.54	0.22	0.82	0.68

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations							
Volume (vph)	133	1	40	391	641	976	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	12	11	11	12	12
Total Lost time (s)	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97			0.97	0.91	0.95	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00			1.00	1.00	1.00	1.00
Frt	1.00			1.00	1.00	1.00	0.85
Flt Protected	0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)	2833			3019	4468	3217	1280
Flt Permitted	0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)	2833			3019	4468	3217	1280
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.90	0.94	0.94
Adj. Flow (vph)	162	1	44	434	712	1038	341
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	163	0	0	478	712	1038	341
Confl. Bikes (#/hr)							3
Heavy Vehicles (%)	19%	0%	0%	1%	1%	1%	12%
Turn Type	Prot		Prot	Prot	NA	NA	Perm
Protected Phases	3		1	1	6	2	
Permitted Phases							2
Actuated Green, G (s)	25.0			34.0	85.0	46.0	46.0
Effective Green, g (s)	26.0			35.0	86.0	47.0	47.0
Actuated g/C Ratio	0.22			0.29	0.72	0.39	0.39
Clearance Time (s)	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	4.0			4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	613			880	3202	1259	501
v/s Ratio Prot	c0.06			c0.16	0.16	c0.32	
v/s Ratio Perm							0.27
v/c Ratio	0.27			0.54	0.22	0.82	0.68
Uniform Delay, d1	39.1			35.8	5.7	32.8	30.3
Progression Factor	0.86			1.00	1.00	1.37	1.37
Incremental Delay, d2	1.1			2.4	0.2	0.6	0.7
Delay (s)	34.8			38.2	5.9	45.4	42.1
Level of Service	C			D	A	D	D
Approach Delay (s)	34.8				18.9	44.6	
Approach LOS	C				B	D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	41	316	25	294	542	254
v/c Ratio	0.17	0.56	0.10	0.54	1.01	0.40
Control Delay	11.4	13.7	20.8	27.6	68.1	29.5
Queue Delay	0.0	3.2	0.0	0.1	0.0	0.0
Total Delay	11.4	16.9	20.8	27.7	68.1	29.5
Queue Length 50th (ft)	8	61	9	131	~307	149
Queue Length 95th (ft)	m12	m89	28	212	#505	m207
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	245	562	259	545	534	633
Starvation Cap Reductn	0	155	0	0	0	0
Spillback Cap Reductn	0	0	0	11	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.78	0.10	0.55	1.01	0.40

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	38	287	4	24	243	36	68	338	71	7	142	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.95			0.92	
Flpb, ped/bikes	0.93	1.00		0.90	1.00			0.98			1.00	
Frt	1.00	1.00		1.00	0.98			0.98			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1261	1583		1413	1533			1191			1318	
Flt Permitted	0.52	1.00		0.49	1.00			0.91			0.98	
Satd. Flow (perm)	690	1583		731	1533			1093			1297	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88	0.87	0.87	0.87
Adj. Flow (vph)	41	312	4	25	256	38	77	384	81	8	163	83
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	41	316	0	25	294	0	0	542	0	0	254	0
Confl. Peds. (#/hr)	75		115	115		75	233		71	71		233
Confl. Bikes (#/hr)			12						361			
Heavy Vehicles (%)	16%	4%	0%	0%	3%	11%	1%	7%	4%	14%	11%	6%
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			43.0			43.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			44.0			44.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36			0.49			0.49	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	245	562		259	545			534			634	
v/s Ratio Prot		c0.20			0.19							
v/s Ratio Perm	0.06			0.03				c0.50			0.20	
v/c Ratio	0.17	0.56		0.10	0.54			1.01			0.40	
Uniform Delay, d1	19.9	23.4		19.4	23.1			23.0			14.6	
Progression Factor	0.50	0.46		1.00	1.00			1.00			1.83	
Incremental Delay, d2	1.0	2.6		0.7	3.8			42.8			1.8	
Delay (s)	10.9	13.4		20.1	26.9			65.8			28.5	
Level of Service	B	B		C	C			E			C	
Approach Delay (s)		13.1			26.4			65.8			28.5	
Approach LOS		B			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	655	290	46	364	79	273
v/c Ratio	1.02	0.58	0.18	0.66	0.34	0.51
Control Delay	66.1	38.1	21.7	30.7	12.1	11.9
Queue Delay	31.4	9.3	0.0	33.6	3.0	1.1
Total Delay	97.4	47.3	21.7	64.3	15.1	13.0
Queue Length 50th (ft)	~376	178	17	170	14	50
Queue Length 95th (ft)	#565	244	44	270	m24	m68
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	642	504	256	553	229	540
Starvation Cap Reductn	0	177	0	0	32	110
Spillback Cap Reductn	212	0	0	201	83	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.89	0.18	1.03	0.54	0.63

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	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	75	450	39	34	205	8	1	42	248	90	73	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	12	10	12	12	11	11
Total Lost time (s)		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
Frpb, ped/bikes		0.99			1.00			1.00	0.95		1.00	0.95
Flpb, ped/bikes		0.99			0.99			0.90	1.00		0.93	1.00
Frt		0.99			1.00			1.00	0.96		1.00	0.96
Flt Protected		0.99			0.99			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1462			1204			1245	1510		1414	1475
Flt Permitted		0.91			0.87			0.53	1.00		0.42	1.00
Satd. Flow (perm)		1338			1053			700	1510		627	1475
Peak-hour factor, PHF	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	87	523	45	40	241	9	1	45	267	97	79	209
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	652	0	0	289	0	0	46	364	0	79	273
Confl. Peds. (#/hr)	116		119	119		116		107		97	97	
Confl. Bikes (#/hr)			57			6				20		
Heavy Vehicles (%)	7%	5%	3%	26%	8%	0%	2%	10%	4%	3%	3%	3%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA
Protected Phases		4			8				2			6
Permitted Phases	4			8			2	2			6	
Actuated Green, G (s)		42.0			42.0			32.0	32.0		32.0	32.0
Effective Green, g (s)		43.0			43.0			33.0	33.0		33.0	33.0
Actuated g/C Ratio		0.48			0.48			0.37	0.37		0.37	0.37
Clearance Time (s)		8.0			8.0			8.0	8.0		8.0	8.0
Lane Grp Cap (vph)		639			503			256	553		229	540
v/s Ratio Prot									c0.24			0.19
v/s Ratio Perm		c0.49			0.27			0.07			0.13	
v/c Ratio		1.02			0.57			0.18	0.66		0.34	0.51
Uniform Delay, d1		23.5			16.9			19.3	23.8		20.7	22.2
Progression Factor		1.00			1.91			1.00	1.00		0.41	0.41
Incremental Delay, d2		40.8			4.2			1.5	6.0		3.2	2.6
Delay (s)		64.3			36.5			20.9	29.8		11.6	11.6
Level of Service		E			D			C	C		B	B
Approach Delay (s)		64.3			36.5				28.8			11.6
Approach LOS		E			D				C			B

Intersection Summary			
HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	59
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	64
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	41
Heavy Vehicles (%)	3%
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	565	155	175	274	238	4	35	319	51
v/c Ratio	1.01	0.36	1.64	0.52	0.36	0.05	0.12	1.07	0.18
Control Delay	60.1	23.7	328.2	8.5	2.1	30.7	30.1	76.0	20.2
Queue Delay	33.8	0.0	0.0	0.6	0.0	0.7	0.0	0.0	0.0
Total Delay	93.9	23.7	328.2	9.1	2.1	31.3	30.1	76.0	20.2
Queue Length 50th (ft)	~352	74	~144	57	5	2	16	~196	16
Queue Length 95th (ft)	m#378	m86	m#194	m75	m8	8	31	m#203	m18
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	561	425	107	522	658	73	293	299	290
Starvation Cap Reductn	141	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	66	0	24	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.35	0.36	1.64	0.60	0.36	0.08	0.12	1.07	0.18

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												
Volume (vph)	4	476	132	154	241	209	3	9	15	297	45	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	8.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.84	1.00	1.00	0.93	1.00	0.93		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1536	1196	1450	1425	1140	1570	1389		1417	1375	
Flt Permitted		1.00	1.00	0.19	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		1532	1196	291	1425	1140	348	1389		1417	1375	
Peak-hour factor, PHF	0.85	0.85	0.85	0.88	0.88	0.88	0.68	0.68	0.68	0.93	0.93	0.93
Adj. Flow (vph)	5	560	155	175	274	238	4	13	22	319	48	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	565	155	175	274	238	4	35	0	319	51	0
Confl. Peds. (#/hr)	35		75	75		35	25		70			25
Confl. Bikes (#/hr)			40									17
Heavy Vehicles (%)	0%	5%	2%	1%	12%	11%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	32.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.36	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		561	425	106	522	747	73	293		299	290	
v/s Ratio Prot					0.19	0.07		c0.03		c0.23	0.04	
v/s Ratio Perm		0.37	0.13	c0.60		0.14	0.01					
v/c Ratio		1.01	0.36	1.65	0.52	0.32	0.05	0.12		1.07	0.18	
Uniform Delay, d1		28.5	21.5	28.5	22.4	9.8	28.3	28.7		35.5	29.1	
Progression Factor		1.07	1.02	0.38	0.27	0.17	1.00	1.00		0.64	0.66	
Incremental Delay, d2		27.8	1.1	315.5	2.1	0.6	1.4	0.8		49.3	0.4	
Delay (s)		58.5	22.9	326.4	8.3	2.3	29.8	29.6		71.9	19.7	
Level of Service		E	C	F	A	A	C	C		E	B	
Approach Delay (s)		50.8			87.2			29.6			64.7	
Approach LOS		D			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	67.0	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)	19.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	176	593	148	86	402	87	407	113	458	202
v/c Ratio	0.77	1.32	0.61	0.83	0.74	0.72	0.56	0.71	0.87	1.12
Control Delay	57.5	184.0	39.9	84.5	57.8	71.9	32.0	62.2	39.7	124.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	184.0	39.9	84.5	57.8	71.9	32.0	62.2	39.7	124.4
Queue Length 50th (ft)	109	~461	70	54	131	54	110	55	267	~133
Queue Length 95th (ft)	m109	m#449	m71	m#89	m174	m#99	146	m80	m#406	m#221
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	228	448	241	104	541	121	721	165	528	181
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.32	0.61	0.83	0.74	0.72	0.56	0.68	0.87	1.12

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												
Volume (vph)	151	510	127	80	335	39	77	249	113	107	435	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.71	1.00	0.99		1.00	0.96		1.00	1.00	0.87
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1613	863	1342	2708		1366	2471		1490	1425	1169
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1613	863	1342	2708		1366	2471		1490	1425	1169
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95	0.95
Adj. Flow (vph)	176	593	148	86	360	42	87	280	127	113	458	202
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	176	593	148	86	402	0	87	407	0	113	458	202
Confl. Peds. (#/hr)			150			70			60			55
Confl. Bikes (#/hr)			175			5			3			9
Heavy Vehicles (%)	3%	6%	8%	13%	9%	29%	15%	17%	13%	9%	16%	5%
Bus Blockages (#/hr)	0	0	7	0	7	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	13.0	23.0	23.0	6.0	16.0		5.6	26.3		8.7	32.4	13.0
Effective Green, g (s)	14.0	24.0	24.0	7.0	17.0		6.6	27.3		9.7	33.4	14.0
Actuated g/C Ratio	0.16	0.27	0.27	0.08	0.19		0.07	0.30		0.11	0.37	0.16
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	228	430	230	104	511		100	749		160	528	181
v/s Ratio Prot	0.12	c0.37		0.06	0.15		c0.06	0.16		0.08	c0.32	
v/s Ratio Perm			0.17									c0.17
v/c Ratio	0.77	1.38	0.64	0.83	0.79		0.87	0.54		0.71	0.87	1.12
Uniform Delay, d1	36.5	33.0	29.2	40.9	34.8		41.3	26.2		38.8	26.2	38.0
Progression Factor	1.38	1.25	1.24	1.04	1.50		1.12	1.07		1.16	0.91	0.88
Incremental Delay, d2	4.1	174.3	3.4	30.1	8.4		42.8	2.2		9.1	12.4	89.5
Delay (s)	54.3	215.6	39.7	72.7	60.5		89.2	30.2		54.0	36.4	122.9
Level of Service	D	F	D	E	E		F	C		D	D	F
Approach Delay (s)		156.2			62.7			40.6			61.6	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	90.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	676	149	254	417	96	102
v/c Ratio	1.26	0.47	0.68	0.77	0.39	0.31
Control Delay	140.0	38.0	11.9	37.7	43.2	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	140.0	38.0	11.9	37.7	43.2	11.6
Queue Length 50th (ft)	~490	69	80	199	54	8
Queue Length 95th (ft)	m#416	m67	m67	m174	103	47
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160		250	
Base Capacity (vph)	535	317	371	545	244	330
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	1.26	0.47	0.68	0.77	0.39	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	608	134	239	392	89	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	10	11
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	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	1.00
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	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1506	1233	1454	1535	1099	1100
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1506	1233	1454	1535	1099	1100
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.93	0.93
Adj. Flow (vph)	676	149	254	417	96	102
RTOR Reduction (vph)	0	44	0	0	0	49
Lane Group Flow (vph)	676	105	254	417	96	53
Confl. Peds. (#/hr)		400				
Confl. Bikes (#/hr)		283				
Heavy Vehicles (%)	6%	10%	8%	4%	38%	13%
Parking (#/hr)						3
Turn Type	NA	Over	Prot	NA	Prot	Over
Protected Phases	2	4	3	2	4	3
Permitted Phases						
Actuated Green, G (s)	31.0	19.0	22.0	31.0	19.0	22.0
Effective Green, g (s)	32.0	20.0	23.0	32.0	20.0	23.0
Actuated g/C Ratio	0.36	0.22	0.26	0.36	0.22	0.26
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	535	274	371	545	244	281
v/s Ratio Prot	c0.45	0.09	c0.17	0.27	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	1.26	0.38	0.68	0.77	0.39	0.19
Uniform Delay, d1	29.0	29.8	30.2	25.7	29.8	26.2
Progression Factor	0.52	1.92	0.34	1.38	1.26	0.76
Incremental Delay, d2	120.0	0.4	0.9	1.0	4.6	1.4
Delay (s)	135.1	57.5	11.2	36.4	42.0	21.4
Level of Service	F	E	B	D	D	C
Approach Delay (s)	121.1			26.9	31.4	
Approach LOS	F			C	C	

Intersection Summary			
HCM 2000 Control Delay	73.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	27	522	20	26	399
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.63	0.63	0.98	0.98	0.93	0.93
Hourly flow rate (vph)	13	43	533	20	28	429
Pedestrians	250		1			33
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	23		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			297			907
pX, platoon unblocked						
vC, conflicting volume	1279	826			803	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1279	826			803	
tC, single (s)	6.8	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.4			2.2	
p0 queue free %	89	84			96	
cM capacity (veh/h)	114	274			642	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	56	553	457
Volume Left	13	0	28
Volume Right	43	20	0
cSH	208	1700	642
Volume to Capacity	0.27	0.33	0.04
Queue Length 95th (ft)	26	0	3
Control Delay (s)	28.5	0.0	1.3
Lane LOS	D		A
Approach Delay (s)	28.5	0.0	1.3
Approach LOS	D		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR2
Lane Group Flow (vph)	258	496	732	357	303	104
v/c Ratio	0.79	0.48	1.24	0.92	0.76	0.38
Control Delay	36.9	32.2	152.2	64.0	30.0	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	32.2	152.2	64.0	30.0	23.5
Queue Length 50th (ft)	161	106	~523	197	143	47
Queue Length 95th (ft)	m141	m92	#738	#366	m138	m48
Internal Link Dist (ft)		882	68		124	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	326	1031	588	386	397	277
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	0.79	0.48	1.24	0.92	0.76	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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	240	398	63	0	681	332	129	143	110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	11	11	11	12	11	12	12
Total Lost time (s)	6.0	3.0			3.0	3.0	3.0		6.0		
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00		0.95		
Frpb, ped/bikes	1.00	0.97			1.00	1.00	1.00		1.00		
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	0.98			1.00	0.85	0.92		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.98		1.00		
Satd. Flow (prot)	1468	2815			1605	1391	1432		1247		
Flt Permitted	0.95	1.00			1.00	1.00	0.98		1.00		
Satd. Flow (perm)	1468	2815			1605	1391	1432		1247		
Peak-hour factor, PHF	0.93	0.93	0.92	0.92	0.93	0.93	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	258	428	68	0	732	357	136	155	116	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	258	496	0	0	732	357	303	0	104	0	0
Confl. Peds. (#/hr)			100								
Confl. Bikes (#/hr)						18					
Heavy Vehicles (%)	7%	3%	2%	2%	3%	1%	5%	2%	7%	2%	2%
Turn Type	Prot	NA			NA	Over	Prot		Over		
Protected Phases	4	2			6	3	3		4		
Permitted Phases											
Actuated Green, G (s)	19.0	32.0			32.0	24.0	24.0		19.0		
Effective Green, g (s)	20.0	33.0			33.0	25.0	25.0		20.0		
Actuated g/C Ratio	0.22	0.37			0.37	0.28	0.28		0.22		
Clearance Time (s)	7.0	4.0			4.0	4.0	4.0		7.0		
Lane Grp Cap (vph)	326	1032			588	386	397		277		
v/s Ratio Prot	c0.18	0.18			c0.46	c0.26	0.21		0.08		
v/s Ratio Perm											
v/c Ratio	0.79	0.48			1.24	0.92	0.76		0.38		
Uniform Delay, d1	33.0	21.9			28.5	31.6	29.8		29.7		
Progression Factor	1.01	1.44			1.00	1.00	0.92		0.76		
Incremental Delay, d2	1.8	0.1			124.0	30.3	1.3		0.4		
Delay (s)	35.3	31.7			152.5	61.9	28.6		22.9		
Level of Service	D	C			F	E	C		C		
Approach Delay (s)		32.9			122.8		27.1			0.0	
Approach LOS		C			F		C			A	

Intersection Summary			
HCM 2000 Control Delay	75.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

18: Vassar St/Galileo Galilei Way & Main St

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	229	434	60	252	533	87	357	232
v/c Ratio	0.62	0.66	0.26	0.45	0.67	0.38	0.63	0.52
Control Delay	28.3	25.6	38.3	41.0	27.3	36.7	38.9	36.9
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	26.2	38.3	41.0	27.3	36.7	38.9	36.9
Queue Length 50th (ft)	97	188	35	149	127	50	224	144
Queue Length 95th (ft)	169	276	m65	225	188	m61	m271	m170
Internal Link Dist (ft)		730		410	472		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	368	657	231	564	792	230	565	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	46	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.71	0.26	0.45	0.67	0.38	0.63	0.52

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												
Volume (vph)	197	300	73	58	126	116	68	248	174	83	339	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	10	11	10
Total Lost time (s)	7.0	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			0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.93			0.96		1.00	1.00	0.94
Flpb, ped/bikes	0.90	1.00		0.94	1.00			1.00		0.96	1.00	1.00
Frt	1.00	0.97		1.00	0.93			0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1343	1478		1245	1270			2517		1318	1413	1124
Flt Permitted	0.59	1.00		0.40	1.00			0.78		0.42	1.00	1.00
Satd. Flow (perm)	828	1478		520	1270			1979		578	1413	1124
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	229	349	85	60	131	121	74	270	189	87	357	232
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	229	434	0	60	252	0	0	533	0	87	357	232
Confl. Peds. (#/hr)	200		100	100		200	35		60	60		35
Confl. Bikes (#/hr)			85			7			36			
Heavy Vehicles (%)	13%	7%	12%	15%	13%	11%	3%	13%	24%	11%	17%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	8	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	39.0	39.0		39.0	39.0			35.0		35.0	35.0	35.0
Effective Green, g (s)	40.0	40.0		40.0	40.0			36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44			0.40		0.40	0.40	0.40
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0		8.0	8.0	8.0
Lane Grp Cap (vph)	368	656		231	564			791		231	565	449
v/s Ratio Prot		c0.29			0.20						0.25	
v/s Ratio Perm	0.28			0.12				c0.27		0.15		0.21
v/c Ratio	0.62	0.66		0.26	0.45			0.67		0.38	0.63	0.52
Uniform Delay, d1	19.2	19.7		15.7	17.3			22.2		19.1	21.7	20.4
Progression Factor	1.00	1.00		2.13	2.15			1.00		1.66	1.59	1.62
Incremental Delay, d2	7.7	5.2		2.4	2.2			4.6		2.6	3.0	2.4
Delay (s)	26.9	24.9		35.8	39.6			26.7		34.3	37.6	35.5
Level of Service	C	C		D	D			C		C	D	D
Approach Delay (s)		25.6			38.8			26.7			36.4	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	126.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	82	523	147	120	99	144	255	177
v/c Ratio	0.21	0.82	0.49	0.22	0.51	0.36	0.85	0.62
Control Delay	13.2	27.4	20.0	12.0	37.3	28.0	54.6	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	27.4	20.0	12.0	37.3	28.0	54.6	37.4
Queue Length 50th (ft)	22	217	50	33	47	64	157	109
Queue Length 95th (ft)	m41	#435	83	54	101	117	#270	m165
Internal Link Dist (ft)		410		669		920	481	
Turn Bay Length (ft)	25		25		25			
Base Capacity (vph)	391	634	303	535	196	398	301	286
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	0.21	0.82	0.49	0.22	0.51	0.36	0.85	0.62

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	341	140	113	56	36	90	121	10	120	102	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	8.0	7.0		8.0	7.0		8.0	7.0			7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.90		1.00	0.86		1.00	0.98			1.00	0.85
Flpb, ped/bikes	0.72	1.00		0.89	1.00		0.92	1.00			0.90	1.00
Frt	1.00	0.96		1.00	0.94		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1026	1167		1446	983		1236	1328			1297	954
Flt Permitted	0.68	1.00		0.37	1.00		0.52	1.00			0.75	1.00
Satd. Flow (perm)	734	1167		570	983		680	1328			1005	954
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	82	371	152	147	73	47	99	133	11	138	117	177
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	82	523	0	147	120	0	99	144	0	0	255	177
Confl. Peds. (#/hr)	250		200	200		250	50		90	90		50
Confl. Bikes (#/hr)			101			5			8			11
Heavy Vehicles (%)	14%	14%	16%	0%	34%	50%	21%	14%	0%	12%	3%	9%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	48.0	48.0		48.0	48.0		26.0	26.0			26.0	26.0
Effective Green, g (s)	48.0	49.0		48.0	49.0		26.0	27.0			27.0	27.0
Actuated g/C Ratio	0.53	0.54		0.53	0.54		0.29	0.30			0.30	0.30
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0			8.0	8.0
Lane Grp Cap (vph)	391	635		304	535		196	398			301	286
v/s Ratio Prot		c0.45			0.12			0.11				
v/s Ratio Perm	0.11			0.26			0.15				c0.25	0.19
v/c Ratio	0.21	0.82		0.48	0.22		0.51	0.36			0.85	0.62
Uniform Delay, d1	11.0	16.9		13.2	10.6		26.6	24.7			29.6	27.1
Progression Factor	1.05	0.96		1.00	1.00		1.00	1.00			1.06	1.03
Incremental Delay, d2	1.0	9.2		5.4	1.0		9.0	2.5			21.1	8.1
Delay (s)	12.6	25.5		18.6	11.6		35.7	27.3			52.4	36.1
Level of Service	B	C		B	B		D	C			D	D
Approach Delay (s)		23.8			15.5			30.7			45.7	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	216	222	0	0	0	64
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.92	0.92	0.75	0.75
Hourly flow rate (vph)	260	267	0	0	0	85
Pedestrians					307	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			835		701	701
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			835		701	701
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	75
cM capacity (veh/h)			628		321	348

Direction, Lane #	EB 1	NB 1
Volume Total	528	85
Volume Left	0	0
Volume Right	267	85
cSH	1700	348
Volume to Capacity	0.31	0.25
Queue Length 95th (ft)	0	24
Control Delay (s)	0.0	18.7
Lane LOS		C
Approach Delay (s)	0.0	18.7
Approach LOS		C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	987	106	0	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.42	0.42
Hourly flow rate (vph)	0	0	1028	110	0	24
Pedestrians					129	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					14	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		704				
pX, platoon unblocked						
vC, conflicting volume	1268				1212	698
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1268				1212	698
tC, single (s)	4.1				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	100				100	92
cM capacity (veh/h)	466				152	313

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	685	453	24
Volume Left	0	0	0	0	0
Volume Right	0	0	0	110	24
cSH	1700	1700	1700	1700	313
Volume to Capacity	0.00	0.00	0.40	0.27	0.08
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	17.5
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.5
Approach LOS					C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	631	97	0	952	314	0	0	0	0	0	142
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	678	104	0	1046	345	0	0	0	0	0	158
Pedestrians								161			129	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			11	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1274										
pX, platoon unblocked												
vC, conflicting volume	1520			944			2268	2412	552	1687	2291	1348
vC1, stage 1 conf vol							892	892		1348	1348	
vC2, stage 2 conf vol							1376	1520		339	944	
vCu, unblocked vol	1520			944			2268	2412	552	1687	2291	1348
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			0	100	100	100	100	0
cM capacity (veh/h)	397			735			0	112	477	120	129	124

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	452	330	1391	158
Volume Left	0	0	0	0
Volume Right	0	104	345	158
cSH	1700	1700	1700	124
Volume to Capacity	0.27	0.19	0.82	1.28
Queue Length 95th (ft)	0	0	0	253
Control Delay (s)	0.0	0.0	0.0	240.0
Lane LOS				F
Approach Delay (s)	0.0		0.0	240.0
Approach LOS				F

Intersection Summary			
Average Delay	16.2		
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	53	218	0	0	270	81
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.50	0.50	0.86	0.86
Hourly flow rate (vph)	56	232	0	0	314	94
Pedestrians	64		61			47
Lane Width (ft)	13.0		0.0			13.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	6		0			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1000
pX, platoon unblocked						
vC, conflicting volume	847	111			64	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	847	111			64	
tC, single (s)	6.6	6.4			4.2	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.3	
p0 queue free %	75	72			78	
cM capacity (veh/h)	224	817			1414	

Direction, Lane #	WB 1	SB 1
Volume Total	288	408
Volume Left	56	314
Volume Right	232	0
cSH	539	1414
Volume to Capacity	0.54	0.22
Queue Length 95th (ft)	79	21
Control Delay (s)	19.1	6.8
Lane LOS	C	A
Approach Delay (s)	19.1	6.8
Approach LOS	C	

Intersection Summary			
Average Delay	11.9		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	253	257	21	2	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.79	0.79	0.58	0.58
Hourly flow rate (vph)	21	316	325	27	3	26
Pedestrians		17	38		51	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	3		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	403				786	407
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	403				786	407
tC, single (s)	4.2				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.5
p0 queue free %	98				99	95
cM capacity (veh/h)	1086				331	573

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	338	352	29
Volume Left	21	0	3
Volume Right	0	27	26
cSH	1086	1700	528
Volume to Capacity	0.02	0.21	0.06
Queue Length 95th (ft)	1	0	4
Control Delay (s)	0.7	0.0	12.2
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	12.2
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	92	2	167	267	32	71
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.53	0.53	0.93	0.93	0.74	0.74
Hourly flow rate (vph)	174	4	180	287	43	96
Pedestrians	213			213	41	
Lane Width (ft)	14.0			12.0	10.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	21			18	3	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				320		
pX, platoon unblocked	0.86					
vC, conflicting volume	991	517	352			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	910	517	352			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	0	99	81			
cM capacity (veh/h)	161	367	966			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	177	467	139
Volume Left	174	180	0
Volume Right	4	0	96
cSH	163	966	1700
Volume to Capacity	1.09	0.19	0.08
Queue Length 95th (ft)	228	17	0
Control Delay (s)	153.4	5.0	0.0
Lane LOS	F	A	
Approach Delay (s)	153.4	5.0	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	37.7		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	14	1091	0	0	0	0	0	24	110
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	16	1269	0	0	0	0	0	27	125
Pedestrians		8									50	
Lane Width (ft)		0.0									14.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.77						0.77	0.77		0.77	0.77	0.77
vC, conflicting volume	1319			0			813	1351	0	1351	1351	692
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	826			0			173	868	0	868	868	17
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			100	100	100	100	87	83
cM capacity (veh/h)	589			1636			430	210	1084	175	213	749

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	439	846	152
Volume Left	16	0	0
Volume Right	0	0	125
cSH	1636	1700	516
Volume to Capacity	0.01	0.50	0.29
Queue Length 95th (ft)	1	0	31
Control Delay (s)	0.4	0.0	14.9
Lane LOS	A		B
Approach Delay (s)	0.1		14.9
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1352	12	273	47
v/c Ratio	0.75	0.03	0.65	0.12
Control Delay	14.5	28.7	42.1	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	28.7	42.1	3.1
Queue Length 50th (ft)	274	6	156	0
Queue Length 95th (ft)	364	20	244	2
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1813	407	429	415
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	0.75	0.03	0.64	0.11

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1061	183	11	251	0	0	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.97		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.98		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2727		1624	1710				1422
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2727		1624	1710				1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.72	0.72	0.72
Adj. Flow (vph)	0	0	0	0	1153	199	12	273	0	0	0	47
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	35
Lane Group Flow (vph)	0	0	0	0	1352	0	12	273	0	0	0	12
Confl. Peds. (#/hr)						72						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	4%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					65.3		23.4	23.4				23.4
Effective Green, g (s)					66.3		24.4	24.4				24.4
Actuated g/C Ratio					0.66		0.24	0.24				0.24
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1813		397	418				348
v/s Ratio Prot					c0.50		0.01	c0.16				
v/s Ratio Perm												0.01
v/c Ratio					0.75		0.03	0.65				0.03
Uniform Delay, d1					11.1		28.6	33.8				28.7
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					2.8		0.0	3.6				0.0
Delay (s)					13.9		28.7	37.5				28.7
Level of Service					B		C	D				C
Approach Delay (s)		0.0			13.9			37.1			28.7	
Approach LOS		A			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	631	0	0	952	0	209
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	686	0	0	1035	0	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			686		1721	343
vC1, stage 1 conf vol					686	
vC2, stage 2 conf vol					1035	
vCu, unblocked vol			686		1721	343
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	60
cM capacity (veh/h)			904		205	659

Direction, Lane #	EB 1	EB 2	WB 1	NE 1
Volume Total	343	343	1035	261
Volume Left	0	0	0	0
Volume Right	0	0	0	261
cSH	1700	1700	1700	659
Volume to Capacity	0.20	0.20	0.61	0.40
Queue Length 95th (ft)	0	0	0	47
Control Delay (s)	0.0	0.0	0.0	14.0
Lane LOS				B
Approach Delay (s)	0.0		0.0	14.0
Approach LOS				B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1273	0	0	38	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.94	0.94
Hourly flow rate (vph)	0	1384	0	0	40	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				692	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				692	0
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				89	100
cM capacity (veh/h)	1622				382	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	692	692	40
Volume Left	0	0	40
Volume Right	0	0	0
cSH	1700	1700	382
Volume to Capacity	0.41	0.41	0.11
Queue Length 95th (ft)	0	0	9
Control Delay (s)	0.0	0.0	15.5
Lane LOS			C
Approach Delay (s)	0.0		15.5
Approach LOS			C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	279	1117
v/c Ratio	0.18	0.37
Control Delay	0.3	0.3
Queue Delay	0.1	0.0
Total Delay	0.4	0.3
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1510	3020
Starvation Cap Reductn	0	0
Spillback Cap Reductn	494	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.27	0.37

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	262	1050	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1516	3032				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1516	3032				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	1117	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	279	1117	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	99.7	99.7				
Effective Green, g (s)	95.7	95.7				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1455	2910				
v/s Ratio Prot	0.18	c0.37				
v/s Ratio Perm						
v/c Ratio	0.19	0.38				
Uniform Delay, d1	0.1	0.1				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.1	0.1				
Delay (s)	0.2	0.2				
Level of Service	A	A				
Approach Delay (s)		0.2	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1091	23	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.94	0.94	0.85	0.85
Hourly flow rate (vph)	0	0	0	1161	27	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked						
vC, conflicting volume			0		580	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		580	0
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		94	100
cM capacity (veh/h)			1636		450	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	580	580	27
Volume Left	0	0	27
Volume Right	0	0	0
cSH	1700	1700	450
Volume to Capacity	0.34	0.34	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	13.5
Lane LOS			B
Approach Delay (s)	0.0		13.5
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	NBL	SET	NWT
Lane Group Flow (vph)	944	1526	1083
v/c Ratio	0.56	1.71	1.76
Control Delay	14.3	350.6	369.5
Queue Delay	0.0	0.0	0.0
Total Delay	14.3	350.6	369.5
Queue Length 50th (ft)	117	~440	~333
Queue Length 95th (ft)	m239	#507	m#408
Internal Link Dist (ft)	450	741	1079
Turn Bay Length (ft)	85		
Base Capacity (vph)	1676	892	616
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.56	1.71	1.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	NBL	NBR	SET	SER	NWU	NWL	NWT
Lane Configurations							
Volume (vph)	887	19	937	391	12	45	982
Ideal Flow (vphpl)	1900	1900	2000	2000	1900	2000	2000
Lane Width	10	11	12	12	12	12	11
Total Lost time (s)	3.0		6.0				6.0
Lane Util. Factor	0.97		*0.95				*0.95
Frt	1.00		0.96				1.00
Flt Protected	0.95		1.00				1.00
Satd. Flow (prot)	2936		4855				4794
Flt Permitted	0.95		1.00				0.70
Satd. Flow (perm)	2936		4855				3379
Peak-hour factor, PHF	0.96	0.96	0.87	0.87	0.92	0.96	0.96
Adj. Flow (vph)	924	20	1077	449	13	47	1023
RTOR Reduction (vph)	0	0	85	0	0	0	0
Lane Group Flow (vph)	944	0	1441	0	0	0	1083
Heavy Vehicles (%)	0%	11%	1%	1%	2%	7%	3%
Bus Blockages (#/hr)	0	0	0	9	0	0	0
Turn Type	Prot		NA			D.P+P	NA
Protected Phases	3		2			4	2 4
Permitted Phases						2	
Actuated Green, G (s)	50.4		12.8				17.8
Effective Green, g (s)	51.4		13.8				19.8
Actuated g/C Ratio	0.57		0.15				0.22
Clearance Time (s)	4.0		7.0				
Vehicle Extension (s)	3.0		3.0				
Lane Grp Cap (vph)	1676		744				837
v/s Ratio Prot	c0.32		c0.30				c0.09
v/s Ratio Perm							0.20
v/c Ratio	0.56		1.94				1.29
Uniform Delay, d1	12.2		38.1				35.1
Progression Factor	0.97		1.00				0.78
Incremental Delay, d2	0.1		426.7				138.3
Delay (s)	11.9		464.8				165.6
Level of Service	B		F				F
Approach Delay (s)	11.9		464.8				165.6
Approach LOS	B		F				F

Intersection Summary			
HCM 2000 Control Delay	253.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	453	494	651	47	448
v/c Ratio	1.26	1.22	0.94	0.18	0.59
Control Delay	167.3	154.4	27.7	1.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	167.3	154.4	27.7	1.5	6.6
Queue Length 50th (ft)	~326	~360	210	1	90
Queue Length 95th (ft)	#414	#558	m#479	m1	m8
Internal Link Dist (ft)	1468	719	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	359	406	689	257	760
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	1.26	1.22	0.94	0.18	0.59

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												
Volume (vph)	63	256	34	10	217	242	18	572	8	42	341	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.90			1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00			1.00		0.99	1.00	
Frt		0.99			0.93			1.00		1.00	0.98	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1516			1199			1473		1485	1591	
Flt Permitted		0.68			0.98			0.98		0.34	1.00	
Satd. Flow (perm)		1045			1181			1443		537	1591	
Peak-hour factor, PHF	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	81	328	44	11	228	255	20	622	9	47	379	69
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	453	0	0	494	0	0	651	0	47	448	0
Confl. Peds. (#/hr)	75		50	50		75	15		20	20		15
Confl. Bikes (#/hr)			17			57			3			1
Heavy Vehicles (%)	6%	5%	0%	0%	3%	0%	6%	1%	0%	5%	0%	6%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			42.0		42.0	42.0	
Effective Green, g (s)		31.0			31.0			43.0		43.0	43.0	
Actuated g/C Ratio		0.34			0.34			0.48		0.48	0.48	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		359			406			689		256	760	
v/s Ratio Prot											0.28	
v/s Ratio Perm		c0.43			0.42			c0.45		0.09		
v/c Ratio		1.26			1.22			0.94		0.18	0.59	
Uniform Delay, d1		29.5			29.5			22.4		13.5	17.1	
Progression Factor		1.00			1.50			0.46		0.10	0.36	
Incremental Delay, d2		138.4			115.7			14.4		0.1	0.3	
Delay (s)		167.9			160.0			24.6		1.4	6.4	
Level of Service		F			F			C		A	A	
Approach Delay (s)		167.9			160.0			24.6			5.9	
Approach LOS		F			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	83.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	335	199	196	157	528
v/c Ratio	1.16	0.79	0.73	0.73	1.14
Control Delay	125.7	49.9	42.7	58.4	114.5
Queue Delay	0.5	0.0	0.0	0.0	0.4
Total Delay	126.2	49.9	42.7	58.4	114.9
Queue Length 50th (ft)	~234	64	63	87	~353
Queue Length 95th (ft)	m#181	#118	#100	#180	#547
Internal Link Dist (ft)	719		195	1971	
Turn Bay Length (ft)					150
Base Capacity (vph)	289	251	270	214	465
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	11	0	0	0	21
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.21	0.79	0.73	0.73	1.19

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	241	54	161	159	148	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	12	11	11	10	11
Total Lost time (s)	4.0		5.0	5.0	3.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1369		1510	1621	1486	1351
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	1369		1510	1621	1486	1351
Peak-hour factor, PHF	0.88	0.88	0.81	0.81	0.94	0.94
Adj. Flow (vph)	274	61	199	196	157	528
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	335	0	199	196	157	528
Confl. Bikes (#/hr)		16				
Heavy Vehicles (%)	3%	8%	4%	2%	2%	4%
Parking (#/hr)	2	2				
Turn Type	NA		Split	NA	Perm	pm+ov
Protected Phases	4 5		1	1		1
Permitted Phases					6	6
Actuated Green, G (s)	19.0		14.0	14.0	12.0	26.0
Effective Green, g (s)	20.0		15.0	15.0	13.0	28.0
Actuated g/C Ratio	0.22		0.17	0.17	0.14	0.31
Clearance Time (s)			6.0	6.0	4.0	6.0
Lane Grp Cap (vph)	304		251	270	214	420
v/s Ratio Prot	c0.24		0.13	0.12		c0.21
v/s Ratio Perm					0.11	0.18
v/c Ratio	1.10		0.79	0.73	0.73	1.26
Uniform Delay, d1	35.0		36.0	35.6	36.8	31.0
Progression Factor	1.65		0.71	0.72	1.00	1.00
Incremental Delay, d2	51.1		21.9	15.4	19.9	133.8
Delay (s)	108.8		47.6	40.9	56.7	164.8
Level of Service	F		D	D	E	F
Approach Delay (s)	108.8			44.3	140.1	
Approach LOS	F			D	F	

Intersection Summary			
HCM 2000 Control Delay	105.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	84	824	86	217	836	236	574	181
v/c Ratio	0.97	0.54	0.18	0.28	0.74	0.98	0.46	0.37
Control Delay	44.1	5.8	3.1	28.0	30.7	50.0	1.0	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	44.1	5.8	3.1	28.0	30.7	50.0	1.1	13.5
Queue Length 50th (ft)	28	14	4	51	217	127	0	31
Queue Length 95th (ft)	m8	m9	m3	81	287	m105	m0	45
Internal Link Dist (ft)		1079			832	195		257
Turn Bay Length (ft)	250		175	200			100	
Base Capacity (vph)	87	1538	483	789	1133	242	1244	495
Starvation Cap Reductn	0	0	0	0	0	0	96	0
Spillback Cap Reductn	0	0	0	22	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.54	0.18	0.28	0.74	0.98	0.50	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	5	72	750	78	204	784	2	164	53	528	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	11	12	13	12	12	11	11	11	12
Total Lost time (s)		3.0	3.0	3.0	5.0	3.0			3.0	5.0		3.0
Lane Util. Factor		1.00	0.91	1.00	0.97	0.95			1.00	0.88		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	0.99		0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.91
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.96	1.00		1.00
Satd. Flow (prot)		1568	4468	1405	3090	3290			1514	2363		1520
Flt Permitted		0.15	1.00	1.00	0.95	1.00			0.56	1.00		0.99
Satd. Flow (perm)		252	4468	1405	3090	3290			873	2363		1503
Peak-hour factor, PHF	0.92	0.91	0.91	0.91	0.94	0.94	0.94	0.92	0.92	0.92	0.66	0.66
Adj. Flow (vph)	5	79	824	86	217	834	2	178	58	574	8	53
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	37	0	79
Lane Group Flow (vph)	0	84	824	86	217	836	0	0	236	537	0	102
Confl. Bikes (#/hr)							13			3		
Heavy Vehicles (%)	2%	0%	1%	0%	2%	2%	0%	3%	12%	4%	0%	0%
Turn Type	Perm	Perm	NA	Prot	Prot	NA		Perm	NA	pm+ov	Perm	NA
Protected Phases			3 4	3 4	1 2	3 4			5 6	1 2		5 6
Permitted Phases	3 4	3 4						5 6		5 6	5 6	
Actuated Green, G (s)		29.0	29.0	29.0	24.0	29.0			24.0	48.0		24.0
Effective Green, g (s)		30.0	30.0	30.0	25.0	30.0			25.0	47.0		25.0
Actuated g/C Ratio		0.33	0.33	0.33	0.28	0.33			0.28	0.52		0.28
Clearance Time (s)												
Lane Grp Cap (vph)		84	1489	468	858	1096			242	1234		417
v/s Ratio Prot			0.18	0.06	0.07	0.25				c0.12		
v/s Ratio Perm		c0.33							c0.27	0.11		0.07
v/c Ratio		1.00	0.55	0.18	0.25	0.76			0.98	0.44		0.25
Uniform Delay, d1		30.0	24.5	21.3	25.2	26.8			32.2	13.3		25.2
Progression Factor		0.39	0.24	0.14	1.00	1.00			1.09	0.09		1.00
Incremental Delay, d2		29.5	0.1	0.1	0.7	5.0			12.4	0.1		1.4
Delay (s)		41.2	6.0	3.1	26.0	31.9			47.4	1.3		26.6
Level of Service		D	A	A	C	C			D	A		C
Approach Delay (s)			8.7			30.6			14.7			26.6
Approach LOS			A			C			B			C

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	79
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.66
Adj. Flow (vph)	120
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Bikes (#/hr)	13
Heavy Vehicles (%)	1%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWT
Lane Group Flow (vph)	412	603	298	240	605	395	421	1066	360	743
v/c Ratio	1.15	0.67	0.93	0.62	0.74	0.60	1.01	1.25	0.89	1.11
Control Delay	138.8	49.8	83.1	49.1	49.8	24.4	99.2	164.8	77.3	112.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	138.8	49.8	83.1	49.1	49.8	24.4	99.2	164.8	77.3	112.2
Queue Length 50th (ft)	~375	160	229	167	231	181	~311	~520	261	~342
Queue Length 95th (ft)	#565	201	#391	236	273	250	#490	#613	#399	#468
Internal Link Dist (ft)		832			440			1843		515
Turn Bay Length (ft)	200		400				600			
Base Capacity (vph)	358	901	322	389	813	656	417	855	403	670
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.67	0.93	0.62	0.74	0.60	1.01	1.25	0.89	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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	367	537	265	202	508	332	362	917	310	176	395	97
Ideal Flow (vphpl)	2100	1900	1900	1900	2100	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	10	10	10	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00		0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1872	4916	1759	1668	3616	1457	1668	3421	1615		3296	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1872	4916	1759	1668	3616	1457	1668	3421	1615		3296	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.86	0.86	0.86	0.90	0.90	0.90
Adj. Flow (vph)	412	603	298	240	605	395	421	1066	360	196	439	108
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	0	0	11	0
Lane Group Flow (vph)	412	603	298	240	605	358	421	1066	360	0	732	0
Confl. Peds. (#/hr)							158		33			158
Confl. Bikes (#/hr)						27						6
Heavy Vehicles (%)	3%	2%	1%	1%	3%	2%	1%	2%	0%	1%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Prot	Split	NA	
Protected Phases	5	2		1	6	4	8	8	8	4	4	
Permitted Phases			2			6						
Actuated Green, G (s)	22.0	21.0	21.0	27.0	26.0	49.0	29.0	29.0	29.0		23.0	
Effective Green, g (s)	23.0	22.0	22.0	28.0	27.0	51.0	30.0	30.0	30.0		24.0	
Actuated g/C Ratio	0.19	0.18	0.18	0.23	0.22	0.42	0.25	0.25	0.25		0.20	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	358	901	322	389	813	667	417	855	403		659	
v/s Ratio Prot	c0.22	0.12		0.14	c0.17	0.11	0.25	c0.31	0.22		c0.22	
v/s Ratio Perm			0.17			0.14						
v/c Ratio	1.15	0.67	0.93	0.62	0.74	0.54	1.01	1.25	0.89		1.11	
Uniform Delay, d1	48.5	45.6	48.2	41.2	43.3	25.7	45.0	45.0	43.5		48.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	1.20	1.22		1.00	
Incremental Delay, d2	95.2	3.9	34.3	2.0	6.1	0.4	45.6	120.5	20.3		69.4	
Delay (s)	143.7	49.6	82.5	43.2	49.4	26.1	100.3	174.6	73.4		117.4	
Level of Service	F	D	F	D	D	C	F	F	E		F	
Approach Delay (s)		86.6			40.8			137.9			117.4	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	98.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	753	439	263	314	84
v/c Ratio	0.38	0.46	0.85	0.84	0.22
Control Delay	18.0	30.8	59.1	53.2	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	30.8	59.1	53.2	10.1
Queue Length 50th (ft)	204	123	143	170	5
Queue Length 95th (ft)	m247	m161	#281	205	26
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1991	962	308	375	378
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	0.38	0.46	0.85	0.84	0.22

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	655	303	59	25	0	194	54	140	89	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		3.5	3.5				4.5			3.5	3.5
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.92				1.00			1.00	0.97
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.97				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2963	2584				1232			1501	1295
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2963	2584				1232			1501	1295
Peak-hour factor, PHF	0.87	0.87	0.88	0.88	0.88	0.94	0.94	0.94	0.73	0.73	0.73
Adj. Flow (vph)	0	753	344	67	28	0	206	57	192	122	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	753	439	0	0	0	263	0	0	314	29
Confl. Peds. (#/hr)	48			64	48			64			8
Confl. Bikes (#/hr)				23	23			19			1
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%	2%	0%	1%	1%	2%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		59.5	32.5				22.5			21.5	21.5
Effective Green, g (s)		60.5	33.5				22.5			22.5	22.5
Actuated g/C Ratio		0.67	0.37				0.25			0.25	0.25
Clearance Time (s)			4.5				4.5			4.5	4.5
Lane Grp Cap (vph)		1991	961				308			375	323
v/s Ratio Prot		0.25	c0.17				c0.21			c0.21	
v/s Ratio Perm											0.02
v/c Ratio		0.38	0.46				0.85			0.84	0.09
Uniform Delay, d1		6.5	21.4				32.2			32.0	25.9
Progression Factor		2.68	1.35				1.00			1.00	1.00
Incremental Delay, d2		0.3	1.5				24.8			19.5	0.6
Delay (s)		17.7	30.3				57.0			51.5	26.5
Level of Service		B	C				E			D	C
Approach Delay (s)		17.7	30.3			57.0				46.2	
Approach LOS		B	C			E				D	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	334	622	90	272	445	177	345
v/c Ratio	0.84	0.59	0.49	0.42	0.96	0.54	0.88
Control Delay	52.8	29.5	45.5	32.5	63.4	30.5	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	29.5	45.5	32.5	63.4	30.5	67.8
Queue Length 50th (ft)	188	160	48	71	271	103	206
Queue Length 95th (ft)	m#308	m229	94	111	m#398	m146	m#320
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	200		250			140	
Base Capacity (vph)	431	1050	224	647	466	330	394
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	0.77	0.59	0.40	0.42	0.95	0.54	0.88

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	480	80	83	214	36	74	309	152	41	224	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	3.0	7.0		3.0	7.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.97			1.00	0.68		0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.98	1.00		0.99	
Frt	1.00	0.98		1.00	0.98			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.99	
Satd. Flow (prot)	1555	2704		1444	2749			1593	929		1511	
Flt Permitted	0.95	1.00		0.95	1.00			0.82	1.00		0.73	
Satd. Flow (perm)	1555	2704		1444	2749			1313	929		1109	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.86	0.86	0.86	0.98	0.98	0.98
Adj. Flow (vph)	334	533	89	90	233	39	86	359	177	42	229	74
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	334	622	0	90	272	0	0	445	177	0	345	0
Confl. Peds. (#/hr)	56		32			56	152		218	216		150
Confl. Bikes (#/hr)			11			20						11
Heavy Vehicles (%)	1%	7%	1%	5%	8%	0%	0%	1%	3%	5%	1%	3%
Bus Blockages (#/hr)	0	8	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	22.1	33.2		9.1	20.2			30.7	30.7		30.7	
Effective Green, g (s)	23.1	34.2		10.1	21.2			31.7	31.7		31.7	
Actuated g/C Ratio	0.26	0.38		0.11	0.24			0.35	0.35		0.35	
Clearance Time (s)	4.0	8.0		4.0	8.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	399	1027		162	647			462	327		390	
v/s Ratio Prot	c0.21	c0.23		0.06	0.10							
v/s Ratio Perm								c0.34	0.19		0.31	
v/c Ratio	0.84	0.61		0.56	0.42			0.96	0.54		0.88	
Uniform Delay, d1	31.7	22.5		37.8	29.2			28.6	23.3		27.4	
Progression Factor	1.06	1.14		1.00	1.00			1.05	1.02		1.77	
Incremental Delay, d2	14.1	2.6		4.1	2.0			30.2	1.6		16.0	
Delay (s)	47.5	28.2		41.9	31.2			60.3	25.4		64.5	
Level of Service	D	C		D	C			E	C		E	
Approach Delay (s)		34.9			33.9			50.4			64.5	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	331	333	539	28	293	92
v/c Ratio	0.86	0.17	0.35	0.07	0.63	0.37
Control Delay	40.3	8.2	8.1	32.8	45.0	41.1
Queue Delay	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	40.3	8.2	8.8	32.8	45.0	41.1
Queue Length 50th (ft)	185	47	47	16	199	58
Queue Length 95th (ft)	#408	67	81	27	296	110
Internal Link Dist (ft)		1070	174	143	1971	
Turn Bay Length (ft)	170					200
Base Capacity (vph)	385	1936	1552	429	468	248
Starvation Cap Reductn	0	0	666	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	0.86	0.17	0.61	0.07	0.63	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	1	304	236	70	31	245	220	0	11	6	4	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			3.5			4.0			4.0
Lane Util. Factor		1.00	0.95			0.95			1.00			1.00
Frpb, ped/bikes		1.00	0.97			0.87			0.96			1.00
Flpb, ped/bikes		0.88	1.00			1.00			1.00			1.00
Frt		1.00	0.97			0.93			0.95			1.00
Flt Protected		0.95	1.00			1.00			1.00			1.00
Satd. Flow (prot)		1327	2941			2561			1561			1707
Flt Permitted		0.43	1.00			0.91			1.00			1.00
Satd. Flow (perm)		598	2941			2344			1561			1704
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.61	0.61	0.61	0.91	0.91
Adj. Flow (vph)	1	330	257	76	34	266	239	0	18	10	4	289
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	331	333	0	0	539	0	0	28	0	0	293
Confl. Peds. (#/hr)		76		26	26		75	107		45	45	
Confl. Bikes (#/hr)				1			3			5		
Heavy Vehicles (%)	2%	8%	5%	0%	3%	3%	1%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	NA		pm+pt	NA			NA		Perm	NA
Protected Phases			2		1	6			8			4
Permitted Phases	2	2			6			8			4	
Actuated Green, G (s)		78.0	78.0			78.5			32.0			32.0
Effective Green, g (s)		79.0	79.0			79.5			33.0			33.0
Actuated g/C Ratio		0.66	0.66			0.66			0.28			0.28
Clearance Time (s)		5.0	5.0			4.5			5.0			5.0
Vehicle Extension (s)		3.0	3.0			3.0			3.0			3.0
Lane Grp Cap (vph)		393	1936			1552			429			468
v/s Ratio Prot			0.11						0.02			
v/s Ratio Perm		c0.55				0.23						c0.17
v/c Ratio		0.84	0.17			0.35			0.07			0.63
Uniform Delay, d1		15.7	7.9			8.9			32.1			38.1
Progression Factor		1.00	1.00			0.84			1.00			1.00
Incremental Delay, d2		19.2	0.2			0.1			0.3			6.2
Delay (s)		35.0	8.1			7.6			32.4			44.3
Level of Service		C	A			A			C			D
Approach Delay (s)			21.5			7.6			32.4			43.3
Approach LOS			C			A			C			D

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	84
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.75
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	932
Flt Permitted	1.00
Satd. Flow (perm)	932
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	92
RTOR Reduction (vph)	0
Lane Group Flow (vph)	92
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	17%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	32.0
Effective Green, g (s)	32.0
Actuated g/C Ratio	0.27
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	248
v/s Ratio Prot	
v/s Ratio Perm	0.10
v/c Ratio	0.37
Uniform Delay, d1	35.8
Progression Factor	1.00
Incremental Delay, d2	4.2
Delay (s)	40.0
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	268	449	1239	928	155
v/c Ratio	0.28	0.73	0.43	0.72	0.32
Control Delay	25.9	51.5	11.7	29.5	22.6
Queue Delay	1.0	0.0	0.0	0.0	0.0
Total Delay	26.8	51.5	11.7	29.5	22.6
Queue Length 50th (ft)	49	168	164	363	73
Queue Length 95th (ft)	69	213	193	m409	m92
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	971	736	2858	1288	482
Starvation Cap Reductn	464	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.61	0.43	0.72	0.32

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations							
Volume (vph)	241	3	37	362	1103	798	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	12	11	11	12	12
Total Lost time (s)	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97			0.97	0.91	0.95	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00	0.88
Flpb, ped/bikes	1.00			1.00	1.00	1.00	1.00
Frt	1.00			1.00	1.00	1.00	0.85
Flt Protected	0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)	3238			3046	4513	3249	1218
Flt Permitted	0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)	3238			3046	4513	3249	1218
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.89	0.86	0.86
Adj. Flow (vph)	265	3	42	407	1239	928	155
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	268	0	0	449	1239	928	155
Confl. Peds. (#/hr)	1			75			75
Confl. Bikes (#/hr)							5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	5%
Turn Type	Prot		Prot	Prot	NA	NA	Perm
Protected Phases	3		1	1	6	2	
Permitted Phases							2
Actuated Green, G (s)	35.0			23.4	75.0	46.6	46.6
Effective Green, g (s)	36.0			24.4	76.0	47.6	47.6
Actuated g/C Ratio	0.30			0.20	0.63	0.40	0.40
Clearance Time (s)	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	4.0			4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	971			619	2858	1288	483
v/s Ratio Prot	c0.08			c0.15	0.27	c0.29	
v/s Ratio Perm							0.13
v/c Ratio	0.28			0.73	0.43	0.72	0.32
Uniform Delay, d1	32.1			44.7	11.1	30.6	25.0
Progression Factor	0.78			1.00	1.00	0.87	0.81
Incremental Delay, d2	0.7			4.5	0.5	1.8	0.9
Delay (s)	25.7			49.2	11.6	28.5	21.2
Level of Service	C			D	B	C	C
Approach Delay (s)	25.7				21.6	27.5	
Approach LOS	C				C	C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	94	387	25	301	356	515
v/c Ratio	0.28	0.59	0.10	0.48	0.77	0.91
Control Delay	8.9	10.5	17.7	22.7	35.3	42.9
Queue Delay	1.1	2.2	0.0	0.1	0.0	0.3
Total Delay	10.0	12.8	17.7	22.8	35.3	43.1
Queue Length 50th (ft)	14	60	9	123	167	280
Queue Length 95th (ft)	m21	m81	25	195	#311	#459
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	330	661	252	624	461	566
Starvation Cap Reductn	107	156	0	0	0	2
Spillback Cap Reductn	0	0	0	16	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.77	0.10	0.50	0.77	0.91

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	89	360	8	22	193	75	48	202	67	10	321	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.96			0.97			0.87	
Flpb, ped/bikes	0.93	1.00		0.89	1.00			0.98			1.00	
Frt	1.00	1.00		1.00	0.96			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1426	1608		1329	1519			1231			1321	
Flt Permitted	0.54	1.00		0.44	1.00			0.86			0.99	
Satd. Flow (perm)	804	1608		614	1519			1065			1309	
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	94	379	8	25	217	84	54	227	75	11	357	147
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	94	387	0	25	301	0	0	356	0	0	515	0
Confl. Peds. (#/hr)	93		168	168		93	247		95	95		247
Confl. Bikes (#/hr)			28			17			36			231
Heavy Vehicles (%)	2%	2%	0%	5%	0%	0%	0%	6%	0%	0%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	36.0	36.0		36.0	36.0			38.0			38.0	
Effective Green, g (s)	37.0	37.0		37.0	37.0			39.0			39.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.43			0.43	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	330	661		252	624			461			567	
v/s Ratio Prot		c0.24			0.20							
v/s Ratio Perm	0.12			0.04				0.33			c0.39	
v/c Ratio	0.28	0.59		0.10	0.48			0.77			0.91	
Uniform Delay, d1	17.7	20.6		16.3	19.5			21.7			23.8	
Progression Factor	0.40	0.38		1.00	1.00			1.00			0.93	
Incremental Delay, d2	1.4	2.5		0.8	2.7			11.9			18.5	
Delay (s)	8.6	10.3		17.1	22.1			33.6			40.5	
Level of Service	A	B		B	C			C			D	
Approach Delay (s)		10.0			21.7			33.6			40.5	
Approach LOS		A			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	480	535	80	452	15	289
v/c Ratio	0.96	1.01	0.25	0.67	0.06	0.46
Control Delay	58.8	69.4	19.6	26.9	8.6	11.3
Queue Delay	42.9	34.7	0.0	16.3	0.2	1.0
Total Delay	101.7	104.2	19.6	43.2	8.8	12.3
Queue Length 50th (ft)	256	~284	29	201	3	56
Queue Length 95th (ft)	#378	m#445	63	312	m5	m78
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	500	530	317	676	238	635
Starvation Cap Reductn	0	191	0	0	0	158
Spillback Cap Reductn	121	0	0	213	75	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.27	1.58	0.25	0.98	0.09	0.61

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												
Volume (vph)	62	306	16	25	437	19	76	375	54	13	187	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	10	12	12	11	11	12
Total Lost time (s)		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	
Frpb, ped/bikes		0.99			0.99		1.00	0.98		1.00	0.95	
Flpb, ped/bikes		0.99			1.00		0.90	1.00		0.94	1.00	
Frt		0.99			0.99		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1494			1306		1329	1603		1473	1506	
Flt Permitted		0.78			0.96		0.54	1.00		0.36	1.00	
Satd. Flow (perm)		1182			1253		752	1603		565	1506	
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	78	382	20	28	486	21	80	395	57	15	210	79
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	478	0	0	533	0	80	452	0	15	289	0
Confl. Peds. (#/hr)	99		160	160		99	124		111	111		124
Confl. Bikes (#/hr)			15			85			42			19
Heavy Vehicles (%)	2%	4%	6%	0%	2%	0%	3%	2%	4%	0%	0%	0%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			37.0		37.0	37.0		37.0	37.0	
Effective Green, g (s)		38.0			38.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
Clearance Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Lane Grp Cap (vph)		499			529		317	676		238	635	
v/s Ratio Prot								c0.28			0.19	
v/s Ratio Perm		0.40			c0.43		0.11			0.03		
v/c Ratio		0.96			1.01		0.25	0.67		0.06	0.46	
Uniform Delay, d1		25.2			26.0		16.8	20.9		15.4	18.6	
Progression Factor		1.00			1.39		1.00	1.00		0.51	0.49	
Incremental Delay, d2		31.2			32.5		1.9	5.2		0.4	1.9	
Delay (s)		56.4			68.7		18.7	26.1		8.3	11.0	
Level of Service		E			E		B	C		A	B	
Approach Delay (s)		56.4			68.7			25.0			10.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	425	18	33	447	386	71	127	316	26
v/c Ratio	0.76	0.04	0.17	0.77	0.59	0.97	0.37	1.06	0.11
Control Delay	34.1	19.1	9.2	14.3	10.6	139.1	34.0	92.6	22.3
Queue Delay	54.9	0.0	0.0	53.9	0.3	45.9	4.6	0.0	0.0
Total Delay	89.0	19.1	9.2	68.2	10.8	185.1	38.7	92.6	22.3
Queue Length 50th (ft)	248	9	4	84	44	40	62	~201	7
Queue Length 95th (ft)	m270	m10	m4	m95	m55	#111	103	m#324	m15
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	559	456	198	579	654	73	344	299	238
Starvation Cap Reductn	201	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	186	38	20	154	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.04	0.17	1.14	0.63	1.34	0.67	1.06	0.11

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.

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												
Volume (vph)	12	345	15	30	407	351	58	101	3	288	9	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	7.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.92	1.00	1.00	0.86	1.00	0.99		1.00	0.89	
Flpb, ped/bikes		1.00	1.00	0.97	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.91	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1559	1246	1472	1580	1132	1570	1632		1417	1132	
Flt Permitted		0.98	1.00	0.35	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		1527	1246	541	1580	1132	348	1632		1417	1132	
Peak-hour factor, PHF	0.84	0.84	0.84	0.91	0.91	0.91	0.82	0.82	0.82	0.91	0.91	0.91
Adj. Flow (vph)	14	411	18	33	447	386	71	123	4	316	10	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	425	18	33	447	386	71	127	0	316	26	0
Confl. Peds. (#/hr)	82		45	45		82	60		156			60
Confl. Bikes (#/hr)			1						18			5
Heavy Vehicles (%)	8%	3%	7%	0%	1%	3%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	33.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.37	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		559	456	198	579	742	73	344		299	238	
v/s Ratio Prot					c0.28	0.11		0.08		c0.22	0.02	
v/s Ratio Perm		0.28	0.01	0.06		0.23	c0.20					
v/c Ratio		0.76	0.04	0.17	0.77	0.52	0.97	0.37		1.06	0.11	
Uniform Delay, d1		25.0	18.3	19.2	25.2	11.5	35.2	30.4		35.5	28.7	
Progression Factor		1.15	1.03	0.43	0.39	1.08	1.00	1.00		0.71	0.73	
Incremental Delay, d2		4.2	0.1	0.6	3.4	0.9	97.9	3.0		63.9	0.8	
Delay (s)		32.9	18.9	8.8	13.2	13.2	133.1	33.4		89.0	21.8	
Level of Service		C	B	A	B	B	F	C		F	C	
Approach Delay (s)		32.3			13.0			69.2			83.9	
Approach LOS		C			B			E			F	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	163	447	68	187	673	131	657	80	349	177
v/c Ratio	0.71	1.02	0.25	1.15	0.98	0.71	0.80	0.63	0.80	1.04
Control Delay	56.8	62.8	24.2	161.7	60.1	55.0	43.2	51.2	38.8	113.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.8	24.2	161.7	60.1	55.0	43.2	51.2	38.8	113.2
Queue Length 50th (ft)	85	~219	21	~150	181	69	207	38	164	~129
Queue Length 95th (ft)	m99	m#350	m29	m#250	#283	m106	253	m#75	m#247	m#227
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	229	439	277	162	687	191	826	128	463	171
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	1.02	0.25	1.15	0.98	0.69	0.80	0.63	0.75	1.04

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												
Volume (vph)	153	420	64	159	523	49	111	453	105	74	321	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.72	1.00	0.97		1.00	0.96		1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1522	959	1458	2810		1570	2756		1450	1605	1137
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1522	959	1458	2810		1570	2756		1450	1605	1137
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	163	447	68	187	615	58	131	533	124	80	349	177
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	163	447	68	187	673	0	131	657	0	80	349	177
Confl. Peds. (#/hr)			200			150			75			75
Confl. Bikes (#/hr)			55			182			13			19
Heavy Vehicles (%)	3%	6%	2%	4%	3%	29%	0%	6%	7%	12%	3%	2%
Bus Blockages (#/hr)	0	6	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	13.0	23.4	23.4	9.0	19.4		9.6	26.0		5.6	25.0	13.0
Effective Green, g (s)	14.0	24.4	24.4	10.0	20.4		10.6	27.0		6.6	26.0	14.0
Actuated g/C Ratio	0.16	0.27	0.27	0.11	0.23		0.12	0.30		0.07	0.29	0.16
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	228	412	259	162	636		184	826		106	463	176
v/s Ratio Prot	0.11	c0.29		0.13	0.24		c0.08	c0.24		0.06	0.22	
v/s Ratio Perm			0.07									c0.16
v/c Ratio	0.71	1.08	0.26	1.15	1.06		0.71	0.80		0.75	0.75	1.01
Uniform Delay, d1	36.1	32.8	25.7	40.0	34.8		38.2	29.0		40.9	29.1	38.0
Progression Factor	1.27	0.84	0.92	1.36	0.92		0.95	1.23		0.76	0.84	0.95
Incremental Delay, d2	4.7	55.3	1.1	113.6	49.7		10.1	4.4		22.3	5.8	63.6
Delay (s)	50.5	82.9	24.7	168.0	81.6		46.5	39.9		53.5	30.2	99.7
Level of Service	D	F	C	F	F		D	D		D	C	F
Approach Delay (s)		69.3			100.4			41.0			53.6	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	67.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	611	74	128	364	264	214
v/c Ratio	1.09	0.22	0.32	0.65	0.79	0.59
Control Delay	77.5	22.1	17.6	43.7	39.7	43.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	22.1	17.6	43.7	39.7	43.4
Queue Length 50th (ft)	~375	18	26	183	60	99
Queue Length 95th (ft)	m#433	m22	m49	m254	#231	m157
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160		250	
Base Capacity (vph)	561	339	397	561	336	360
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	1.09	0.22	0.32	0.65	0.79	0.59

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	544	66	124	353	227	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	10	11
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	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	1.00
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	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1580	1330	1555	1580	1516	1219
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1580	1330	1555	1580	1516	1219
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.86	0.86
Adj. Flow (vph)	611	74	128	364	264	214
RTOR Reduction (vph)	0	44	0	0	0	49
Lane Group Flow (vph)	611	30	128	364	264	165
Confl. Peds. (#/hr)		898				407
Confl. Bikes (#/hr)		52				
Heavy Vehicles (%)	1%	2%	1%	1%	0%	2%
Parking (#/hr)						3
Turn Type	NA	Over	Prot	NA	Prot	Over
Protected Phases	2	4	3	2	4	3!
Permitted Phases						
Actuated Green, G (s)	31.0	19.0	22.0	31.0	19.0	22.0
Effective Green, g (s)	32.0	20.0	23.0	32.0	20.0	23.0
Actuated g/C Ratio	0.36	0.22	0.26	0.36	0.22	0.26
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	561	295	397	561	336	311
v/s Ratio Prot	c0.39	0.02	0.08	0.23	c0.17	c0.14
v/s Ratio Perm						
v/c Ratio	1.09	0.10	0.32	0.65	0.79	0.53
Uniform Delay, d1	29.0	27.9	27.2	24.3	33.0	28.8
Progression Factor	0.74	1.81	0.58	1.59	0.70	1.79
Incremental Delay, d2	53.4	0.3	1.4	3.9	14.6	5.4
Delay (s)	74.8	50.7	17.2	42.5	37.8	57.2
Level of Service	E	D	B	D	D	E
Approach Delay (s)	72.2			35.9	46.5	
Approach LOS	E			D	D	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	45	56	426	12	13	470
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.90	0.90	0.91	0.91
Hourly flow rate (vph)	58	72	473	13	14	516
Pedestrians	300		5			34
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	27		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			296			907
pX, platoon unblocked						
vC, conflicting volume	1330	814			787	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1330	814			787	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	52	73			98	
cM capacity (veh/h)	120	270			614	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	129	487	531
Volume Left	58	0	14
Volume Right	72	13	0
cSH	173	1700	614
Volume to Capacity	0.75	0.29	0.02
Queue Length 95th (ft)	119	0	2
Control Delay (s)	70.0	0.0	0.7
Lane LOS	F		A
Approach Delay (s)	70.0	0.0	0.7
Approach LOS	F		

Intersection Summary			
Average Delay	8.2		
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR2
Lane Group Flow (vph)	283	710	465	178	496	117
v/c Ratio	0.83	0.67	0.81	0.42	1.04	0.38
Control Delay	57.2	22.5	39.1	28.3	82.0	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	22.5	39.1	28.3	82.0	27.1
Queue Length 50th (ft)	173	108	236	80	~303	55
Queue Length 95th (ft)	m195	m115	#397	140	m#460	m89
Internal Link Dist (ft)		882	68		136	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	340	1054	576	424	476	308
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	0.83	0.67	0.81	0.42	1.04	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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	252	562	73	0	451	173	386	58	120	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	12	12	11	11	11	12	11	13	12
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00		0.95		
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00		1.00		
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	0.98			1.00	0.85	0.98		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.96		1.00		
Satd. Flow (prot)	1458	2966			1621	1364	1532		1322		
Flt Permitted	0.95	1.00			1.00	1.00	0.96		1.00		
Satd. Flow (perm)	1458	2966			1621	1364	1532		1322		
Peak-hour factor, PHF	0.89	0.89	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	631	79	0	465	178	420	63	130	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	283	710	0	0	465	178	496	0	117	0	0
Confl. Peds. (#/hr)			100								
Confl. Bikes (#/hr)						175					
Heavy Vehicles (%)	4%	2%	2%	2%	2%	3%	1%	2%	1%	2%	2%
Turn Type	Prot	NA			NA	Over	Prot		Over		
Protected Phases	4	2			6	3	3		4		
Permitted Phases											
Actuated Green, G (s)	20.0	31.0			31.0	27.0	27.0		20.0		
Effective Green, g (s)	21.0	32.0			32.0	28.0	28.0		21.0		
Actuated g/C Ratio	0.23	0.36			0.36	0.31	0.31		0.23		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	340	1054			576	424	476		308		
v/s Ratio Prot	c0.19	0.24			c0.29	0.13	c0.32		0.09		
v/s Ratio Perm											
v/c Ratio	0.83	0.67			0.81	0.42	1.04		0.38		
Uniform Delay, d1	32.8	24.6			26.2	24.6	31.0		29.0		
Progression Factor	1.31	0.82			1.00	1.00	0.95		0.80		
Incremental Delay, d2	13.0	2.0			11.6	3.0	50.8		3.2		
Delay (s)	56.0	22.1			37.8	27.6	80.2		26.4		
Level of Service	E	C			D	C	F		C		
Approach Delay (s)		31.8			35.0		69.9			0.0	
Approach LOS		C			C		E			A	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	266	381	93	326	559	56	346	165
v/c Ratio	0.80	0.53	0.36	0.46	0.69	0.29	0.59	0.49
Control Delay	40.8	19.8	15.2	14.9	29.5	23.0	22.1	23.0
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	19.9	15.2	14.9	29.5	23.0	22.1	23.0
Queue Length 50th (ft)	123	145	37	130	139	16	96	46
Queue Length 95th (ft)	#270	230	m44	m133	172	m21	m120	m59
Internal Link Dist (ft)		749		410	521		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	332	721	261	712	812	194	588	338
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	36	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.56	0.36	0.46	0.69	0.29	0.59	0.49

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	255	291	75	78	227	47	37	267	148	53	329	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	10	11	10
Total Lost time (s)	7.0	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			0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.92		1.00	0.94			0.90		1.00	1.00	0.70
Flpb, ped/bikes	0.80	1.00		0.80	1.00			0.99		0.89	1.00	1.00
Frt	1.00	0.97		1.00	0.97			0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1273	1510		1117	1493			2545		1300	1605	922
Flt Permitted	0.52	1.00		0.47	1.00			0.87		0.39	1.00	1.00
Satd. Flow (perm)	695	1510		548	1493			2215		530	1605	922
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.81	0.81	0.81	0.95	0.95	0.95
Adj. Flow (vph)	266	303	78	93	270	56	46	330	183	56	346	165
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	266	381	0	93	326	0	0	559	0	56	346	165
Confl. Peds. (#/hr)	635		347	347		635	203		179	179		203
Confl. Bikes (#/hr)			29			36			39			
Heavy Vehicles (%)	6%	1%	0%	8%	1%	5%	0%	7%	11%	4%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	42.0	42.0		42.0	42.0			32.0		32.0	32.0	32.0
Effective Green, g (s)	43.0	43.0		43.0	43.0			33.0		33.0	33.0	33.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.37		0.37	0.37	0.37
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0		8.0	8.0	8.0
Lane Grp Cap (vph)	332	721		261	713			812		194	588	338
v/s Ratio Prot		0.25			0.22						0.22	
v/s Ratio Perm	c0.38			0.17				c0.25		0.11		0.18
v/c Ratio	0.80	0.53		0.36	0.46			0.69		0.29	0.59	0.49
Uniform Delay, d1	19.9	16.4		14.8	15.7			24.1		20.2	23.0	22.0
Progression Factor	1.00	1.00		0.82	0.85			1.00		0.97	0.83	0.88
Incremental Delay, d2	18.2	2.8		2.1	1.2			4.7		2.0	2.4	2.7
Delay (s)	38.0	19.2		14.3	14.5			28.9		21.6	21.5	22.0
Level of Service	D	B		B	B			C		C	C	C
Approach Delay (s)		26.9			14.4			28.9			21.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	39	493	50	110	252	356	182	108
v/c Ratio	0.14	0.75	0.21	0.18	1.22	0.71	0.68	0.28
Control Delay	11.4	22.6	15.5	12.9	166.4	35.4	27.8	29.1
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	22.7	15.5	12.9	166.4	35.4	27.8	29.1
Queue Length 50th (ft)	11	152	15	32	~178	175	70	55
Queue Length 95th (ft)	m20	380	37	59	#290	247	100	90
Internal Link Dist (ft)		410		639		920	481	
Turn Bay Length (ft)	25		25		25			
Base Capacity (vph)	280	658	238	605	206	502	269	386
Starvation Cap Reductn	0	3	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	0.14	0.75	0.21	0.18	1.22	0.71	0.68	0.28

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												
Volume (vph)	36	361	93	43	58	37	209	284	12	58	84	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	8.0	7.0		8.0	7.0		8.0	7.0			7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.87		1.00	0.76		1.00	0.98			1.00	0.62
Flpb, ped/bikes	0.49	1.00		0.73	1.00		0.60	1.00			0.91	1.00
Frt	1.00	0.97		1.00	0.94		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	775	1289		1191	1185		949	1507			1397	757
Flt Permitted	0.69	1.00		0.38	1.00		0.64	1.00			0.57	1.00
Satd. Flow (perm)	560	1289		477	1185		642	1507			808	757
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.83	0.83	0.83	0.78	0.78	0.78
Adj. Flow (vph)	39	392	101	50	67	43	252	342	14	74	108	108
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	39	493	0	50	110	0	252	356	0	0	182	108
Confl. Peds. (#/hr)	685		789	789		685	263		218	218		263
Confl. Bikes (#/hr)			39			42			19			4
Heavy Vehicles (%)	3%	1%	1%	0%	2%	3%	3%	0%	0%	2%	1%	0%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	custom
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		6
Actuated Green, G (s)	45.0	45.0		45.0	45.0		29.0	29.0			29.0	45.0
Effective Green, g (s)	45.0	46.0		45.0	46.0		29.0	30.0			30.0	46.0
Actuated g/C Ratio	0.50	0.51		0.50	0.51		0.32	0.33			0.33	0.51
Clearance Time (s)	8.0	8.0		8.0	8.0		8.0	8.0			8.0	8.0
Lane Grp Cap (vph)	280	658		238	605		206	502			269	386
v/s Ratio Prot		c0.38			0.09			0.24				
v/s Ratio Perm	0.07			0.10			c0.39				0.23	0.14
v/c Ratio	0.14	0.75		0.21	0.18		1.22	0.71			0.68	0.28
Uniform Delay, d1	12.1	17.4		12.6	11.9		30.5	26.2			25.8	12.6
Progression Factor	0.82	0.86		1.00	1.00		1.00	1.00			0.52	2.06
Incremental Delay, d2	0.9	6.5		2.0	0.7		135.9	8.2			12.7	1.8
Delay (s)	10.8	21.5		14.6	12.5		166.4	34.4			26.1	27.7
Level of Service	B	C		B	B		F	C			C	C
Approach Delay (s)		20.7			13.2			89.1			26.7	
Approach LOS		C			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	353	117	0	0	0	156
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.74	0.74
Hourly flow rate (vph)	380	126	0	0	0	211
Pedestrians					291	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					20	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			796		733	733
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			796		733	733
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	37
cM capacity (veh/h)			666		312	335

Direction, Lane #	EB 1	NB 1
Volume Total	505	211
Volume Left	0	0
Volume Right	126	211
cSH	1700	335
Volume to Capacity	0.30	0.63
Queue Length 95th (ft)	0	101
Control Delay (s)	0.0	32.3
Lane LOS		D
Approach Delay (s)	0.0	32.3
Approach LOS		D

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	611	15	0	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.99	0.99	0.60	0.60
Hourly flow rate (vph)	0	0	617	15	0	40
Pedestrians					189	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		703				
pX, platoon unblocked						
vC, conflicting volume	821				814	505
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	821				814	505
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	90
cM capacity (veh/h)	635				253	401

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	411	221	40
Volume Left	0	0	0	0	0
Volume Right	0	0	0	15	40
cSH	1700	1700	1700	1700	401
Volume to Capacity	0.00	0.00	0.24	0.13	0.10
Queue Length 95th (ft)	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	15.0
Lane LOS					B
Approach Delay (s)	0.0		0.0		15.0
Approach LOS					B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1260	226	0	508	150	0	0	0	0	0	117
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.61	0.61	0.61
Hourly flow rate (vph)	0	1326	238	0	535	158	0	0	0	0	0	192
Pedestrians								317			189	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			16	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1273										
pX, platoon unblocked												
vC, conflicting volume	882			1881			2568	2644	1099	1466	2684	803
vC1, stage 1 conf vol							1762	1762		803	803	
vC2, stage 2 conf vol							805	882		663	1881	
vCu, unblocked vol	882			1881			2568	2644	1099	1466	2684	803
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			100			100	100	100	100	100	28
cM capacity (veh/h)	653			323			43	93	207	187	88	266

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	884	680	693	192
Volume Left	0	0	0	0
Volume Right	0	238	158	192
cSH	1700	1700	1700	266
Volume to Capacity	0.52	0.40	0.41	0.72
Queue Length 95th (ft)	0	0	0	125
Control Delay (s)	0.0	0.0	0.0	46.9
Lane LOS				E
Approach Delay (s)	0.0		0.0	46.9
Approach LOS				E

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	142	500	0	0	96	120
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	169	595	0	0	113	141
Pedestrians	98		152			197
Lane Width (ft)	13.0		0.0			13.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	9		0			18
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1000
pX, platoon unblocked						
vC, conflicting volume	617	295			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	617	295			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	56	0			92	
cM capacity (veh/h)	381	558			1374	

Direction, Lane #	WB 1	SB 1
Volume Total	764	254
Volume Left	169	113
Volume Right	595	0
cSH	506	1374
Volume to Capacity	1.51	0.08
Queue Length 95th (ft)	989	7
Control Delay (s)	261.5	3.9
Lane LOS	F	A
Approach Delay (s)	261.5	3.9
Approach LOS	F	

Intersection Summary			
Average Delay	197.2		
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	85	609	9	2	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.98	0.98	0.67	0.67
Hourly flow rate (vph)	14	106	621	9	3	52
Pedestrians		20	35		122	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		2	3		10	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	753				917	768
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	753				917	768
tC, single (s)	4.3				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.3
p0 queue free %	98				99	85
cM capacity (veh/h)	709				260	352

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	120	631	55
Volume Left	14	0	3
Volume Right	0	9	52
cSH	709	1700	345
Volume to Capacity	0.02	0.37	0.16
Queue Length 95th (ft)	1	0	14
Control Delay (s)	1.4	0.0	17.4
Lane LOS	A		C
Approach Delay (s)	1.4	0.0	17.4
Approach LOS			C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	41	18	120	90	94	217
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.83	0.83	0.85	0.85
Hourly flow rate (vph)	58	25	145	108	111	255
Pedestrians	42			71	86	
Lane Width (ft)	14.0			12.0	10.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	4			6	6	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				320		
pX, platoon unblocked	0.93					
vC, conflicting volume	764	351	408			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	712	351	408			
tC, single (s)	6.4	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	80	96	87			
cM capacity (veh/h)	295	617	1109			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	83	253	366
Volume Left	58	145	0
Volume Right	25	0	255
cSH	350	1109	1700
Volume to Capacity	0.24	0.13	0.22
Queue Length 95th (ft)	23	11	0
Control Delay (s)	18.4	5.5	0.0
Lane LOS	C	A	
Approach Delay (s)	18.4	5.5	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	65	1307	0	0	0	0	0	99	163
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	73	1469	0	0	0	0	0	110	181
Pedestrians		49										
Lane Width (ft)		0.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.66						0.66	0.66		0.66	0.66	0.66
vC, conflicting volume	1469			0			1165	1615	0	1615	1615	783
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	672			0			212	894	0	894	894	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			96			100	100	100	100	38	74
cM capacity (veh/h)	602			1636			174	175	1084	149	178	703

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	563	979	291
Volume Left	73	0	0
Volume Right	0	0	181
cSH	1636	1700	332
Volume to Capacity	0.04	0.58	0.88
Queue Length 95th (ft)	4	0	205
Control Delay (s)	1.3	0.0	59.2
Lane LOS	A		F
Approach Delay (s)	0.5		59.2
Approach LOS			F

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1515	24	159	153
v/c Ratio	0.82	0.06	0.38	0.40
Control Delay	17.6	29.2	34.6	26.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.6	29.2	34.6	26.8
Queue Length 50th (ft)	342	12	84	60
Queue Length 95th (ft)	443	21	110	89
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1842	401	414	387
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	0.82	0.06	0.38	0.40

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1251	97	14	113	0	0	0	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.98		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.99		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2775		1624	1676				1450
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2775		1624	1676				1450
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.58	0.71	0.92	0.73	0.73	0.73
Adj. Flow (vph)	0	0	0	0	1406	109	24	159	0	0	0	153
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	29
Lane Group Flow (vph)	0	0	0	0	1515	0	24	159	0	0	0	124
Confl. Peds. (#/hr)						117						
Confl. Bikes (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	2%	0%	2%	2%	0%	0%	2%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					66.2		24.0	24.0				24.0
Effective Green, g (s)					67.2		25.0	25.0				25.0
Actuated g/C Ratio					0.66		0.25	0.25				0.25
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1842		401	414				358
v/s Ratio Prot					c0.55		0.01	c0.09				
v/s Ratio Perm												0.09
v/c Ratio					0.82		0.06	0.38				0.35
Uniform Delay, d1					12.6		29.1	31.7				31.4
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					4.3		0.1	0.6				0.6
Delay (s)					16.9		29.2	32.3				32.0
Level of Service					B		C	C				C
Approach Delay (s)		0.0			16.9			31.9			32.0	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	101.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	1260	0	0	508	0	376
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	1370	0	0	552	0	470
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1370		1922	685
vC1, stage 1 conf vol					1370	
vC2, stage 2 conf vol					552	
vCu, unblocked vol			1370		1922	685
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	0
cM capacity (veh/h)			497		157	393

Direction, Lane #	EB 1	EB 2	WB 1	NE 1
Volume Total	685	685	552	470
Volume Left	0	0	0	0
Volume Right	0	0	0	470
cSH	1700	1700	1700	393
Volume to Capacity	0.40	0.40	0.32	1.20
Queue Length 95th (ft)	0	0	0	473
Control Delay (s)	0.0	0.0	0.0	141.2
Lane LOS				F
Approach Delay (s)	0.0		0.0	141.2
Approach LOS				F

Intersection Summary			
Average Delay	27.7		
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1594	0	0	164	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.96	0.92	0.92	0.69	0.69
Hourly flow rate (vph)	0	1660	0	0	238	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				830	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				830	0
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				24	100
cM capacity (veh/h)	1622				312	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	830	830	238
Volume Left	0	0	238
Volume Right	0	0	0
cSH	1700	1700	312
Volume to Capacity	0.49	0.49	0.76
Queue Length 95th (ft)	0	0	147
Control Delay (s)	0.0	0.0	45.4
Lane LOS			E
Approach Delay (s)	0.0		45.4
Approach LOS			E

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	120.5%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	135	1736
v/c Ratio	0.09	0.58
Control Delay	0.1	0.8
Queue Delay	0.0	0.0
Total Delay	0.2	0.8
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1486	3002
Starvation Cap Reductn	0	0
Spillback Cap Reductn	425	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.13	0.58

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	127	1632	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1486	3002				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1486	3002				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	1736	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	135	1736	0	0	0	0
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	101.2	101.2				
Effective Green, g (s)	97.2	97.2				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1427	2883				
v/s Ratio Prot	0.09	c0.58				
v/s Ratio Perm						
v/c Ratio	0.09	0.60				
Uniform Delay, d1	0.1	0.2				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.0	0.4				
Delay (s)	0.1	0.5				
Level of Service	A	A				
Approach Delay (s)		0.5	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	101.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1307	30	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.91	0.88	0.62	0.95
Hourly flow rate (vph)	0	0	0	1485	48	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked					0.76	
vC, conflicting volume			0		743	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		40	0
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		93	100
cM capacity (veh/h)			1636		742	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	743	743	48
Volume Left	0	0	48
Volume Right	0	0	0
cSH	1700	1700	742
Volume to Capacity	0.44	0.44	0.07
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	10.2
Lane LOS			B
Approach Delay (s)	0.0		10.2
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		

Future Conditions

Lane Group	NBL	SET	SER	NWT
Lane Group Flow (vph)	264	2152	906	630
v/c Ratio	0.40	1.07	0.80	0.32
Control Delay	39.8	67.2	15.5	6.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	39.8	67.2	15.5	6.6
Queue Length 50th (ft)	83	~892	287	47
Queue Length 95th (ft)	109	#1030	438	66
Internal Link Dist (ft)	450	1169		729
Turn Bay Length (ft)	100			
Base Capacity (vph)	768	2002	1130	1943
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	0.34	1.07	0.80	0.32

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	NBL	NBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	175	44	0	2001	843	0	573	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	11	14	11	11	11	12	12
Total Lost time (s)	6.0			6.0	6.0		3.0			
Lane Util. Factor	0.97			0.95	1.00		0.95			
Frpb, ped/bikes	1.00			1.00	0.98		1.00			
Flpb, ped/bikes	1.00			1.00	1.00		1.00			
Frt	0.97			1.00	0.85		1.00			
Flt Protected	0.96			1.00	1.00		1.00			
Satd. Flow (prot)	3127			3388	1595		3144			
Flt Permitted	0.96			1.00	1.00		1.00			
Satd. Flow (perm)	3127			3388	1595		3144			
Peak-hour factor, PHF	0.81	0.92	0.92	0.93	0.93	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	216	48	0	2152	906	0	630	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	264	0	0	2152	906	0	630	0	0	0
Confl. Bikes (#/hr)					6					
Heavy Vehicles (%)	3%	2%	2%	3%	2%	12%	11%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	10	0	0	0	0	0
Turn Type	Prot			NA	custom		NA		Prot	
Protected Phases	4			2 3	4		3 6		7	
Permitted Phases			2 3		2					
Actuated Green, G (s)	23.0			68.0	78.0		68.0			
Effective Green, g (s)	23.0			68.0	78.0		62.0			
Actuated g/C Ratio	0.21			0.62	0.71		0.56			
Clearance Time (s)	6.0				6.0					
Vehicle Extension (s)	3.0				3.0					
Lane Grp Cap (vph)	653			2094	1218		1772			
v/s Ratio Prot	0.08			c0.64	c0.16		0.20			
v/s Ratio Perm					0.41					
v/c Ratio	0.40			1.03	0.74		0.36			
Uniform Delay, d1	37.6			21.0	9.8		13.1			
Progression Factor	1.00			1.00	1.00		0.60			
Incremental Delay, d2	0.4			27.1	2.5		0.1			
Delay (s)	38.0			48.1	12.4		8.0			
Level of Service	D			D	B		A			
Approach Delay (s)	38.0			37.5			8.0		0.0	
Approach LOS	D			D			A		A	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	668	441	305	98	760
v/c Ratio	1.39	1.20	0.99	0.25	1.05
Control Delay	214.4	141.6	61.8	17.1	72.1
Queue Delay	0.0	0.0	0.0	0.0	1.5
Total Delay	214.4	141.6	61.8	17.1	73.6
Queue Length 50th (ft)	~510	~307	139	33	~474
Queue Length 95th (ft)	#720	#489	m#230	68	#691
Internal Link Dist (ft)	1468	668	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	481	368	308	399	727
Starvation Cap Reductn	0	0	0	0	3
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.39	1.20	0.99	0.25	1.05

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												
Volume (vph)	36	460	125	47	334	20	30	184	21	94	681	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.96			0.99			1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00			1.00		0.98	1.00	
Frt		0.97			0.99			0.99		1.00	0.99	
Flt Protected		1.00			0.99			0.99		0.95	1.00	
Satd. Flow (prot)		1385			1313			1402		1469	1597	
Flt Permitted		0.95			0.76			0.48		0.57	1.00	
Satd. Flow (perm)		1313			1005			678		879	1597	
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.77	0.77	0.77	0.96	0.96	0.96
Adj. Flow (vph)	39	495	134	52	367	22	39	239	27	98	709	51
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	668	0	0	441	0	0	305	0	98	760	0
Confl. Peds. (#/hr)	174		67	67		174	61		42	42		61
Confl. Bikes (#/hr)			89			7			2			10
Heavy Vehicles (%)	14%	11%	8%	10%	7%	0%	5%	4%	5%	5%	1%	13%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		32.0			32.0			40.0		40.0	40.0	
Effective Green, g (s)		33.0			33.0			41.0		41.0	41.0	
Actuated g/C Ratio		0.37			0.37			0.46		0.46	0.46	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		481			368			308		400	727	
v/s Ratio Prot											c0.48	
v/s Ratio Perm		c0.51			0.44			0.45		0.11		
v/c Ratio		1.39			1.20			0.99		0.24	1.05	
Uniform Delay, d1		28.5			28.5			24.3		15.0	24.5	
Progression Factor		1.00			1.00			0.98		1.00	1.00	
Incremental Delay, d2		187.4			112.7			34.6		1.5	45.8	
Delay (s)		215.9			141.2			58.4		16.5	70.3	
Level of Service		F			F			E		B	E	
Approach Delay (s)		215.9			141.2			58.4			64.2	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	123.0	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)	16.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	501	213	163	1183
v/c Ratio	0.68	0.33	0.39	0.72
Control Delay	42.6	27.0	29.5	8.3
Queue Delay	0.3	0.4	0.3	49.2
Total Delay	42.9	27.4	29.8	57.5
Queue Length 50th (ft)	168	107	85	380
Queue Length 95th (ft)	228	170	130	m364
Internal Link Dist (ft)	668	2022		89
Turn Bay Length (ft)			1000	
Base Capacity (vph)	732	654	415	1650
Starvation Cap Reductn	0	0	0	594
Spillback Cap Reductn	33	160	42	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.72	0.43	0.44	1.12

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												
Volume (vph)	0	383	83	0	0	0	0	196	134	0	698	390
Ideal Flow (vphpl)	1900	1900	1900	2200	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	12	10	11	10	11	11	11
Total Lost time (s)		5.0						5.0	5.0		5.0	
Lane Util. Factor		0.95						1.00	1.00		0.95	
Frpb, ped/bikes		0.98						1.00	1.00		0.86	
Flpb, ped/bikes		1.00						1.00	1.00		1.00	
Frt		0.97						1.00	0.85		0.95	
Flt Protected		1.00						1.00	1.00		1.00	
Satd. Flow (prot)		2879						1801	1142		2794	
Flt Permitted		1.00						1.00	1.00		1.00	
Satd. Flow (perm)		2879						1801	1142		2794	
Peak-hour factor, PHF	0.92	0.93	0.93	0.90	0.90	0.92	0.82	0.92	0.82	0.92	0.92	0.92
Adj. Flow (vph)	0	412	89	0	0	0	0	213	163	0	759	424
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	501	0	0	0	0	0	213	163	0	1183	0
Confl. Peds. (#/hr)			50									94
Confl. Bikes (#/hr)			77									
Heavy Vehicles (%)	2%	7%	17%	5%	5%	2%	16%	2%	32%	2%	2%	2%
Parking (#/hr)		2	2									
Turn Type		NA						NA	Perm		NA	
Protected Phases		1						3			2 3	
Permitted Phases									3			
Actuated Green, G (s)		28.0						40.0	40.0		65.0	
Effective Green, g (s)		28.0						40.0	40.0		65.0	
Actuated g/C Ratio		0.25						0.36	0.36		0.59	
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		732						654	415		1651	
v/s Ratio Prot		c0.17						0.12			c0.42	
v/s Ratio Perm									0.14			
v/c Ratio		0.68						0.33	0.39		0.72	
Uniform Delay, d1		37.0						25.3	26.0		16.0	
Progression Factor		1.00						1.00	1.00		0.49	
Incremental Delay, d2		5.1						1.3	2.8		0.2	
Delay (s)		42.2						26.6	28.8		8.0	
Level of Service		D						C	C		A	
Approach Delay (s)		42.2			0.0			27.5			8.0	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	NBR	SBR
Lane Group Flow (vph)	1575	1296	185	357	92
v/c Ratio	0.71	0.89	0.43	0.67	0.08
Control Delay	2.7	33.9	42.2	46.3	0.7
Queue Delay	0.8	17.8	1.2	8.5	0.0
Total Delay	3.5	51.7	43.3	54.8	0.7
Queue Length 50th (ft)	29	417	105	232	3
Queue Length 95th (ft)	m30	508	m168	358	5
Internal Link Dist (ft)	266	832	236		
Turn Bay Length (ft)					
Base Capacity (vph)	2234	1458	430	529	1083
Starvation Cap Reductn	340	0	102	135	0
Spillback Cap Reductn	0	193	0	0	78
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	1.02	0.56	0.91	0.09

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												
Volume (vph)	0	1465	0	0	1000	141	11	164	339	0	0	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	10	10	10
Total Lost time (s)		5.0			5.0			5.0	4.0			5.0
Lane Util. Factor		0.91			0.95			1.00	1.00			1.00
Frpb, ped/bikes		1.00			0.99			1.00	1.00			0.96
Flpb, ped/bikes		1.00			1.00			1.00	1.00			1.00
Frt		1.00			0.98			1.00	0.85			0.86
Flt Protected		1.00			1.00			1.00	1.00			1.00
Satd. Flow (prot)		4468			2918			1183	1266			1192
Flt Permitted		1.00			1.00			1.00	1.00			1.00
Satd. Flow (perm)		4468			2918			1183	1266			1192
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	0	1575	0	0	1136	160	12	173	357	0	0	92
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1575	0	0	1296	0	0	185	357	0	0	92
Confl. Peds. (#/hr)						13			57			13
Confl. Bikes (#/hr)			17			2			15			6
Heavy Vehicles (%)	1%	1%	21%	5%	5%	3%	43%	39%	11%	7%	26%	11%
Turn Type		NA			NA		Split	NA	custom			Perm
Protected Phases		1			1 2		3	3	2 3			
Permitted Phases												1 2 3
Actuated Green, G (s)		55.0			61.0			40.0	45.0			110.0
Effective Green, g (s)		55.0			61.0			40.0	45.0			106.0
Actuated g/C Ratio		0.50			0.55			0.36	0.41			0.96
Clearance Time (s)		5.0						5.0				
Lane Grp Cap (vph)		2234			1618			430	517			1148
v/s Ratio Prot		0.35			c0.44			0.16	c0.28			
v/s Ratio Perm												0.08
v/c Ratio		0.71			0.80			0.43	0.69			0.08
Uniform Delay, d1		21.2			19.6			26.4	26.8			0.1
Progression Factor		0.09			1.00			1.46	1.52			1.00
Incremental Delay, d2		0.7			4.3			2.5	6.0			0.1
Delay (s)		2.6			23.9			41.0	46.5			0.2
Level of Service		A			C			D	D			A
Approach Delay (s)		2.6			23.9			44.6			0.2	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	200	1073	609	328	672	341	229	476	309	339	1396
v/c Ratio	0.91	0.91	0.84	1.46	0.80	0.36	0.97	0.97	0.54	0.60	1.29
Control Delay	93.7	56.7	28.7	269.0	51.2	6.1	96.7	77.7	13.3	38.2	172.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.7	56.7	28.7	269.0	51.2	6.1	96.7	77.7	13.3	38.2	172.9
Queue Length 50th (ft)	155	297	245	~347	258	44	181	198	30	237	~750
Queue Length 95th (ft)	#297	#379	#367	#531	331	70	#320	#285	104	349	#898
Internal Link Dist (ft)		832			440			1843			515
Turn Bay Length (ft)	200		400				600			100	
Base Capacity (vph)	219	1176	727	224	838	946	236	493	577	563	1078
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.91	0.84	1.46	0.80	0.36	0.97	0.97	0.54	0.60	1.29

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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	190	1019	579	305	625	317	197	409	266	354	925	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	12	12	12	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.98	1.00	
Satd. Flow (prot)	1646	4868	1759	1687	3471	1568	1574	3292	1468	1650	3072	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.98	1.00	
Satd. Flow (perm)	1646	4868	1759	1687	3471	1568	1574	3292	1468	1650	3072	
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.86	0.86	0.86	0.94	0.94	0.94
Adj. Flow (vph)	200	1073	609	328	672	341	229	476	309	377	984	374
RTOR Reduction (vph)	0	0	39	0	0	32	0	0	113	0	28	0
Lane Group Flow (vph)	200	1073	570	328	672	309	229	476	196	339	1368	0
Confl. Peds. (#/hr)							120		11			50
Confl. Bikes (#/hr)									1			11
Heavy Vehicles (%)	6%	3%	1%	7%	4%	3%	7%	6%	10%	3%	5%	7%
Turn Type	Prot	NA	custom	Prot	NA	pt+ov	Split	NA	pt+ov	Split	NA	
Protected Phases	5	2	2	1	6	4 6	3	3	1 3	4	4	
Permitted Phases			3									
Actuated Green, G (s)	15.0	28.0	45.0	15.0	28.0	68.0	17.0	17.0	37.0	40.0	40.0	
Effective Green, g (s)	16.0	29.0	47.0	16.0	29.0	70.0	18.0	18.0	38.0	41.0	41.0	
Actuated g/C Ratio	0.13	0.24	0.39	0.13	0.24	0.58	0.15	0.15	0.32	0.34	0.34	
Clearance Time (s)	5.0	5.0	5.0	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	3.0		3.0	3.0	
Lane Grp Cap (vph)	219	1176	688	224	838	914	236	493	464	563	1049	
v/s Ratio Prot	0.12	c0.22	0.20	c0.19	0.19	0.20	c0.15	0.14	0.13	0.21	c0.45	
v/s Ratio Perm			0.12									
v/c Ratio	0.91	0.91	0.83	1.46	0.80	0.34	0.97	0.97	0.42	0.60	1.30	
Uniform Delay, d1	51.3	44.3	32.9	52.0	42.8	13.0	50.7	50.7	32.3	32.7	39.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.64	1.00	1.00	
Incremental Delay, d2	37.7	12.2	8.1	231.8	5.6	0.2	49.3	31.0	0.6	1.8	143.7	
Delay (s)	89.0	56.4	41.0	283.8	48.4	13.2	94.1	75.7	21.3	34.6	183.2	
Level of Service	F	E	D	F	D	B	F	E	C	C	F	
Approach Delay (s)		54.9			97.0			63.3			154.2	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	94.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	776	864	404	219	30
v/c Ratio	0.39	0.98	0.96	0.84	0.13
Control Delay	8.4	40.9	62.8	63.6	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	40.9	62.8	63.6	32.9
Queue Length 50th (ft)	123	277	190	121	15
Queue Length 95th (ft)	m157	m274	#365	#240	39
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1989	878	420	262	232
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	0.39	0.98	0.96	0.84	0.13

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	691	659	135	45	0	309	47	147	48	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		4.5	4.5				4.5			4.5	4.5
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.93				1.00			1.00	0.96
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.97				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2755	2396				1209			1476	1309
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2755	2396				1209			1476	1309
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.97	0.88	0.88	0.88	0.89	0.89	0.89
Adj. Flow (vph)	0	776	679	139	46	0	351	53	165	54	30
RTOR Reduction (vph)	0	0	0	0	0	0	51	0	0	0	0
Lane Group Flow (vph)	0	776	864	0	0	0	353	0	0	219	30
Confl. Peds. (#/hr)					102			41			6
Confl. Bikes (#/hr)				8	8			24			11
Heavy Vehicles (%)	0%	14%	18%	0%	3%	0%	4%	0%	3%	2%	0%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		65.0	33.0				27.5			16.0	16.0
Effective Green, g (s)		65.0	33.0				27.5			16.0	16.0
Actuated g/C Ratio		0.72	0.37				0.31			0.18	0.18
Clearance Time (s)			4.5				4.5			4.5	4.5
Lane Grp Cap (vph)		1989	878				369			262	232
v/s Ratio Prot		0.28	c0.36				c0.29			c0.15	
v/s Ratio Perm											0.02
v/c Ratio		0.39	0.98				0.96			0.84	0.13
Uniform Delay, d1		4.8	28.2				30.7			35.7	31.1
Progression Factor		1.65	0.75				1.00			1.00	1.00
Incremental Delay, d2		0.2	17.6				37.3			25.9	1.1
Delay (s)		8.2	38.7				67.9			61.6	32.3
Level of Service		A	D				E			E	C
Approach Delay (s)		8.2	38.7			67.9				58.1	
Approach LOS		A	D			E				E	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	118	500	313	742	238	121	709
v/c Ratio	0.90	0.91	1.78	1.09	0.70	0.29	1.19
Control Delay	95.2	60.7	399.5	95.7	15.2	8.3	104.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	60.7	399.5	95.7	15.2	8.3	104.6
Queue Length 50th (ft)	59	157	~269	~253	96	35	~503
Queue Length 95th (ft)	m#165	m#247	#382	#315	m89	m34	m#428
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	200		250			140	
Base Capacity (vph)	131	549	176	679	340	419	598
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	0.90	0.91	1.78	1.09	0.70	0.29	1.19

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												
Volume (vph)	111	378	92	257	557	52	83	146	116	40	432	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	8.0	8.0		8.0	8.0			5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.97		1.00	0.99			1.00	0.80		0.94	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		0.99	
Frt	1.00	0.97		1.00	0.99			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		1.00	
Satd. Flow (prot)	1481	2357		1444	2548			1547	1020		1502	
Flt Permitted	0.95	1.00		0.95	1.00			0.53	1.00		0.97	
Satd. Flow (perm)	1481	2357		1444	2548			829	1020		1457	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.96	0.96	0.96	0.93	0.93	0.93
Adj. Flow (vph)	118	402	98	313	679	63	86	152	121	43	465	201
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	118	500	0	313	742	0	0	238	121	0	709	0
Confl. Peds. (#/hr)			33			38	148		165	165		148
Confl. Bikes (#/hr)			14			12						17
Heavy Vehicles (%)	6%	26%	4%	5%	20%	19%	1%	5%	10%	2%	2%	2%
Bus Blockages (#/hr)	0	0	8	0	0	8	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.0	20.0		10.0	23.0			36.0	36.0		36.0	
Effective Green, g (s)	8.0	21.0		11.0	24.0			37.0	37.0		37.0	
Actuated g/C Ratio	0.09	0.23		0.12	0.27			0.41	0.41		0.41	
Clearance Time (s)	9.0	9.0		9.0	9.0			6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	131	549		176	679			340	419		598	
v/s Ratio Prot	0.08	0.21		c0.22	c0.29							
v/s Ratio Perm								0.29	0.12		c0.49	
v/c Ratio	0.90	0.91		1.78	1.09			0.70	0.29		1.19	
Uniform Delay, d1	40.6	33.6		39.5	33.0			21.9	17.7		26.5	
Progression Factor	0.90	1.13		1.00	1.00			0.57	0.44		0.56	
Incremental Delay, d2	55.0	21.5		372.3	62.6			0.6	0.0		85.2	
Delay (s)	91.4	59.6		411.8	95.6			13.1	7.9		100.1	
Level of Service	F	E		F	F			B	A		F	
Approach Delay (s)		65.6			189.4			11.4			100.1	
Approach LOS		E			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	115.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	313	299	1326	64	359	385
v/c Ratio	1.94	0.16	0.85	0.27	1.04	2.25
Control Delay	466.0	5.4	17.1	43.5	105.0	605.8
Queue Delay	0.0	0.0	47.8	1.5	0.0	0.0
Total Delay	466.0	5.4	64.9	45.1	105.0	605.8
Queue Length 50th (ft)	~250	33	155	42	~300	~483
Queue Length 95th (ft)	#379	43	m183	52	#472	#660
Internal Link Dist (ft)		1070	174	143	2022	
Turn Bay Length (ft)	170					
Base Capacity (vph)	161	1873	1561	237	346	171
Starvation Cap Reductn	0	0	403	81	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.94	0.16	1.15	0.41	1.04	2.25

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	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	1	259	145	103	4	285	595	257	0	15	22	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				3.5			4.0		
Lane Util. Factor		1.00	0.95				0.95			1.00		
Frpb, ped/bikes		1.00	0.96				0.95			0.93		
Flpb, ped/bikes		1.00	1.00				1.00			1.00		
Frt		1.00	0.94				0.97			0.92		
Flt Protected		0.95	1.00				0.99			1.00		
Satd. Flow (prot)		1311	2584				2780			1141		
Flt Permitted		0.17	1.00				0.76			1.00		
Satd. Flow (perm)		229	2584				2144			1141		
Peak-hour factor, PHF	0.92	0.83	0.83	0.83	0.92	0.86	0.86	0.86	0.58	0.58	0.58	0.88
Adj. Flow (vph)	1	312	175	124	4	331	692	299	0	26	38	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	313	299	0	0	0	1326	0	0	64	0	0
Confl. Peds. (#/hr)		56		21				56	96		46	46
Confl. Bikes (#/hr)				2				10			5	
Heavy Vehicles (%)	2%	24%	21%	2%	2%	2%	10%	0%	0%	33%	25%	0%
Turn Type	Perm	Perm	NA		pm+pt	pm+pt	NA			NA		Perm
Protected Phases			2		1	1	6			8		
Permitted Phases	2	2			6	6			8			4
Actuated Green, G (s)		86.0	86.0				86.5			24.0		
Effective Green, g (s)		87.0	87.0				87.5			25.0		
Actuated g/C Ratio		0.72	0.72				0.73			0.21		
Clearance Time (s)		5.0	5.0				4.5			5.0		
Vehicle Extension (s)		3.0	3.0				3.0			3.0		
Lane Grp Cap (vph)		166	1873				1563			237		
v/s Ratio Prot			0.12							0.06		
v/s Ratio Perm		c1.37					0.62					
v/c Ratio		1.89	0.16				0.85			0.27		
Uniform Delay, d1		16.5	5.1				11.5			39.8		
Progression Factor		1.00	1.00				1.15			1.00		
Incremental Delay, d2		420.4	0.2				2.1			2.8		
Delay (s)		436.9	5.3				15.4			42.6		
Level of Service		F	A				B			D		
Approach Delay (s)			226.0				15.4			42.6		
Approach LOS			F				B			D		

Intersection Summary			
HCM 2000 Control Delay	160.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	307	339
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	5.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.78
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1671	855
Flt Permitted	0.99	1.00
Satd. Flow (perm)	1661	855
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	349	385
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	359	385
Confl. Peds. (#/hr)		96
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	32%
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	24.0	24.0
Effective Green, g (s)	25.0	24.0
Actuated g/C Ratio	0.21	0.20
Clearance Time (s)	5.0	5.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	346	171
v/s Ratio Prot		
v/s Ratio Perm	0.22	c0.45
v/c Ratio	1.04	2.25
Uniform Delay, d1	47.5	48.0
Progression Factor	1.00	1.00
Incremental Delay, d2	58.5	581.5
Delay (s)	106.0	629.5
Level of Service	F	F
Approach Delay (s)	376.9	
Approach LOS	F	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	219	857	859	1147	436
v/c Ratio	0.36	0.97	0.27	0.91	0.87
Control Delay	34.2	67.0	6.2	37.8	38.4
Queue Delay	1.1	0.8	0.0	0.0	51.0
Total Delay	35.3	67.8	6.2	37.8	89.4
Queue Length 50th (ft)	61	338	75	462	332
Queue Length 95th (ft)	m81	#472	93	m377	m277
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	613	880	3202	1259	501
Starvation Cap Reductn	211	0	0	0	0
Spillback Cap Reductn	0	4	0	0	130
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.98	0.27	0.91	1.18

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	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations							
Volume (vph)	179	1	41	730	773	1078	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	12	11	11	12	12
Total Lost time (s)	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97			0.97	0.91	0.95	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00			1.00	1.00	1.00	1.00
Frt	1.00			1.00	1.00	1.00	0.85
Flt Protected	0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)	2833			3018	4468	3217	1280
Flt Permitted	0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)	2833			3018	4468	3217	1280
Peak-hour factor, PHF	0.82	0.82	0.90	0.90	0.90	0.94	0.94
Adj. Flow (vph)	218	1	46	811	859	1147	436
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	219	0	0	857	859	1147	436
Confl. Bikes (#/hr)							3
Heavy Vehicles (%)	19%	0%	0%	1%	1%	1%	12%
Turn Type	Prot		Prot	Prot	NA	NA	Perm
Protected Phases	3		1	1	6	2	
Permitted Phases							2
Actuated Green, G (s)	25.0			34.0	85.0	46.0	46.0
Effective Green, g (s)	26.0			35.0	86.0	47.0	47.0
Actuated g/C Ratio	0.22			0.29	0.72	0.39	0.39
Clearance Time (s)	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	4.0			4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	613			880	3202	1259	501
v/s Ratio Prot	c0.08			c0.28	0.19	c0.36	
v/s Ratio Perm							0.34
v/c Ratio	0.36			0.97	0.27	0.91	0.87
Uniform Delay, d1	39.9			42.0	6.0	34.5	33.7
Progression Factor	0.81			1.00	1.00	1.04	1.04
Incremental Delay, d2	1.6			24.6	0.2	1.3	2.1
Delay (s)	33.9			66.7	6.2	37.3	37.3
Level of Service	C			E	A	D	D
Approach Delay (s)	33.9				36.4	37.3	
Approach LOS	C				D	D	

Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	42	324	26	302	565	267
v/c Ratio	0.17	0.58	0.10	0.55	1.06	0.42
Control Delay	11.5	13.5	20.9	28.0	79.8	30.0
Queue Delay	0.0	3.6	0.0	0.1	0.0	0.0
Total Delay	11.5	17.1	20.9	28.1	79.8	30.0
Queue Length 50th (ft)	8	63	10	136	~355	154
Queue Length 95th (ft)	m12	m91	29	220	#535	m214
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	241	562	254	545	535	636
Starvation Cap Reductn	0	155	0	0	0	0
Spillback Cap Reductn	0	0	0	11	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.80	0.10	0.57	1.06	0.42

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	39	294	4	25	250	37	69	356	72	7	151	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98			0.95			0.92	
Flpb, ped/bikes	0.93	1.00		0.90	1.00			0.98			1.00	
Frt	1.00	1.00		1.00	0.98			0.98			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1263	1583		1416	1533			1194			1322	
Flt Permitted	0.51	1.00		0.48	1.00			0.91			0.98	
Satd. Flow (perm)	677	1583		717	1533			1096			1301	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88	0.87	0.87	0.87
Adj. Flow (vph)	42	320	4	26	263	39	78	405	82	8	174	85
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	42	324	0	26	302	0	0	565	0	0	267	0
Confl. Peds. (#/hr)	75		115	115		75	233		71	71		233
Confl. Bikes (#/hr)			12						361			
Heavy Vehicles (%)	16%	4%	0%	0%	3%	11%	1%	7%	4%	14%	11%	6%
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	31.0	31.0		31.0	31.0			43.0			43.0	
Effective Green, g (s)	32.0	32.0		32.0	32.0			44.0			44.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36			0.49			0.49	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	240	562		254	545			535			636	
v/s Ratio Prot		c0.20			0.20							
v/s Ratio Perm	0.06			0.04				c0.52			0.21	
v/c Ratio	0.17	0.58		0.10	0.55			1.06			0.42	
Uniform Delay, d1	19.9	23.5		19.4	23.3			23.0			14.8	
Progression Factor	0.51	0.46		1.00	1.00			1.00			1.83	
Incremental Delay, d2	0.9	2.4		0.8	4.0			54.5			1.9	
Delay (s)	11.0	13.2		20.2	27.3			77.5			29.0	
Level of Service	B	B		C	C			E			C	
Approach Delay (s)		12.9			26.7			77.5			29.0	
Approach LOS		B			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	802	403	47	373	82	279
v/c Ratio	1.26	0.79	0.19	0.67	0.37	0.52
Control Delay	152.0	45.6	21.9	31.2	12.3	11.8
Queue Delay	6.1	55.1	0.0	40.6	3.6	1.2
Total Delay	158.1	100.7	21.9	71.8	15.9	13.1
Queue Length 50th (ft)	~580	250	18	176	15	51
Queue Length 95th (ft)	#752	#331	44	278	m24	m68
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	639	509	253	554	224	541
Starvation Cap Reductn	0	185	0	0	29	111
Spillback Cap Reductn	315	10	0	201	81	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.48	1.24	0.19	1.06	0.57	0.65

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	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	77	572	40	35	300	8	1	43	255	92	75	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	12	10	12	12	11	11
Total Lost time (s)		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
Frpb, ped/bikes		0.99			1.00			1.00	0.95		1.00	0.95
Flpb, ped/bikes		0.99			1.00			0.90	1.00		0.93	1.00
Frt		0.99			1.00			1.00	0.96		1.00	0.97
Flt Protected		0.99			0.99			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1474			1219			1247	1511		1416	1476
Flt Permitted		0.90			0.87			0.53	1.00		0.41	1.00
Satd. Flow (perm)		1332			1065			691	1511		612	1476
Peak-hour factor, PHF	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	90	665	47	41	353	9	1	46	274	99	82	214
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	799	0	0	402	0	0	47	373	0	82	279
Confl. Peds. (#/hr)	116		119	119		116		107		97	97	
Confl. Bikes (#/hr)			57			6				20		
Heavy Vehicles (%)	7%	5%	3%	26%	8%	0%	2%	10%	4%	3%	3%	3%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA
Protected Phases		4			8				2			6
Permitted Phases	4			8			2	2			6	
Actuated Green, G (s)		42.0			42.0			32.0	32.0		32.0	32.0
Effective Green, g (s)		43.0			43.0			33.0	33.0		33.0	33.0
Actuated g/C Ratio		0.48			0.48			0.37	0.37		0.37	0.37
Clearance Time (s)		8.0			8.0			8.0	8.0		8.0	8.0
Lane Grp Cap (vph)		636			508			253	554		224	541
v/s Ratio Prot									c0.25			0.19
v/s Ratio Perm		c0.60			0.38			0.07			0.13	
v/c Ratio		1.26			0.79			0.19	0.67		0.37	0.52
Uniform Delay, d1		23.5			19.7			19.4	24.0		20.8	22.3
Progression Factor		1.00			1.78			1.00	1.00		0.40	0.40
Incremental Delay, d2		128.1			8.7			1.6	6.4		3.4	2.6
Delay (s)		151.6			43.9			21.0	30.4		11.8	11.6
Level of Service		F			D			C	C		B	B
Approach Delay (s)		151.6			43.9				29.3			11.6
Approach LOS		F			D				C			B

Intersection Summary			
HCM 2000 Control Delay	78.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	104.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	60
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	65
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	41
Heavy Vehicles (%)	3%
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	710	160	178	383	250	4	37	338	54
v/c Ratio	1.27	0.38	2.62	0.73	0.38	0.05	0.13	1.13	0.19
Control Delay	150.6	23.5	754.9	11.8	1.9	30.7	30.2	95.8	20.2
Queue Delay	2.3	0.0	0.0	56.6	0.0	0.0	0.0	0.0	0.0
Total Delay	152.9	23.5	754.9	68.4	1.9	30.7	30.2	95.8	20.2
Queue Length 50th (ft)	~533	80	~172	89	6	2	17	~218	17
Queue Length 95th (ft)	m#425	m78	m#186	m97	m8	8	32	m#209	m18
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	561	425	68	522	658	73	291	299	290
Starvation Cap Reductn	135	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	209	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.67	0.38	2.62	1.22	0.38	0.05	0.13	1.13	0.19

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												
Volume (vph)	4	599	136	157	337	220	3	9	16	314	47	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	8.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.84	1.00	1.00	0.93	1.00	0.93		1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1536	1196	1470	1425	1140	1570	1381		1417	1376	
Flt Permitted		1.00	1.00	0.12	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		1532	1196	188	1425	1140	348	1381		1417	1376	
Peak-hour factor, PHF	0.85	0.85	0.85	0.88	0.88	0.88	0.68	0.68	0.68	0.93	0.93	0.93
Adj. Flow (vph)	5	705	160	178	383	250	4	13	24	338	51	3
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	710	160	178	383	250	4	37	0	338	54	0
Confl. Peds. (#/hr)	35		75	75		35	25		70			25
Confl. Bikes (#/hr)			40									17
Heavy Vehicles (%)	0%	5%	2%	1%	12%	11%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	32.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.36	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		561	425	68	522	747	73	291		299	290	
v/s Ratio Prot					0.27	0.07		c0.03		c0.24	0.04	
v/s Ratio Perm		0.46	0.13	c0.95		0.15	0.01					
v/c Ratio		1.27	0.38	2.62	0.73	0.33	0.05	0.13		1.13	0.19	
Uniform Delay, d1		28.5	21.6	28.5	24.7	9.9	28.3	28.8		35.5	29.2	
Progression Factor		1.10	1.04	0.41	0.35	0.20	1.00	1.00		0.64	0.67	
Incremental Delay, d2		120.9	0.2	739.0	2.4	0.3	1.4	0.9		69.5	0.3	
Delay (s)		152.3	22.8	750.7	11.0	2.3	29.8	29.7		92.4	19.8	
Level of Service		F	C	F	B	A	C	C		F	B	
Approach Delay (s)		128.5			170.7			29.7			82.4	
Approach LOS		F			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	134.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	270	653	156	89	444	108	604	119	668	260
v/c Ratio	1.18	1.46	0.65	0.86	0.82	0.89	0.82	0.74	1.36	1.44
Control Delay	131.5	239.8	40.5	87.9	59.4	73.4	34.7	58.3	192.2	235.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.5	239.8	40.5	87.9	59.4	73.4	34.7	58.3	192.2	235.4
Queue Length 50th (ft)	~194	~536	79	56	139	66	175	61	~511	~205
Queue Length 95th (ft)	m141	m#403	m0	m#98	#213	m#79	m184	m65	m#537	m#218
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	228	448	241	104	543	121	737	165	490	181
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	1.46	0.65	0.86	0.82	0.89	0.82	0.72	1.36	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.

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												
Volume (vph)	232	562	134	83	373	40	96	419	118	113	635	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.71	1.00	0.99		1.00	0.97		1.00	1.00	0.87
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1613	868	1342	2717		1366	2533		1490	1425	1169
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1613	868	1342	2717		1366	2533		1490	1425	1169
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95	0.95
Adj. Flow (vph)	270	653	156	89	401	43	108	471	133	119	668	260
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	270	653	156	89	444	0	108	604	0	119	668	260
Confl. Peds. (#/hr)			150			70			60			55
Confl. Bikes (#/hr)			175			5			3			9
Heavy Vehicles (%)	3%	6%	8%	13%	9%	29%	15%	17%	13%	9%	16%	5%
Bus Blockages (#/hr)	0	0	7	0	7	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	13.0	24.0	24.0	6.0	17.0		7.0	25.2		8.8	30.0	13.0
Effective Green, g (s)	14.0	25.0	25.0	7.0	18.0		8.0	26.2		9.8	31.0	14.0
Actuated g/C Ratio	0.16	0.28	0.28	0.08	0.20		0.09	0.29		0.11	0.34	0.16
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	228	448	241	104	543		121	737		162	490	181
v/s Ratio Prot	0.18	c0.40		0.07	0.16		c0.08	0.24		0.08	c0.47	
v/s Ratio Perm			0.18									c0.22
v/c Ratio	1.18	1.46	0.65	0.86	0.82		0.89	0.82		0.73	1.36	1.44
Uniform Delay, d1	38.0	32.5	28.6	41.0	34.4		40.6	29.7		38.8	29.5	38.0
Progression Factor	1.34	1.30	1.30	0.99	1.43		0.98	0.99		1.23	0.79	0.85
Incremental Delay, d2	87.2	207.1	1.2	35.9	9.5		26.3	4.2		5.5	167.8	206.4
Delay (s)	138.0	249.2	38.5	76.6	58.8		66.1	33.7		53.4	191.0	238.8
Level of Service	F	F	D	E	E		E	C		D	F	F
Approach Delay (s)		190.9			61.8			38.6			187.3	
Approach LOS		F			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	137.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	724	170	373	452	105	170
v/c Ratio	1.20	0.69	1.10	0.74	0.48	0.66
Control Delay	109.8	52.5	72.3	28.2	40.8	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.8	52.5	72.3	28.2	40.8	49.6
Queue Length 50th (ft)	~497	106	~255	194	42	106
Queue Length 95th (ft)	m#352	m90	m176	m146	88	#184
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160			50
Base Capacity (vph)	602	246	339	614	219	256
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	1.20	0.69	1.10	0.74	0.48	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	652	153	351	425	98	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	10	11
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	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	1.00
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	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1506	1233	1454	1535	1099	1100
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1506	1233	1454	1535	1099	1100
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.93	0.93
Adj. Flow (vph)	724	170	373	452	105	170
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	724	170	373	452	105	170
Confl. Peds. (#/hr)		400				
Confl. Bikes (#/hr)		283				
Heavy Vehicles (%)	6%	10%	8%	4%	38%	13%
Parking (#/hr)						3
Turn Type	NA	Over	Prot	NA	Prot	Over
Protected Phases	2	4	3	2	4	3
Permitted Phases						
Actuated Green, G (s)	35.0	17.0	20.0	35.0	17.0	20.0
Effective Green, g (s)	36.0	18.0	21.0	36.0	18.0	21.0
Actuated g/C Ratio	0.40	0.20	0.23	0.40	0.20	0.23
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	602	246	339	614	219	256
v/s Ratio Prot	c0.48	c0.14	c0.26	0.29	0.10	0.15
v/s Ratio Perm						
v/c Ratio	1.20	0.69	1.10	0.74	0.48	0.66
Uniform Delay, d1	27.0	33.4	34.5	23.0	31.9	31.3
Progression Factor	0.41	1.49	0.51	1.15	1.03	1.15
Incremental Delay, d2	92.8	1.5	49.9	0.7	6.8	11.9
Delay (s)	103.9	51.1	67.5	27.1	39.7	48.0
Level of Service	F	D	E	C	D	D
Approach Delay (s)	93.8			45.4	44.8	
Approach LOS	F			D	D	

Intersection Summary			
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	28	681	21	27	487
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.63	0.63	0.98	0.98	0.93	0.93
Hourly flow rate (vph)	13	44	695	21	29	524
Pedestrians	250		1			33
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	23		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			297			907
pX, platoon unblocked						
vC, conflicting volume	1538	989			966	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1538	989			966	
tC, single (s)	6.8	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.4			2.2	
p0 queue free %	84	80			95	
cM capacity (veh/h)	77	221			558	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	57	716	553
Volume Left	13	0	29
Volume Right	44	21	0
cSH	156	1700	558
Volume to Capacity	0.37	0.42	0.05
Queue Length 95th (ft)	38	0	4
Control Delay (s)	40.8	0.0	1.5
Lane LOS	E		A
Approach Delay (s)	40.8	0.0	1.5
Approach LOS	E		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR2
Lane Group Flow (vph)	357	518	800	416	310	190
v/c Ratio	1.10	0.50	1.36	1.08	0.77	0.69
Control Delay	79.6	33.1	200.2	101.6	34.1	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	33.1	200.2	101.6	34.1	27.9
Queue Length 50th (ft)	~243	124	~604	~266	157	100
Queue Length 95th (ft)	m#214	m114	#826	#444	m116	m69
Internal Link Dist (ft)		882	68		124	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	326	1032	588	386	401	277
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	1.10	0.50	1.36	1.08	0.77	0.69

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	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	332	417	64	0	744	387	167	104	200	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	12	11	11	11	12	11	12	12
Total Lost time (s)	6.0	3.0			3.0	3.0	3.0		6.0		
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00		0.95		
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00		1.00		
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	0.98			1.00	0.85	0.94		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.97		1.00		
Satd. Flow (prot)	1468	2817			1605	1391	1445		1247		
Flt Permitted	0.95	1.00			1.00	1.00	0.97		1.00		
Satd. Flow (perm)	1468	2817			1605	1391	1445		1247		
Peak-hour factor, PHF	0.93	0.93	0.92	0.92	0.93	0.93	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	357	448	70	0	800	416	176	113	211	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	357	518	0	0	800	416	310	0	190	0	0
Confl. Peds. (#/hr)			100								
Confl. Bikes (#/hr)						18					
Heavy Vehicles (%)	7%	3%	2%	2%	3%	1%	5%	2%	7%	2%	2%
Turn Type	Prot	NA			NA	Over	Prot		Over		
Protected Phases	4	2			6	3	3		4		
Permitted Phases											
Actuated Green, G (s)	19.0	32.0			32.0	24.0	24.0		19.0		
Effective Green, g (s)	20.0	33.0			33.0	25.0	25.0		20.0		
Actuated g/C Ratio	0.22	0.37			0.37	0.28	0.28		0.22		
Clearance Time (s)	7.0	4.0			4.0	4.0	4.0		7.0		
Lane Grp Cap (vph)	326	1032			588	386	401		277		
v/s Ratio Prot	c0.24	0.18			c0.50	c0.30	0.21		0.15		
v/s Ratio Perm											
v/c Ratio	1.10	0.50			1.36	1.08	0.77		0.69		
Uniform Delay, d1	35.0	22.1			28.5	32.5	29.9		32.1		
Progression Factor	0.86	1.47			1.00	1.00	1.05		0.78		
Incremental Delay, d2	47.9	0.2			173.1	68.2	1.4		1.3		
Delay (s)	77.9	32.6			201.6	100.7	32.7		26.4		
Level of Service	E	C			F	F	C		C		
Approach Delay (s)		51.1			167.0		30.3			0.0	
Approach LOS		D			F		C			A	

Intersection Summary			
HCM 2000 Control Delay	101.5	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)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	383	495	71	286	631	95	424	375
v/c Ratio	1.10	0.75	0.36	0.50	0.84	0.48	0.75	0.84
Control Delay	106.5	29.4	16.1	16.2	36.3	39.5	42.7	45.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.5	29.4	16.1	16.2	36.3	39.5	42.7	45.2
Queue Length 50th (ft)	~250	227	14	58	166	58	266	235
Queue Length 95th (ft)	#396	328	m13	m47	#268	m50	m228	m207
Internal Link Dist (ft)		730		410	472		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	347	662	198	572	753	196	565	449
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	1.10	0.75	0.36	0.50	0.84	0.48	0.75	0.84

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												
Volume (vph)	329	351	75	68	156	119	69	311	201	90	403	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	10	11	10
Total Lost time (s)	7.0	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			0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.93			0.96		1.00	1.00	0.94
Flpb, ped/bikes	0.91	1.00		0.95	1.00			1.00		0.97	1.00	1.00
Frt	1.00	0.97		1.00	0.93			0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1352	1490		1254	1288			2527		1325	1413	1124
Flt Permitted	0.55	1.00		0.34	1.00			0.74		0.35	1.00	1.00
Satd. Flow (perm)	781	1490		446	1288			1884		492	1413	1124
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	383	408	87	71	162	124	75	338	218	95	424	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	383	495	0	71	286	0	0	631	0	95	424	375
Confl. Peds. (#/hr)	200		100	100		200	35		60	60		35
Confl. Bikes (#/hr)			85			7			36			
Heavy Vehicles (%)	13%	7%	12%	15%	13%	11%	3%	13%	24%	11%	17%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	8	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	39.0	39.0		39.0	39.0			35.0		35.0	35.0	35.0
Effective Green, g (s)	40.0	40.0		40.0	40.0			36.0		36.0	36.0	36.0
Actuated g/C Ratio	0.44	0.44		0.44	0.44			0.40		0.40	0.40	0.40
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0		8.0	8.0	8.0
Lane Grp Cap (vph)	347	662		198	572			753		196	565	449
v/s Ratio Prot		0.33			0.22						0.30	
v/s Ratio Perm	c0.49			0.16				c0.33		0.19		0.33
v/c Ratio	1.10	0.75		0.36	0.50			0.84		0.48	0.75	0.84
Uniform Delay, d1	25.0	20.8		16.5	17.9			24.4		20.1	23.1	24.3
Progression Factor	1.00	1.00		0.86	0.86			1.00		1.76	1.74	1.73
Incremental Delay, d2	79.2	7.6		0.5	0.3			10.8		0.8	0.9	1.8
Delay (s)	104.2	28.4		14.7	15.6			35.1		36.1	41.2	43.8
Level of Service	F	C		B	B			D		D	D	D
Approach Delay (s)		61.4			15.5			35.1			41.7	
Approach LOS		E			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	134.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	137	563	143	87	101	152	540
v/c Ratio	0.49	1.25	1.40	0.25	0.89	0.41	1.98
Control Delay	25.4	150.4	257.4	21.2	96.3	30.6	462.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	150.4	257.4	21.2	96.3	30.6	462.7
Queue Length 50th (ft)	59	~399	~110	33	55	70	~472
Queue Length 95th (ft)	m92	m#587	#185	58	#153	127	m#494
Internal Link Dist (ft)		410		669		920	481
Turn Bay Length (ft)	25		25		25		
Base Capacity (vph)	280	450	102	344	113	370	273
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	0.49	1.25	1.40	0.25	0.89	0.41	1.98

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												
Volume (vph)	126	364	154	110	30	37	92	128	10	133	116	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	5.0	4.0		5.0	4.0		5.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.90		1.00	0.81		1.00	0.99			0.94	
Flpb, ped/bikes	0.71	1.00		0.92	1.00		0.98	1.00			0.96	
Frt	1.00	0.96		1.00	0.92		1.00	0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1007	1158		1489	886		1310	1335			1236	
Flt Permitted	0.70	1.00		0.17	1.00		0.31	1.00			0.78	
Satd. Flow (perm)	743	1158		271	886		427	1335			982	
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	137	396	167	143	39	48	101	141	11	153	133	254
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	137	563	0	143	87	0	101	152	0	0	540	0
Confl. Peds. (#/hr)	250		200	200		250	50		90	90		50
Confl. Bikes (#/hr)			101			5			8			11
Heavy Vehicles (%)	14%	14%	16%	0%	34%	50%	21%	14%	0%	12%	3%	9%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	34.0	34.0		34.0	34.0		24.0	24.0			24.0	
Effective Green, g (s)	34.0	35.0		34.0	35.0		24.0	25.0			25.0	
Actuated g/C Ratio	0.38	0.39		0.38	0.39		0.27	0.28			0.28	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)	280	450		102	344		113	370			272	
v/s Ratio Prot		0.49			0.10			0.11				
v/s Ratio Perm	0.18			c0.53			0.24				c0.55	
v/c Ratio	0.49	1.25		1.40	0.25		0.89	0.41			1.99	
Uniform Delay, d1	21.4	27.5		28.0	18.6		31.8	26.5			32.5	
Progression Factor	0.94	0.88		1.00	1.00		1.00	1.00			0.47	
Incremental Delay, d2	4.0	124.8		229.4	1.8		59.6	3.3			447.1	
Delay (s)	24.1	149.0		257.4	20.4		91.4	29.8			462.4	
Level of Service	C	F		F	C		F	C			F	
Approach Delay (s)		124.5			167.8			54.4			462.4	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	225.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	225	240	0	0	0	66
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.92	0.92	0.75	0.75
Hourly flow rate (vph)	271	289	0	0	0	88
Pedestrians					307	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			867		723	723
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			867		723	723
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	74
cM capacity (veh/h)			611		312	338

Direction, Lane #	EB 1	NB 1
Volume Total	560	88
Volume Left	0	0
Volume Right	289	88
cSH	1700	338
Volume to Capacity	0.33	0.26
Queue Length 95th (ft)	0	26
Control Delay (s)	0.0	19.4
Lane LOS		C
Approach Delay (s)	0.0	19.4
Approach LOS		C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	1115	109	0	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.42	0.42
Hourly flow rate (vph)	0	0	1161	114	0	24
Pedestrians					129	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					14	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		704				
pX, platoon unblocked						
vC, conflicting volume	1404				1347	766
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1404				1347	766
tC, single (s)	4.1				6.8	7.1
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	100				100	92
cM capacity (veh/h)	413				124	281

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	774	501	24
Volume Left	0	0	0	0	0
Volume Right	0	0	0	114	24
cSH	1700	1700	1700	1700	281
Volume to Capacity	0.00	0.00	0.46	0.29	0.08
Queue Length 95th (ft)	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	19.0
Lane LOS					C
Approach Delay (s)	0.0		0.0		19.0
Approach LOS					C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	691	101	0	1078	332	0	0	0	0	0	146
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	743	109	0	1185	365	0	0	0	0	0	162
Pedestrians								161			129	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			11	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1274										
pX, platoon unblocked												
vC, conflicting volume	1678			1013			2488	2637	587	1868	2509	1496
vC1, stage 1 conf vol							958	958		1496	1496	
vC2, stage 2 conf vol							1529	1678		372	1013	
vCu, unblocked vol	1678			1013			2488	2637	587	1868	2509	1496
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			0	100	100	100	100	0
cM capacity (veh/h)	345			693			0	95	453	98	111	98

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	495	356	1549	162
Volume Left	0	0	0	0
Volume Right	0	109	365	162
cSH	1700	1700	1700	98
Volume to Capacity	0.29	0.21	0.91	1.66
Queue Length 95th (ft)	0	0	0	320
Control Delay (s)	0.0	0.0	0.0	412.1
Lane LOS				F
Approach Delay (s)	0.0		0.0	412.1
Approach LOS				F

Intersection Summary			
Average Delay	26.1		
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	54	228	0	0	289	87
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.50	0.50	0.86	0.86
Hourly flow rate (vph)	57	243	0	0	336	101
Pedestrians	64		61			47
Lane Width (ft)	13.0		0.0			13.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	6		0			4
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1000
pX, platoon unblocked						
vC, conflicting volume	898	111			64	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	898	111			64	
tC, single (s)	6.6	6.4			4.2	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.3	
p0 queue free %	72	70			76	
cM capacity (veh/h)	204	817			1414	

Direction, Lane #	WB 1	SB 1
Volume Total	300	437
Volume Left	57	336
Volume Right	243	0
cSH	519	1414
Volume to Capacity	0.58	0.24
Queue Length 95th (ft)	91	23
Control Delay (s)	21.0	6.9
Lane LOS	C	A
Approach Delay (s)	21.0	6.9
Approach LOS	C	

Intersection Summary			
Average Delay	12.6		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	272	268	22	2	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.79	0.79	0.58	0.58
Hourly flow rate (vph)	21	340	339	28	3	26
Pedestrians		17	38		51	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	3		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	418				825	421
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418				825	421
tC, single (s)	4.2				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.5
p0 queue free %	98				99	95
cM capacity (veh/h)	1072				314	562

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	361	367	29
Volume Left	21	0	3
Volume Right	0	28	26
cSH	1072	1700	514
Volume to Capacity	0.02	0.22	0.06
Queue Length 95th (ft)	2	0	5
Control Delay (s)	0.7	0.0	12.4
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	12.4
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	92	2	175	286	33	73
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.53	0.53	0.93	0.93	0.74	0.74
Hourly flow rate (vph)	174	4	188	308	45	99
Pedestrians	213			213	41	
Lane Width (ft)	14.0			12.0	10.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	21			18	3	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				320		
pX, platoon unblocked	0.85					
vC, conflicting volume	1032	520	356			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	948	520	356			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	0	99	80			
cM capacity (veh/h)	148	365	962			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	177	496	143
Volume Left	174	188	0
Volume Right	4	0	99
cSH	150	962	1700
Volume to Capacity	1.18	0.20	0.08
Queue Length 95th (ft)	251	18	0
Control Delay (s)	189.3	5.1	0.0
Lane LOS	F	A	
Approach Delay (s)	189.3	5.1	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	44.2		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	14	1255	0	0	0	0	0	24	117
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	16	1459	0	0	0	0	0	27	133
Pedestrians		8									50	
Lane Width (ft)		0.0									14.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									5	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.66						0.66	0.66		0.66	0.66	0.66
vC, conflicting volume	1509			0			917	1542	0	1542	1542	788
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	727			0			0	777	0	777	777	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			99			100	100	100	100	87	80
cM capacity (veh/h)	544			1636			458	202	1084	173	204	651

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	503	973	160
Volume Left	16	0	0
Volume Right	0	0	133
cSH	1636	1700	474
Volume to Capacity	0.01	0.57	0.34
Queue Length 95th (ft)	1	0	37
Control Delay (s)	0.3	0.0	16.4
Lane LOS	A		C
Approach Delay (s)	0.1		16.4
Approach LOS			C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	108.0%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1533	12	296	49
v/c Ratio	0.85	0.03	0.69	0.12
Control Delay	19.0	28.7	43.7	8.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.0	28.7	43.7	8.1
Queue Length 50th (ft)	356	6	172	0
Queue Length 95th (ft)	478	20	266	15
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1809	406	427	396
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	0.85	0.03	0.69	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1222	189	11	272	0	0	0	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.97		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.98		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2741		1624	1710				1422
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2741		1624	1710				1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.72	0.72	0.72
Adj. Flow (vph)	0	0	0	0	1328	205	12	296	0	0	0	49
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	37
Lane Group Flow (vph)	0	0	0	0	1533	0	12	296	0	0	0	12
Confl. Peds. (#/hr)						72						
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	4%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					65.0		24.0	24.0				24.0
Effective Green, g (s)					66.0		25.0	25.0				25.0
Actuated g/C Ratio					0.66		0.25	0.25				0.25
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1809		406	427				355
v/s Ratio Prot					c0.56		0.01	c0.17				
v/s Ratio Perm												0.01
v/c Ratio					0.85		0.03	0.69				0.03
Uniform Delay, d1					13.1		28.3	34.0				28.4
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					5.1		0.0	4.8				0.0
Delay (s)					18.3		28.4	38.8				28.4
Level of Service					B		C	D				C
Approach Delay (s)		0.0			18.3			38.4			28.4	
Approach LOS		A			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	691	0	0	1078	0	214
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	751	0	0	1172	0	268
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			751		1923	376
vC1, stage 1 conf vol					751	
vC2, stage 2 conf vol					1172	
vCu, unblocked vol			751		1923	376
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	57
cM capacity (veh/h)			854		174	628

Direction, Lane #	EB 1	EB 2	WB 1	NE 1
Volume Total	376	376	1172	268
Volume Left	0	0	0	0
Volume Right	0	0	0	268
cSH	1700	1700	1700	628
Volume to Capacity	0.22	0.22	0.69	0.43
Queue Length 95th (ft)	0	0	0	53
Control Delay (s)	0.0	0.0	0.0	14.9
Lane LOS				B
Approach Delay (s)	0.0		0.0	14.9
Approach LOS				B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1756	0	0	39	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.94	0.94
Hourly flow rate (vph)	0	1909	0	0	41	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				954	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				954	0
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				84	100
cM capacity (veh/h)	1622				260	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	954	954	41
Volume Left	0	0	41
Volume Right	0	0	0
cSH	1700	1700	260
Volume to Capacity	0.56	0.56	0.16
Queue Length 95th (ft)	0	0	14
Control Delay (s)	0.0	0.0	21.4
Lane LOS			C
Approach Delay (s)	0.0		21.4
Approach LOS			C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	114.3%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	301	1610
v/c Ratio	0.20	0.53
Control Delay	0.3	0.7
Queue Delay	0.1	0.0
Total Delay	0.4	0.7
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1516	3032
Starvation Cap Reductn	0	0
Spillback Cap Reductn	500	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.30	0.53

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	283	1513	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1516	3032				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1516	3032				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	301	1610	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	301	1610	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	100.0	100.0				
Effective Green, g (s)	96.0	96.0				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1455	2910				
v/s Ratio Prot	0.20	c0.53				
v/s Ratio Perm						
v/c Ratio	0.21	0.55				
Uniform Delay, d1	0.1	0.2				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.1	0.2				
Delay (s)	0.2	0.4				
Level of Service	A	A				
Approach Delay (s)		0.4	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	24	1756	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	1848	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1075			
pX, platoon unblocked						
vC, conflicting volume	0				975	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				975	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	100
cM capacity (veh/h)	1636				245	1084

Direction, Lane #	EB 1	EB 2	EB 3
Volume Total	25	924	924
Volume Left	25	0	0
Volume Right	0	0	0
cSH	1636	1700	1700
Volume to Capacity	0.02	0.54	0.54
Queue Length 95th (ft)	1	0	0
Control Delay (s)	7.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.1		
Approach LOS			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1255	24	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.94	0.94	0.85	0.85
Hourly flow rate (vph)	0	0	0	1335	28	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked						
vC, conflicting volume			0		668	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		668	0
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		93	100
cM capacity (veh/h)			1636		396	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	668	668	28
Volume Left	0	0	28
Volume Right	0	0	0
cSH	1700	1700	396
Volume to Capacity	0.39	0.39	0.07
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	14.8
Lane LOS			B
Approach Delay (s)	0.0		14.8
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1676	757	433	83	132	344
v/c Ratio	0.96	1.14	0.25	0.45	0.67	0.70
Control Delay	41.1	100.6	4.6	28.4	39.7	53.3
Queue Delay	1.8	0.2	0.0	6.3	26.9	0.0
Total Delay	42.9	100.9	4.6	34.7	66.7	53.3
Queue Length 50th (ft)	335	~335	14	56	91	123
Queue Length 95th (ft)	m282	m#413	m26	106	#175	174
Internal Link Dist (ft)	729		266		89	256
Turn Bay Length (ft)						
Base Capacity (vph)	1749	663	1712	186	196	490
Starvation Cap Reductn	0	9	0	63	58	0
Spillback Cap Reductn	29	23	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	1.18	0.25	0.67	0.96	0.70

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												
Volume (vph)	0	1366	176	696	378	20	76	121	0	97	220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	12
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0			5.0	
Lane Util. Factor		0.91		0.97	0.95		1.00	1.00			0.95	
Frpb, ped/bikes		1.00		1.00	0.97		1.00	1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00			1.00	
Frt		0.98		1.00	0.99		1.00	1.00			1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)		4810		3319	3307		1711	1801			3370	
Flt Permitted		1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (perm)		4810		3319	3307		1711	1801			3370	
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	1485	191	757	411	22	83	132	0	105	239	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1676	0	757	433	0	83	132	0	0	344	0
Confl. Peds. (#/hr)			20			216			325			
Turn Type		NA		Prot	NA		Split	NA		Split	NA	
Protected Phases		1		2 3	1 2		5	5		4	4	
Permitted Phases												
Actuated Green, G (s)		40.0		22.0	57.0		12.0	12.0			16.0	
Effective Green, g (s)		40.0		22.0	57.0		12.0	12.0			16.0	
Actuated g/C Ratio		0.36		0.20	0.52		0.11	0.11			0.15	
Clearance Time (s)		5.0					5.0	5.0			5.0	
Lane Grp Cap (vph)		1749		663	1713		186	196			490	
v/s Ratio Prot		c0.35		c0.23	0.13		0.05	c0.07			c0.10	
v/s Ratio Perm												
v/c Ratio		0.96		1.14	0.25		0.45	0.67			0.70	
Uniform Delay, d1		34.2		44.0	14.7		45.9	47.1			44.7	
Progression Factor		1.14		0.57	0.30		0.45	0.47			1.00	
Incremental Delay, d2		1.9		74.0	0.2		7.3	16.4			8.2	
Delay (s)		40.9		99.2	4.6		28.0	38.4			52.9	
Level of Service		D		F	A		C	D			D	
Approach Delay (s)		40.9			64.8			34.4			52.9	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	473	471	3	1333	511	1624
v/c Ratio	1.13	1.14	0.02	0.80	0.41	0.94
Control Delay	120.5	124.3	0.0	24.8	1.4	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.5	124.3	0.0	24.8	1.4	19.3
Queue Length 50th (ft)	~370	~371	0	353	0	208
Queue Length 95th (ft)	#575	#576	0	421	20	m#639
Internal Link Dist (ft)		450	304	741		748
Turn Bay Length (ft)	100					
Base Capacity (vph)	417	412	183	1669	1237	1733
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	1.13	1.14	0.02	0.80	0.41	0.94

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	873	0	34	0	0	3	0	1160	445	0	1558	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	2000	2000	2000	1900
Lane Width	10	11	11	12	12	12	11	11	14	12	11	12
Total Lost time (s)	5.0	6.0			6.0			5.0	5.0		2.0	
Lane Util. Factor	0.95	0.95			1.00			*0.95	*0.95		*0.95	
Frt	1.00	0.99			0.86			1.00	0.85		1.00	
Flt Protected	0.95	0.96			1.00			1.00	1.00		1.00	
Satd. Flow (prot)	1440	1472			1450			3273	1480		3209	
Flt Permitted	0.95	0.96			1.00			1.00	1.00		0.70	
Satd. Flow (perm)	1440	1472			1450			3273	1480		2256	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.92	0.87	0.87	0.96	0.96	0.92
Adj. Flow (vph)	909	0	35	0	0	3	0	1333	511	0	1623	1
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	153	0	0	0
Lane Group Flow (vph)	473	471	0	0	0	0	0	1333	358	0	1624	0
Heavy Vehicles (%)	0%	2%	11%	2%	2%	2%	2%	1%	1%	7%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	9	0	0	0
Turn Type	Split	NA			NA			NA	custom		NA	
Protected Phases	4	4		7	7			2 3	4		3 6	
Permitted Phases							2 3		2			
Actuated Green, G (s)	28.0	28.0			4.0			53.0	68.0		53.0	
Effective Green, g (s)	29.0	28.0			4.0			54.0	70.0		49.0	
Actuated g/C Ratio	0.29	0.28			0.04			0.54	0.70		0.49	
Clearance Time (s)	6.0	6.0			6.0				6.0			
Vehicle Extension (s)	3.0	3.0			3.0				3.0			
Lane Grp Cap (vph)	417	412			58			1767	1110		1572	
v/s Ratio Prot	c0.33	0.32			c0.00			0.41	0.09		c0.51	
v/s Ratio Perm									0.15			
v/c Ratio	1.13	1.14			0.00			0.75	0.32		1.03	
Uniform Delay, d1	35.5	36.0			46.1			17.9	5.8		25.5	
Progression Factor	1.00	1.00			1.00			1.00	1.00		0.55	
Incremental Delay, d2	86.0	89.5			0.0			1.9	0.2		25.6	
Delay (s)	121.5	125.5			46.1			19.7	6.0		39.5	
Level of Service	F	F			D			B	A		D	
Approach Delay (s)		123.5			46.1			15.9			39.5	
Approach LOS		F			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	644	596	811	51	451
v/c Ratio	1.80	1.36	1.24	0.24	0.59
Control Delay	394.4	204.4	126.5	17.8	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	394.4	204.4	126.5	17.8	21.2
Queue Length 50th (ft)	~555	~451	~565	16	179
Queue Length 95th (ft)	#632	#652	m#548	43	278
Internal Link Dist (ft)	1468	694	2039		450
Turn Bay Length (ft)				90	
Base Capacity (vph)	358	438	655	209	760
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	1.80	1.36	1.24	0.24	0.59

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												
Volume (vph)	64	383	55	16	429	121	48	691	7	46	345	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	11	12	12	12	12	11	11	12
Total Lost time (s)		8.0			8.0			8.0		8.0	8.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.96			1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.97			1.00		1.00	0.98	
Flt Protected		0.99			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1522			1317			1469		1491	1592	
Flt Permitted		0.68			0.97			0.93		0.28	1.00	
Satd. Flow (perm)		1041			1273			1372		439	1592	
Peak-hour factor, PHF	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90
Adj. Flow (vph)	82	491	71	17	452	127	52	751	8	51	383	68
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	644	0	0	596	0	0	811	0	51	451	0
Confl. Peds. (#/hr)	75		50	50		75	15		20	20		15
Confl. Bikes (#/hr)			17			57			3			1
Heavy Vehicles (%)	6%	5%	0%	0%	3%	0%	6%	1%	0%	5%	0%	6%
Parking (#/hr)					5			5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0			42.0		42.0	42.0	
Effective Green, g (s)		31.0			31.0			43.0		43.0	43.0	
Actuated g/C Ratio		0.34			0.34			0.48		0.48	0.48	
Clearance Time (s)		9.0			9.0			9.0		9.0	9.0	
Lane Grp Cap (vph)		358			438			655		209	760	
v/s Ratio Prot											0.28	
v/s Ratio Perm		c0.62			0.47			c0.59		0.12		
v/c Ratio		1.80			1.36			1.24		0.24	0.59	
Uniform Delay, d1		29.5			29.5			23.5		13.9	17.1	
Progression Factor		1.00			1.00			0.53		1.00	1.00	
Incremental Delay, d2		370.5			176.6			108.4		2.8	3.4	
Delay (s)		400.0			206.1			120.9		16.6	20.5	
Level of Service		F			F			F		B	C	
Approach Delay (s)		400.0			206.1			120.9			20.1	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	191.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	159.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	483	446	602	838
v/c Ratio	0.69	0.79	1.32	0.50
Control Delay	38.3	40.8	188.6	5.6
Queue Delay	0.0	8.0	1.2	13.1
Total Delay	38.3	48.8	189.8	18.8
Queue Length 50th (ft)	141	252	~499	39
Queue Length 95th (ft)	193	#407	#709	m213
Internal Link Dist (ft)	694	2013		90
Turn Bay Length (ft)			1000	
Base Capacity (vph)	705	567	456	1689
Starvation Cap Reductn	0	0	0	837
Spillback Cap Reductn	0	89	54	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.69	0.93	1.50	0.98

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												
Volume (vph)	0	359	66	0	0	0	0	410	566	0	410	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	12	11	11	10	11	11	11
Total Lost time (s)		5.0						5.0	5.0		4.0	
Lane Util. Factor		0.95						1.00	1.00		0.95	
Frpb, ped/bikes		0.99						1.00	1.00		1.00	
Flpb, ped/bikes		1.00						1.00	1.00		1.00	
Frt		0.98						1.00	0.85		0.93	
Flt Protected		1.00						1.00	1.00		1.00	
Satd. Flow (prot)		2761						1621	1304		2863	
Flt Permitted		1.00						1.00	1.00		1.00	
Satd. Flow (perm)		2761						1621	1304		2863	
Peak-hour factor, PHF	0.92	0.88	0.88	0.81	0.81	0.92	0.94	0.92	0.94	0.92	0.92	0.92
Adj. Flow (vph)	0	408	75	0	0	0	0	446	602	0	446	392
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	468	0	0	0	0	0	446	602	0	838	0
Confl. Peds. (#/hr)			43									
Confl. Bikes (#/hr)			16									
Heavy Vehicles (%)	2%	3%	8%	4%	2%	2%	2%	2%	4%	2%	2%	2%
Parking (#/hr)		2	2									
Turn Type		NA						NA	Perm		NA	
Protected Phases		1						3			2 3	
Permitted Phases									3			
Actuated Green, G (s)		25.0						35.0	35.0		58.0	
Effective Green, g (s)		25.0						35.0	35.0		58.0	
Actuated g/C Ratio		0.25						0.35	0.35		0.58	
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		690						567	456		1660	
v/s Ratio Prot		c0.17						0.28			c0.29	
v/s Ratio Perm									c0.46			
v/c Ratio		0.68						0.79	1.32		0.50	
Uniform Delay, d1		33.9						29.2	32.5		12.5	
Progression Factor		1.00						1.00	1.00		0.42	
Incremental Delay, d2		5.3						10.5	158.8		0.6	
Delay (s)		39.2						39.7	191.3		5.8	
Level of Service		D						D	F		A	
Approach Delay (s)		39.2			0.0			126.8			5.8	
Approach LOS		D			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	66.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	NBR	SBR
Lane Group Flow (vph)	955	1302	242	773	280
v/c Ratio	0.61	0.99	0.36	1.02	0.21
Control Delay	22.6	49.6	5.9	28.0	0.4
Queue Delay	7.3	39.2	73.6	28.6	0.4
Total Delay	29.9	88.8	79.5	56.6	0.8
Queue Length 50th (ft)	235	417	31	~388	0
Queue Length 95th (ft)	282	#584	m52	m177	0
Internal Link Dist (ft)	247	832	210		
Turn Bay Length (ft)					
Base Capacity (vph)	1563	1321	673	755	1348
Starvation Cap Reductn	560	0	275	113	0
Spillback Cap Reductn	0	214	549	0	658
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.95	1.18	1.95	1.20	0.41

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												
Volume (vph)	0	869	0	0	1158	66	88	134	711	0	0	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	11	11	11
Total Lost time (s)		5.0			5.0			5.0	5.0			5.0
Lane Util. Factor		0.91			0.95			1.00	1.00			1.00
Frpb, ped/bikes		1.00			0.99			1.00	1.00			0.95
Flpb, ped/bikes		1.00			1.00			1.00	1.00			1.00
Frt		1.00			0.99			1.00	0.85			0.86
Flt Protected		1.00			1.00			0.98	1.00			1.00
Satd. Flow (prot)		4468			2927			1495	1351			1348
Flt Permitted		1.00			1.00			0.98	1.00			1.00
Satd. Flow (perm)		4468			2927			1495	1351			1348
Peak-hour factor, PHF	0.91	0.91	0.91	0.94	0.94	0.94	0.92	0.92	0.92	0.66	0.66	0.66
Adj. Flow (vph)	0	955	0	0	1232	70	96	146	773	0	0	280
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	12	0	0	0
Lane Group Flow (vph)	0	955	0	0	1298	0	0	242	761	0	0	280
Confl. Peds. (#/hr)						40			17			17
Confl. Bikes (#/hr)						13			3			13
Heavy Vehicles (%)	0%	1%	0%	2%	2%	0%	3%	12%	4%	0%	0%	1%
Turn Type		NA			NA		Split	NA	custom			Perm
Protected Phases		1			1 2		3	3	2 3			
Permitted Phases												1 2 3
Actuated Green, G (s)		35.0			45.0			45.0	55.0			100.0
Effective Green, g (s)		35.0			45.0			45.0	55.0			100.0
Actuated g/C Ratio		0.35			0.45			0.45	0.55			1.00
Clearance Time (s)		5.0						5.0				
Lane Grp Cap (vph)		1563			1317			672	743			1348
v/s Ratio Prot		0.21			c0.44			0.16	c0.56			
v/s Ratio Perm												0.21
v/c Ratio		0.61			0.99			0.36	1.02			0.21
Uniform Delay, d1		26.9			27.2			18.1	22.5			0.0
Progression Factor		0.79			1.00			0.31	0.33			1.00
Incremental Delay, d2		1.1			21.6			0.1	16.8			0.3
Delay (s)		22.4			48.8			5.8	24.2			0.3
Level of Service		C			D			A	C			A
Approach Delay (s)		22.4			48.8			19.8			0.3	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Group Flow (vph)	581	706	355	320	699	475	495	1330	455	186	724
v/c Ratio	1.69	0.66	0.47	0.96	0.80	0.66	1.37	1.79	0.63	0.49	0.99
Control Delay	356.1	46.5	14.4	88.4	51.4	15.5	226.8	396.3	41.4	45.0	75.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	356.1	46.5	14.4	88.4	51.4	15.5	226.8	396.3	41.4	45.0	75.6
Queue Length 50th (ft)	~660	184	93	247	270	114	~519	~835	324	137	294
Queue Length 95th (ft)	#868	227	133	#382	313	153	#689	#920	433	219	#434
Internal Link Dist (ft)		832			440			1843			515
Turn Bay Length (ft)	200		400	135		135	620			100	
Base Capacity (vph)	343	1065	762	333	873	723	361	741	726	379	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.69	0.66	0.47	0.96	0.80	0.66	1.37	1.79	0.63	0.49	0.99

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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	517	628	316	269	587	399	426	1144	391	186	447	185
Ideal Flow (vphpl)	2100	1900	1900	1900	2100	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	15	10	11	10	10	11	12	12	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1872	4916	1759	1668	3745	1478	1668	3421	1615	1626	2986	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1872	4916	1759	1668	3745	1478	1668	3421	1615	1626	2986	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.86	0.86	0.86	0.90	0.90	0.90
Adj. Flow (vph)	581	706	355	320	699	475	495	1330	455	207	497	206
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	0	0	32	0
Lane Group Flow (vph)	581	706	355	320	699	441	495	1330	455	186	692	0
Confl. Peds. (#/hr)							158		33			158
Confl. Bikes (#/hr)						27						6
Heavy Vehicles (%)	3%	2%	1%	1%	3%	2%	1%	2%	0%	1%	1%	1%
Turn Type	Prot	NA	custom	Prot	NA	pt+ov	Split	NA	pt+ov	Split	NA	
Protected Phases	5	2	2	1	6	4 6	3	3	1 3	4	4	
Permitted Phases			3									
Actuated Green, G (s)	21.0	25.0	50.0	23.0	27.0	54.0	25.0	25.0	53.0	27.0	27.0	
Effective Green, g (s)	22.0	26.0	52.0	24.0	28.0	56.0	26.0	26.0	54.0	28.0	28.0	
Actuated g/C Ratio	0.18	0.22	0.43	0.20	0.23	0.47	0.22	0.22	0.45	0.23	0.23	
Clearance Time (s)	5.0	5.0	5.0	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	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	1065	762	333	873	689	361	741	726	379	696	
v/s Ratio Prot	c0.31	0.14	0.10	c0.19	c0.19	0.30	0.30	c0.39	0.28	0.11	c0.23	
v/s Ratio Perm			0.10									
v/c Ratio	1.69	0.66	0.47	0.96	0.80	0.64	1.37	1.79	0.63	0.49	0.99	
Uniform Delay, d1	49.0	43.0	24.1	47.5	43.4	24.3	47.0	47.0	25.3	39.8	45.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.29	1.28	1.45	1.00	1.00	
Incremental Delay, d2	324.6	3.3	0.5	38.8	7.6	2.0	182.9	362.8	1.6	1.0	32.4	
Delay (s)	373.6	46.2	24.6	86.3	51.0	26.3	243.3	423.1	38.2	40.8	78.3	
Level of Service	F	D	C	F	D	C	F	F	D	D	E	
Approach Delay (s)		157.4			50.7			307.3			70.7	
Approach LOS		F			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	173.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBR	SEL	SER
Lane Group Flow (vph)	1036	928	272	330	85
v/c Ratio	0.52	0.99	0.88	0.88	0.22
Control Delay	20.7	62.2	63.3	58.6	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	62.2	63.3	58.6	10.3
Queue Length 50th (ft)	295	299	149	181	5
Queue Length 95th (ft)	m291	m277	#294	#220	26
Internal Link Dist (ft)	645	150		891	
Turn Bay Length (ft)					100
Base Capacity (vph)	1991	940	308	375	378
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	0.52	0.99	0.88	0.88	0.22

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	WBR2	SBL	SBR	SBR2	SEL2	SEL	SER
Lane Configurations											
Volume (vph)	0	901	603	186	28	0	202	54	146	95	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	12	12	12	11	12	12	10	10
Total Lost time (s)		3.5	3.5				4.5			3.5	3.5
Lane Util. Factor		0.95	0.95				1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.91				1.00			1.00	0.97
Flpb, ped/bikes		1.00	1.00				1.00			1.00	1.00
Frt		1.00	0.96				0.86			1.00	0.85
Flt Protected		1.00	1.00				1.00			0.95	1.00
Satd. Flow (prot)		2963	2527				1232			1501	1295
Flt Permitted		1.00	1.00				1.00			0.95	1.00
Satd. Flow (perm)		2963	2527				1232			1501	1295
Peak-hour factor, PHF	0.87	0.87	0.88	0.88	0.88	0.94	0.94	0.94	0.73	0.73	0.73
Adj. Flow (vph)	0	1036	685	211	32	0	215	57	200	130	85
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	1036	928	0	0	0	272	0	0	330	30
Confl. Peds. (#/hr)	48			64	48			64			8
Confl. Bikes (#/hr)				23	23			19			1
Heavy Vehicles (%)	0%	6%	6%	0%	0%	0%	2%	0%	1%	1%	2%
Parking (#/hr)							5				
Turn Type		NA	NA				Prot		Prot	Prot	Perm
Protected Phases		1 2	1				2		3	3	
Permitted Phases											3
Actuated Green, G (s)		59.5	32.5				22.5			21.5	21.5
Effective Green, g (s)		60.5	33.5				22.5			22.5	22.5
Actuated g/C Ratio		0.67	0.37				0.25			0.25	0.25
Clearance Time (s)			4.5				4.5			4.5	4.5
Lane Grp Cap (vph)		1991	940				308			375	323
v/s Ratio Prot		0.35	c0.37				c0.22			c0.22	
v/s Ratio Perm											0.02
v/c Ratio		0.52	0.99				0.88			0.88	0.09
Uniform Delay, d1		7.4	28.0				32.5			32.5	25.9
Progression Factor		2.71	1.64				1.00			1.00	1.00
Incremental Delay, d2		0.1	16.7				28.6			24.3	0.6
Delay (s)		20.2	62.5				61.1			56.7	26.5
Level of Service		C	E				E			E	C
Approach Delay (s)		20.2	62.5			61.1				50.5	
Approach LOS		C	E			E				D	

Intersection Summary			
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	399	841	207	742	502	215	345
v/c Ratio	0.94	0.93	0.92	1.24	1.11	0.65	0.91
Control Delay	63.9	48.8	83.2	155.2	101.1	33.8	46.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	48.8	83.2	155.2	101.1	33.8	46.5
Queue Length 50th (ft)	230	246	118	~281	~341	128	127
Queue Length 95th (ft)	m#399	m#365	#249	#395	m#429	m163	m#277
Internal Link Dist (ft)		1062		1070	827		2039
Turn Bay Length (ft)	200		250			140	
Base Capacity (vph)	431	906	224	598	454	330	381
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	0.93	0.93	0.92	1.24	1.11	0.65	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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	359	666	91	190	624	59	85	347	185	31	219	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	12	10	11	12	12	11	11	12	12	12
Total Lost time (s)	3.0	7.0		3.0	7.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98			1.00	0.68		0.93	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.98	1.00		1.00	
Frt	1.00	0.98		1.00	0.99			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		1.00	
Satd. Flow (prot)	1555	2717		1444	2793			1592	929		1501	
Flt Permitted	0.95	1.00		0.95	1.00			0.79	1.00		0.71	
Satd. Flow (perm)	1555	2717		1444	2793			1277	929		1074	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.86	0.86	0.86	0.98	0.98	0.98
Adj. Flow (vph)	399	740	101	207	678	64	99	403	215	32	223	90
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	399	841	0	207	742	0	0	502	215	0	345	0
Confl. Peds. (#/hr)	56		32			56	152		218	216		150
Confl. Bikes (#/hr)			11			20						11
Heavy Vehicles (%)	1%	7%	1%	5%	8%	0%	0%	1%	3%	5%	1%	3%
Bus Blockages (#/hr)	0	8	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	23.7	29.0		13.0	18.3			31.0	31.0		31.0	
Effective Green, g (s)	24.7	30.0		14.0	19.3			32.0	32.0		32.0	
Actuated g/C Ratio	0.27	0.33		0.16	0.21			0.36	0.36		0.36	
Clearance Time (s)	4.0	8.0		4.0	8.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	426	905		224	598			454	330		381	
v/s Ratio Prot	c0.26	0.31		0.14	c0.27							
v/s Ratio Perm								c0.39	0.23		0.32	
v/c Ratio	0.94	0.93		0.92	1.24			1.11	0.65		0.91	
Uniform Delay, d1	31.9	29.0		37.5	35.4			29.0	24.3		27.6	
Progression Factor	1.00	1.07		1.00	1.00			1.04	1.01		0.94	
Incremental Delay, d2	27.9	17.0		39.5	122.1			70.1	3.7		15.8	
Delay (s)	59.9	47.9		77.0	157.5			100.3	28.3		41.7	
Level of Service	E	D		E	F			F	C		D	
Approach Delay (s)		51.8			139.9			78.7			41.7	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	82.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	446	455	685	241	430	391
v/c Ratio	1.34	0.24	0.47	0.59	0.92	1.58
Control Delay	196.3	8.7	10.8	44.6	68.5	309.6
Queue Delay	0.0	0.0	1.6	63.7	0.0	0.0
Total Delay	196.3	8.7	12.5	108.3	68.5	309.6
Queue Length 50th (ft)	~451	68	81	162	324	~430
Queue Length 95th (ft)	#397	92	100	155	#517	#625
Internal Link Dist (ft)		1070	174	143	2013	
Turn Bay Length (ft)	170					
Base Capacity (vph)	332	1936	1460	408	468	248
Starvation Cap Reductn	0	0	568	210	0	0
Spillback Cap Reductn	0	92	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.25	0.77	1.22	0.92	1.58

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.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	1	409	323	96	62	299	270	0	68	79	4	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			3.5			4.0			4.0
Lane Util. Factor		1.00	0.95			0.95			1.00			1.00
Frpb, ped/bikes		1.00	0.97			0.87			0.94			1.00
Flpb, ped/bikes		0.91	1.00			1.00			1.00			1.00
Frt		1.00	0.97			0.94			0.93			1.00
Flt Protected		0.95	1.00			1.00			1.00			1.00
Satd. Flow (prot)		1373	2941			2574			1487			1708
Flt Permitted		0.36	1.00			0.85			1.00			1.00
Satd. Flow (perm)		518	2941			2201			1487			1705
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.61	0.61	0.61	0.91	0.91
Adj. Flow (vph)	1	445	351	104	67	325	293	0	111	130	4	426
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	446	455	0	0	685	0	0	241	0	0	430
Confl. Peds. (#/hr)		76		26	26		75	107		45	45	
Confl. Bikes (#/hr)				1			3			5		
Heavy Vehicles (%)	2%	8%	5%	0%	3%	3%	1%	0%	0%	0%	0%	0%
Turn Type	Perm	Perm	NA		pm+pt	NA			NA		Perm	NA
Protected Phases			2		1	6			8			4
Permitted Phases	2	2			6			8			4	
Actuated Green, G (s)		78.0	78.0			78.5			32.0			32.0
Effective Green, g (s)		79.0	79.0			79.5			33.0			33.0
Actuated g/C Ratio		0.66	0.66			0.66			0.28			0.28
Clearance Time (s)		5.0	5.0			4.5			5.0			5.0
Vehicle Extension (s)		3.0	3.0			3.0			3.0			3.0
Lane Grp Cap (vph)		341	1936			1458			408			468
v/s Ratio Prot			0.15						0.16			
v/s Ratio Perm		c0.86				0.31						0.25
v/c Ratio		1.31	0.24			0.47			0.59			0.92
Uniform Delay, d1		20.5	8.3			9.9			37.7			42.2
Progression Factor		1.00	1.00			0.99			1.00			1.00
Incremental Delay, d2		158.2	0.3			0.2			6.2			25.6
Delay (s)		178.7	8.6			10.0			43.8			67.8
Level of Service		F	A			A			D			E
Approach Delay (s)			92.8			10.0			43.8			188.9
Approach LOS			F			A			D			F

Intersection Summary			
HCM 2000 Control Delay	96.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	356
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.75
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	932
Flt Permitted	1.00
Satd. Flow (perm)	932
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	391
RTOR Reduction (vph)	0
Lane Group Flow (vph)	391
Confl. Peds. (#/hr)	107
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	17%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	32.0
Effective Green, g (s)	32.0
Actuated g/C Ratio	0.27
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	248
v/s Ratio Prot	
v/s Ratio Perm	c0.42
v/c Ratio	1.58
Uniform Delay, d1	44.0
Progression Factor	1.00
Incremental Delay, d2	278.0
Delay (s)	322.0
Level of Service	F
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	EBL	NEL	NET	SWT	SWR
Lane Group Flow (vph)	444	564	1361	1062	192
v/c Ratio	0.46	0.82	0.48	0.88	0.42
Control Delay	28.5	54.3	12.2	42.6	31.4
Queue Delay	3.6	0.0	0.0	0.0	0.0
Total Delay	32.2	54.3	12.2	42.6	31.4
Queue Length 50th (ft)	107	210	188	410	109
Queue Length 95th (ft)	159	272	218	m441	m131
Internal Link Dist (ft)	174		355	1843	
Turn Bay Length (ft)		200			
Base Capacity (vph)	972	736	2858	1211	454
Starvation Cap Reductn	426	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.77	0.48	0.88	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NEU	NEL	NET	SWT	SWR
Lane Configurations							
Volume (vph)	401	3	38	464	1211	913	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	12	11	11	12	12
Total Lost time (s)	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor	0.97			0.97	0.91	0.95	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00	0.88
Flpb, ped/bikes	1.00			1.00	1.00	1.00	1.00
Frt	1.00			1.00	1.00	1.00	0.85
Flt Protected	0.95			0.95	1.00	1.00	1.00
Satd. Flow (prot)	3239			3046	4513	3249	1218
Flt Permitted	0.95			0.95	1.00	1.00	1.00
Satd. Flow (perm)	3239			3046	4513	3249	1218
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.89	0.86	0.86
Adj. Flow (vph)	441	3	43	521	1361	1062	192
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	444	0	0	564	1361	1062	192
Confl. Peds. (#/hr)	1			75			75
Confl. Bikes (#/hr)							5
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	5%
Turn Type	Prot		Prot	Prot	NA	NA	Perm
Protected Phases	3		1	1	6	2	
Permitted Phases							2
Actuated Green, G (s)	35.0			26.2	75.0	43.8	43.8
Effective Green, g (s)	36.0			27.2	76.0	44.8	44.8
Actuated g/C Ratio	0.30			0.23	0.63	0.37	0.37
Clearance Time (s)	5.0			5.0	5.0	5.0	5.0
Vehicle Extension (s)	4.0			4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	971			690	2858	1212	454
v/s Ratio Prot	c0.14			c0.19	0.30	c0.33	
v/s Ratio Perm							0.16
v/c Ratio	0.46			0.82	0.48	0.88	0.42
Uniform Delay, d1	34.1			44.0	11.6	35.0	28.0
Progression Factor	0.79			1.00	1.00	1.02	1.01
Incremental Delay, d2	1.5			7.8	0.6	5.8	1.8
Delay (s)	28.3			51.9	12.1	41.6	29.9
Level of Service	C			D	B	D	C
Approach Delay (s)	28.3				23.8	39.8	
Approach LOS	C				C	D	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NBT	SBL	SBT	SET	NWT
Lane Group Flow (vph)	96	396	26	309	368	551
v/c Ratio	0.30	0.60	0.11	0.50	0.81	0.96
Control Delay	8.7	9.9	17.9	23.0	39.1	52.6
Queue Delay	1.2	2.5	0.0	0.1	0.0	0.9
Total Delay	9.9	12.4	17.9	23.1	39.1	53.4
Queue Length 50th (ft)	15	61	9	127	178	301
Queue Length 95th (ft)	m21	m81	26	201	#334	m#491
Internal Link Dist (ft)		114		357	755	299
Turn Bay Length (ft)	31		110			
Base Capacity (vph)	325	661	247	624	452	571
Starvation Cap Reductn	104	156	0	0	0	3
Spillback Cap Reductn	0	0	0	16	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.78	0.11	0.51	0.81	0.97

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	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	91	369	8	23	198	77	50	210	68	10	350	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	11	11	12	12	10	12	12	11	12
Total Lost time (s)	8.0	8.0		8.0	8.0			6.0			6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.96			0.97			0.88	
Flpb, ped/bikes	0.93	1.00		0.89	1.00			0.98			1.00	
Frt	1.00	1.00		1.00	0.96			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1428	1608		1332	1517			1234			1331	
Flt Permitted	0.53	1.00		0.43	1.00			0.84			0.99	
Satd. Flow (perm)	791	1608		602	1517			1045			1319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	96	388	8	26	222	87	56	236	76	11	389	151
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	96	396	0	26	309	0	0	368	0	0	551	0
Confl. Peds. (#/hr)	93		168	168		93	247		95	95		247
Confl. Bikes (#/hr)			28			17			36			231
Heavy Vehicles (%)	2%	2%	0%	5%	0%	0%	0%	6%	0%	0%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)								5				
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	36.0	36.0		36.0	36.0			38.0			38.0	
Effective Green, g (s)	37.0	37.0		37.0	37.0			39.0			39.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.43			0.43	
Clearance Time (s)	9.0	9.0		9.0	9.0			7.0			7.0	
Lane Grp Cap (vph)	325	661		247	623			452			571	
v/s Ratio Prot		c0.25			0.20							
v/s Ratio Perm	0.12			0.04				0.35			c0.42	
v/c Ratio	0.30	0.60		0.11	0.50			0.81			0.96	
Uniform Delay, d1	17.8	20.7		16.3	19.6			22.3			24.8	
Progression Factor	0.41	0.38		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.0	1.8		0.9	2.8			14.8			25.7	
Delay (s)	8.3	9.6		17.2	22.4			37.1			50.4	
Level of Service	A	A		B	C			D			D	
Approach Delay (s)		9.4			22.0			37.1			50.4	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	636	998	82	462	15	296
v/c Ratio	1.61	1.84	0.26	0.68	0.06	0.47
Control Delay	312.0	406.7	19.8	27.4	8.5	11.2
Queue Delay	0.0	4.3	0.0	0.2	0.0	1.0
Total Delay	312.0	411.0	19.8	27.7	8.5	12.2
Queue Length 50th (ft)	~530	~909	29	207	3	58
Queue Length 95th (ft)	#631	m#514	64	321	m5	m79
Internal Link Dist (ft)	1159	220		707		114
Turn Bay Length (ft)					30	
Base Capacity (vph)	394	541	313	676	232	636
Starvation Cap Reductn	0	199	0	0	0	149
Spillback Cap Reductn	0	0	0	21	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.61	2.92	0.26	0.71	0.06	0.61

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												
Volume (vph)	63	429	17	26	852	20	78	384	55	13	192	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	12	10	12	10	12	12	11	11	12
Total Lost time (s)		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	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.95	
Flpb, ped/bikes		1.00			1.00		0.90	1.00		0.94	1.00	
Frt		1.00			1.00		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1509			1317		1331	1603		1475	1508	
Flt Permitted		0.61			0.97		0.53	1.00		0.35	1.00	
Satd. Flow (perm)		930			1280		743	1603		550	1508	
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	79	536	21	29	947	22	82	404	58	15	216	80
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	635	0	0	997	0	82	462	0	15	296	0
Confl. Peds. (#/hr)	99		160	160		99	124		111	111		124
Confl. Bikes (#/hr)			15			85			42			19
Heavy Vehicles (%)	2%	4%	6%	0%	2%	0%	3%	2%	4%	0%	0%	0%
Parking (#/hr)		10			10							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.0			37.0		37.0	37.0		37.0	37.0	
Effective Green, g (s)		38.0			38.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
Clearance Time (s)		8.0			8.0		8.0	8.0		8.0	8.0	
Lane Grp Cap (vph)		392			540		313	676		232	636	
v/s Ratio Prot								c0.29			0.20	
v/s Ratio Perm		0.68			c0.78		0.11			0.03		
v/c Ratio		1.62			1.85		0.26	0.68		0.06	0.47	
Uniform Delay, d1		26.0			26.0		16.9	21.1		15.4	18.7	
Progression Factor		1.00			1.45		1.00	1.00		0.51	0.48	
Incremental Delay, d2		290.3			381.4		2.0	5.5		0.4	2.0	
Delay (s)		316.3			419.0		18.9	26.6		8.2	10.9	
Level of Service		F			F		B	C		A	B	
Approach Delay (s)		316.3			419.0			25.5			10.8	
Approach LOS		F			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	255.8	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)	14.0
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	574	19	34	901	419	72	131	327	28
v/c Ratio	2.44	0.04	0.33	1.56	0.64	0.99	0.38	1.09	0.12
Control Delay	670.3	19.6	10.7	269.9	9.0	143.0	34.3	103.5	23.1
Queue Delay	0.0	0.0	0.0	12.7	0.3	620.7	87.7	0.0	0.0
Total Delay	670.3	19.6	10.7	282.6	9.3	763.7	122.0	103.5	23.1
Queue Length 50th (ft)	~571	9	6	~708	41	41	64	~208	8
Queue Length 95th (ft)	m#346	m7	m6	m#527	m35	#113	106	m#320	m16
Internal Link Dist (ft)	220			435			247		299
Turn Bay Length (ft)		50	100						
Base Capacity (vph)	235	456	103	579	654	73	344	299	236
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	390	33	73	275	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.44	0.04	0.33	4.77	0.67	72.00	1.90	1.09	0.12

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												
Volume (vph)	12	470	16	31	820	381	59	104	3	298	9	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	10	10	11	11	12	10	10	12
Total Lost time (s)		7.0	7.0	7.0	7.0	7.0	5.0	5.0		7.0	7.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.92	1.00	1.00	0.86	1.00	0.99		1.00	0.89	
Flpb, ped/bikes		1.00	1.00	0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.90	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1563	1246	1486	1580	1132	1570	1633		1417	1120	
Flt Permitted		0.41	1.00	0.18	1.00	1.00	0.21	1.00		0.95	1.00	
Satd. Flow (perm)		641	1246	283	1580	1132	348	1633		1417	1120	
Peak-hour factor, PHF	0.84	0.84	0.84	0.91	0.91	0.91	0.82	0.82	0.82	0.91	0.91	0.91
Adj. Flow (vph)	14	560	19	34	901	419	72	127	4	327	10	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	574	19	34	901	419	72	131	0	327	28	0
Confl. Peds. (#/hr)	82		45	45		82	60		156			60
Confl. Bikes (#/hr)			1						18			5
Heavy Vehicles (%)	8%	3%	7%	0%	1%	3%	0%	0%	0%	7%	0%	0%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											5	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Perm	NA		Split	NA	
Protected Phases		2			6	4		3		4	4	
Permitted Phases	2		2	6		6	3					
Actuated Green, G (s)		32.0	32.0	32.0	32.0	50.0	18.0	18.0		18.0	18.0	
Effective Green, g (s)		33.0	33.0	33.0	33.0	52.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.37	0.37	0.37	0.37	0.58	0.21	0.21		0.21	0.21	
Clearance Time (s)		8.0	8.0	8.0	8.0	8.0	6.0	6.0		8.0	8.0	
Lane Grp Cap (vph)		235	456	103	579	742	73	344		299	236	
v/s Ratio Prot					0.57	0.12		0.08		c0.23	0.02	
v/s Ratio Perm		c0.90	0.02	0.12		0.25	c0.21					
v/c Ratio		2.44	0.04	0.33	1.56	0.56	0.99	0.38		1.09	0.12	
Uniform Delay, d1		28.5	18.3	20.5	28.5	11.9	35.4	30.5		35.5	28.7	
Progression Factor		1.14	1.05	0.43	0.43	0.94	1.00	1.00		0.71	0.76	
Incremental Delay, d2		650.3	0.0	0.8	251.0	0.3	101.6	3.2		75.1	0.9	
Delay (s)		682.9	19.2	9.6	263.2	11.5	136.9	33.6		100.4	22.6	
Level of Service		F	B	A	F	B	F	C		F	C	
Approach Delay (s)		661.7			178.9			70.3			94.2	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	272.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	219	474	70	193	816	144	882	80	541	321
v/c Ratio	1.12	1.08	0.25	1.50	1.18	0.77	0.98	0.63	1.16	2.20
Control Delay	104.2	73.6	26.8	289.4	125.3	51.9	52.6	52.9	106.3	571.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.2	73.6	26.8	289.4	125.3	51.9	52.6	52.9	106.3	571.4
Queue Length 50th (ft)	~141	~296	26	~158	~288	79	~312	39	~372	~308
Queue Length 95th (ft)	m71	m136	m15	m#219	#374	m86	m#307	m45	m#417	m#334
Internal Link Dist (ft)		435			559		702		645	
Turn Bay Length (ft)	100			285		250		225		
Base Capacity (vph)	196	439	277	129	691	191	902	128	467	146
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.08	0.25	1.50	1.18	0.75	0.98	0.63	1.16	2.20

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												
Volume (vph)	206	446	66	164	639	54	122	641	109	74	498	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11	12	11	11
Total Lost time (s)	7.0	4.0	4.0	7.0	4.0		4.0	4.0		7.0	4.0	7.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.72	1.00	0.97		1.00	0.97		1.00	1.00	0.80
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1472	1522	959	1458	2827		1570	2804		1450	1605	1102
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1472	1522	959	1458	2827		1570	2804		1450	1605	1102
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	219	474	70	193	752	64	144	754	128	80	541	321
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	219	474	70	193	816	0	144	882	0	80	541	321
Confl. Peds. (#/hr)			200			150			75			75
Confl. Bikes (#/hr)			55			182			13			19
Heavy Vehicles (%)	3%	6%	2%	4%	3%	29%	0%	6%	7%	12%	3%	2%
Bus Blockages (#/hr)	0	6	0	0	8	0	0	0	0	0	0	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	custom
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									5
Actuated Green, G (s)	11.0	23.4	23.4	7.0	19.4		9.8	28.0		5.6	26.8	11.0
Effective Green, g (s)	12.0	24.4	24.4	8.0	20.4		10.8	29.0		6.6	27.8	12.0
Actuated g/C Ratio	0.13	0.27	0.27	0.09	0.23		0.12	0.32		0.07	0.31	0.13
Clearance Time (s)	8.0	5.0	5.0	8.0	5.0		5.0	5.0		8.0	5.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	196	412	259	129	640		188	903		106	495	146
v/s Ratio Prot	0.15	c0.31		0.13	0.29		c0.09	0.31		0.06	c0.34	
v/s Ratio Perm			0.07									c0.29
v/c Ratio	1.12	1.15	0.27	1.50	1.27		0.77	0.98		0.75	1.09	2.20
Uniform Delay, d1	39.0	32.8	25.8	41.0	34.8		38.4	30.2		40.9	31.1	39.0
Progression Factor	1.22	1.01	1.04	1.31	0.99		0.99	1.16		1.04	0.68	0.97
Incremental Delay, d2	59.8	70.6	0.2	252.0	133.1		7.9	14.5		12.0	55.3	548.7
Delay (s)	107.2	103.9	27.2	305.8	167.7		45.7	49.6		54.7	76.6	586.4
Level of Service	F	F	C	F	F		D	D		D	E	F
Approach Delay (s)		97.8			194.1			49.1			248.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	148.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	642	79	182	468	290	298
v/c Ratio	1.14	0.27	0.46	0.83	0.86	0.96
Control Delay	95.1	34.6	19.6	41.5	52.0	83.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.1	34.6	19.6	41.5	52.0	83.5
Queue Length 50th (ft)	~412	42	56	205	111	184
Queue Length 95th (ft)	m#412	m45	m73	m269	m#245	m#290
Internal Link Dist (ft)	559			882	481	
Turn Bay Length (ft)		150	160			50
Base Capacity (vph)	561	295	397	561	336	311
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	0.27	0.46	0.83	0.86	0.96

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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	571	70	177	454	249	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	10	10	11
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	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	1.00
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	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1580	1330	1555	1580	1516	1219
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1580	1330	1555	1580	1516	1219
Peak-hour factor, PHF	0.89	0.89	0.97	0.97	0.86	0.86
Adj. Flow (vph)	642	79	182	468	290	298
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	642	79	182	468	290	298
Confl. Peds. (#/hr)		898				407
Confl. Bikes (#/hr)		52				
Heavy Vehicles (%)	1%	2%	1%	1%	0%	2%
Parking (#/hr)						3
Turn Type	NA	Over	Prot	NA	Prot	Over
Protected Phases	2	4	3	2	4	3!
Permitted Phases						
Actuated Green, G (s)	31.0	19.0	22.0	31.0	19.0	22.0
Effective Green, g (s)	32.0	20.0	23.0	32.0	20.0	23.0
Actuated g/C Ratio	0.36	0.22	0.26	0.36	0.22	0.26
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0
Lane Grp Cap (vph)	561	295	397	561	336	311
v/s Ratio Prot	c0.41	0.06	0.12	0.30	c0.19	c0.24
v/s Ratio Perm						
v/c Ratio	1.14	0.27	0.46	0.83	0.86	0.96
Uniform Delay, d1	29.0	28.9	28.2	26.6	33.7	33.0
Progression Factor	0.68	1.14	0.62	1.25	0.88	1.41
Incremental Delay, d2	72.3	0.7	1.8	6.9	20.4	36.3
Delay (s)	92.1	33.8	19.2	40.2	49.9	82.8
Level of Service	F	C	B	D	D	F
Approach Delay (s)	85.7			34.4	66.5	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	62.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	47	57	519	12	13	667
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.78	0.78	0.90	0.90	0.91	0.91
Hourly flow rate (vph)	60	73	577	13	14	733
Pedestrians	300		5			34
Lane Width (ft)	13.0		11.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	27		0			3
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			296			907
pX, platoon unblocked						
vC, conflicting volume	1650	917			890	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1650	917			890	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	21	69			97	
cM capacity (veh/h)	76	235			561	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	133	590	747
Volume Left	60	0	14
Volume Right	73	13	0
cSH	121	1700	561
Volume to Capacity	1.10	0.35	0.03
Queue Length 95th (ft)	197	0	2
Control Delay (s)	181.4	0.0	0.7
Lane LOS	F		A
Approach Delay (s)	181.4	0.0	0.7
Approach LOS	F		

Intersection Summary			
Average Delay	16.8		
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR2
Lane Group Flow (vph)	338	752	504	215	564	252
v/c Ratio	0.99	0.71	0.88	0.51	1.18	0.82
Control Delay	71.3	24.9	45.5	30.4	130.6	47.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	24.9	45.5	30.4	130.6	47.7
Queue Length 50th (ft)	210	127	264	99	~395	127
Queue Length 95th (ft)	m208	m123	#449	170	m#506	m#170
Internal Link Dist (ft)		882	68		136	
Turn Bay Length (ft)	340					200
Base Capacity (vph)	340	1055	576	424	479	308
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	0.99	0.71	0.88	0.51	1.18	0.82

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	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	301	596	75	0	489	209	468	25	258	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	12	12	11	11	11	12	11	13	12
Total Lost time (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00		0.95		
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00		1.00		
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	0.98			1.00	0.85	0.99		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.96		1.00		
Satd. Flow (prot)	1458	2968			1621	1364	1542		1322		
Flt Permitted	0.95	1.00			1.00	1.00	0.96		1.00		
Satd. Flow (perm)	1458	2968			1621	1364	1542		1322		
Peak-hour factor, PHF	0.89	0.89	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	338	670	82	0	504	215	509	27	280	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	338	752	0	0	504	215	564	0	252	0	0
Confl. Peds. (#/hr)			100								
Confl. Bikes (#/hr)						175					
Heavy Vehicles (%)	4%	2%	2%	2%	2%	3%	1%	2%	1%	2%	2%
Turn Type	Prot	NA			NA	Over	Prot		Over		
Protected Phases	4	2			6	3	3		4		
Permitted Phases											
Actuated Green, G (s)	20.0	31.0			31.0	27.0	27.0		20.0		
Effective Green, g (s)	21.0	32.0			32.0	28.0	28.0		21.0		
Actuated g/C Ratio	0.23	0.36			0.36	0.31	0.31		0.23		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	340	1055			576	424	479		308		
v/s Ratio Prot	c0.23	0.25			c0.31	0.16	c0.37		0.19		
v/s Ratio Perm											
v/c Ratio	0.99	0.71			0.88	0.51	1.18		0.82		
Uniform Delay, d1	34.4	25.0			27.1	25.4	31.0		32.7		
Progression Factor	1.23	0.92			1.00	1.00	1.14		0.85		
Incremental Delay, d2	27.6	1.5			16.8	4.3	96.9		17.9		
Delay (s)	70.1	24.5			44.0	29.6	132.4		45.7		
Level of Service	E	C			D	C	F		D		
Approach Delay (s)		38.6			39.7		105.6			0.0	
Approach LOS		D			D		F			A	

Intersection Summary			
HCM 2000 Control Delay	59.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	398	433	107	367	675	60	446	256
v/c Ratio	1.28	0.59	0.45	0.51	0.90	0.38	0.76	0.76
Control Delay	173.6	21.4	20.4	19.9	44.4	18.4	19.9	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	173.6	21.4	20.4	19.9	44.4	18.4	19.9	21.6
Queue Length 50th (ft)	~289	172	60	211	187	14	104	60
Queue Length 95th (ft)	#465	270	m56	m183	#235	m13	m89	m52
Internal Link Dist (ft)		749		410	521		702	
Turn Bay Length (ft)			120					180
Base Capacity (vph)	311	729	239	720	749	159	588	338
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	1.28	0.59	0.45	0.51	0.90	0.38	0.76	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	382	339	77	90	260	48	38	338	171	57	424	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	12	12	10	11	11	10	12	11	10	11	10
Total Lost time (s)	7.0	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			0.95		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.93		1.00	0.95			0.91		1.00	1.00	0.70
Flpb, ped/bikes	0.82	1.00		0.82	1.00			0.99		0.91	1.00	1.00
Frt	1.00	0.97		1.00	0.98			0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1296	1528		1145	1506			2576		1330	1605	922
Flt Permitted	0.48	1.00		0.42	1.00			0.79		0.31	1.00	1.00
Satd. Flow (perm)	654	1528		503	1506			2046		435	1605	922
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.81	0.81	0.81	0.95	0.95	0.95
Adj. Flow (vph)	398	353	80	107	310	57	47	417	211	60	446	256
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	398	433	0	107	367	0	0	675	0	60	446	256
Confl. Peds. (#/hr)	635		347	347		635	203		179	179		203
Confl. Bikes (#/hr)			29			36			39			
Heavy Vehicles (%)	6%	1%	0%	8%	1%	5%	0%	7%	11%	4%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Actuated Green, G (s)	42.0	42.0		42.0	42.0			32.0		32.0	32.0	32.0
Effective Green, g (s)	43.0	43.0		43.0	43.0			33.0		33.0	33.0	33.0
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.37		0.37	0.37	0.37
Clearance Time (s)	8.0	8.0		8.0	8.0			8.0		8.0	8.0	8.0
Lane Grp Cap (vph)	312	730		240	719			750		159	588	338
v/s Ratio Prot		0.28			0.24						0.28	
v/s Ratio Perm	c0.61			0.21				c0.33		0.14		0.28
v/c Ratio	1.28	0.59		0.45	0.51			0.90		0.38	0.76	0.76
Uniform Delay, d1	23.5	17.1		15.6	16.2			26.9		20.9	25.0	25.0
Progression Factor	1.00	1.00		1.16	1.17			1.00		0.78	0.72	0.72
Incremental Delay, d2	146.6	3.5		0.5	0.2			15.9		0.6	0.9	1.5
Delay (s)	170.1	20.7		18.6	19.2			42.9		16.9	18.9	19.5
Level of Service	F	C		B	B			D		B	B	B
Approach Delay (s)		92.2			19.1			42.9			18.9	
Approach LOS		F			B			D			B	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	128.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	66	549	32	101	238	405	392
v/c Ratio	0.50	1.58	0.53	0.53	1.16	0.78	1.36
Control Delay	36.8	294.2	63.2	39.0	143.1	37.6	203.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	294.2	63.2	39.0	143.1	37.6	203.3
Queue Length 50th (ft)	29	~463	15	50	~170	210	~294
Queue Length 95th (ft)	m51	m#635	#60	103	#287	297	#327
Internal Link Dist (ft)		410		639		920	481
Turn Bay Length (ft)	25		25		25		
Base Capacity (vph)	132	348	60	189	205	516	288
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	0.50	1.58	0.53	0.53	1.16	0.78	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												
Volume (vph)	67	400	98	31	46	38	220	302	12	64	110	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	16	12	12	13	12	12	10	11
Total Lost time (s)	5.0	4.0		5.0	4.0		5.0	4.0			4.0	
Lane Util. Factor	0.95	0.95		0.95	0.95		0.95	0.95			1.00	
Frpb, ped/bikes	1.00	0.86		1.00	0.71		1.00	0.99			0.84	
Flpb, ped/bikes	0.44	0.99		0.84	0.99		0.83	0.99			0.97	
Frt	1.00	0.97		1.00	0.93		1.00	0.99			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	657	1211		1297	1037		1248	1422			1210	
Flt Permitted	0.69	1.00		0.16	0.63		0.43	0.96			0.62	
Satd. Flow (perm)	475	1208		218	656		560	1369			763	
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.83	0.83	0.83	0.78	0.78	0.78
Adj. Flow (vph)	73	435	107	36	53	44	265	364	14	82	141	169
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	66	549	0	32	101	0	238	405	0	0	392	0
Confl. Peds. (#/hr)	685		789	789		685	263		218	218		263
Confl. Bikes (#/hr)			39			42			19			4
Heavy Vehicles (%)	3%	1%	1%	0%	2%	3%	3%	0%	0%	2%	1%	0%
Parking (#/hr)		5			5			5				5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		33.0	33.0			33.0	
Effective Green, g (s)	25.0	26.0		25.0	26.0		33.0	34.0			34.0	
Actuated g/C Ratio	0.28	0.29		0.28	0.29		0.37	0.38			0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)	131	348		60	189		205	517			288	
v/s Ratio Prot												
v/s Ratio Perm	0.14	c0.45		0.15	0.15		0.42	0.30			c0.51	
v/c Ratio	0.50	1.58		0.53	0.53		1.16	0.78			1.36	
Uniform Delay, d1	27.3	32.0		27.6	26.9		28.5	24.7			28.0	
Progression Factor	0.92	0.81		1.00	1.00		1.00	1.00			0.51	
Incremental Delay, d2	9.7	269.8		30.0	10.4		113.0	11.3			183.0	
Delay (s)	34.9	295.8		57.6	37.3		141.5	36.0			197.4	
Level of Service	C	F		E	D		F	D			F	
Approach Delay (s)		267.8			42.2			75.1			197.4	
Approach LOS		F			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	166.0	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)	17.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	339	121	0	0	0	166
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.74	0.74
Hourly flow rate (vph)	365	130	0	0	0	224
Pedestrians					291	
Lane Width (ft)					10.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					20	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1034					
pX, platoon unblocked						
vC, conflicting volume			786		721	721
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			786		721	721
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	34
cM capacity (veh/h)			672		317	341

Direction, Lane #	EB 1	NB 1
Volume Total	495	224
Volume Left	0	0
Volume Right	130	224
cSH	1700	341
Volume to Capacity	0.29	0.66
Queue Length 95th (ft)	0	111
Control Delay (s)	0.0	33.7
Lane LOS		D
Approach Delay (s)	0.0	33.7
Approach LOS		D

Intersection Summary			
Average Delay	10.5		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	673	16	0	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.99	0.99	0.60	0.60
Hourly flow rate (vph)	0	0	680	16	0	42
Pedestrians					189	
Lane Width (ft)					16.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					21	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		703				
pX, platoon unblocked						
vC, conflicting volume	885				877	537
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	885				877	537
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	89
cM capacity (veh/h)	601				230	382

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	0	0	453	243	42
Volume Left	0	0	0	0	0
Volume Right	0	0	0	16	42
cSH	1700	1700	1700	1700	382
Volume to Capacity	0.00	0.00	0.27	0.14	0.11
Queue Length 95th (ft)	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	15.6
Lane LOS					C
Approach Delay (s)	0.0		0.0		15.6
Approach LOS					C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1398	236	0	568	168	0	0	0	0	0	118
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.61	0.61	0.61
Hourly flow rate (vph)	0	1472	248	0	598	177	0	0	0	0	0	193
Pedestrians								317			189	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			16	
Right turn flare (veh)												
Median type		None			Raised							
Median storage veh)					1							
Upstream signal (ft)		1273										
pX, platoon unblocked												
vC, conflicting volume	964			2037			2793	2877	1177	1611	2912	875
vC1, stage 1 conf vol							1913	1913		875	875	
vC2, stage 2 conf vol							880	964		736	2037	
vCu, unblocked vol	964			2037			2793	2877	1177	1611	2912	875
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			100			100	100	100	100	100	19
cM capacity (veh/h)	609			281			30	79	184	166	74	238

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	981	739	775	193
Volume Left	0	0	0	0
Volume Right	0	248	177	193
cSH	1700	1700	1700	238
Volume to Capacity	0.58	0.43	0.46	0.81
Queue Length 95th (ft)	0	0	0	154
Control Delay (s)	0.0	0.0	0.0	63.4
Lane LOS				F
Approach Delay (s)	0.0		0.0	63.4
Approach LOS				F

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	146	530	0	0	98	136
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.84	0.84	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	174	631	0	0	115	160
Pedestrians	98		152			197
Lane Width (ft)	13.0		0.0			13.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	9		0			18
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1000
pX, platoon unblocked						
vC, conflicting volume	641	295			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	641	295			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	53	0			92	
cM capacity (veh/h)	368	558			1374	

Direction, Lane #	WB 1	SB 1
Volume Total	805	275
Volume Left	174	115
Volume Right	631	0
cSH	502	1374
Volume to Capacity	1.60	0.08
Queue Length 95th (ft)	1115	7
Control Delay (s)	301.5	3.7
Lane LOS	F	A
Approach Delay (s)	301.5	3.7
Approach LOS	F	

Intersection Summary			
Average Delay	225.6		
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	11	87	641	9	2	36
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.98	0.98	0.67	0.67
Hourly flow rate (vph)	14	109	654	9	3	54
Pedestrians		20	35		122	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		2	3		10	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	785				952	801
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	785				952	801
tC, single (s)	4.3				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.4				3.5	3.3
p0 queue free %	98				99	84
cM capacity (veh/h)	689				248	337

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	122	663	57
Volume Left	14	0	3
Volume Right	0	9	54
cSH	689	1700	331
Volume to Capacity	0.02	0.39	0.17
Queue Length 95th (ft)	2	0	15
Control Delay (s)	1.4	0.0	18.1
Lane LOS	A		C
Approach Delay (s)	1.4	0.0	18.1
Approach LOS			C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	42	19	128	93	112	220
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.71	0.71	0.83	0.83	0.85	0.85
Hourly flow rate (vph)	59	27	154	112	132	259
Pedestrians	42			71	86	
Lane Width (ft)	14.0			12.0	10.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	4			6	6	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				320		
pX, platoon unblocked	0.93					
vC, conflicting volume	810	374	433			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	756	374	433			
tC, single (s)	6.4	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	78	96	86			
cM capacity (veh/h)	272	599	1086			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	86	266	391
Volume Left	59	154	0
Volume Right	27	0	259
cSH	328	1086	1700
Volume to Capacity	0.26	0.14	0.23
Queue Length 95th (ft)	26	12	0
Control Delay (s)	19.8	5.7	0.0
Lane LOS	C	A	
Approach Delay (s)	19.8	5.7	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	66	1560	0	0	0	0	0	101	180
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	74	1753	0	0	0	0	0	112	200
Pedestrians		49										
Lane Width (ft)		0.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					974							
pX, platoon unblocked	0.45						0.45	0.45		0.45	0.45	0.45
vC, conflicting volume	1753			0			1330	1901	0	1901	1901	925
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	210			0			0	542	0	542	542	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.6	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	100			95			100	100	100	100	42	58
cM capacity (veh/h)	607			1636			138	190	1084	182	192	478

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	658	1169	312
Volume Left	74	0	0
Volume Right	0	0	200
cSH	1636	1700	311
Volume to Capacity	0.05	0.69	1.00
Queue Length 95th (ft)	4	0	272
Control Delay (s)	1.3	0.0	89.4
Lane LOS	A		F
Approach Delay (s)	0.5		89.4
Approach LOS			F

Intersection Summary			
Average Delay	13.4		
Intersection Capacity Utilization	129.1%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	1773	24	172	179
v/c Ratio	0.96	0.06	0.41	0.46
Control Delay	30.5	29.2	35.0	30.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.5	29.2	35.0	30.4
Queue Length 50th (ft)	498	12	92	78
Queue Length 95th (ft)	#721	21	118	109
Internal Link Dist (ft)	356		20	
Turn Bay Length (ft)				
Base Capacity (vph)	1845	404	417	385
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	0.96	0.06	0.41	0.46

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												
Volume (vph)	0	0	0	0	1479	99	14	122	0	0	0	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	12	12	12	12	12	12	12
Total Lost time (s)					5.0		4.0	4.0				4.0
Lane Util. Factor					0.95		1.00	1.00				1.00
Frpb, ped/bikes					0.98		1.00	1.00				1.00
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					0.99		1.00	1.00				0.86
Flt Protected					1.00		0.95	1.00				1.00
Satd. Flow (prot)					2789		1624	1676				1450
Flt Permitted					1.00		0.95	1.00				1.00
Satd. Flow (perm)					2789		1624	1676				1450
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.58	0.71	0.92	0.73	0.73	0.73
Adj. Flow (vph)	0	0	0	0	1662	111	24	172	0	0	0	179
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	0	0	1773	0	24	172	0	0	0	154
Confl. Peds. (#/hr)						117						
Confl. Bikes (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	0%	0%	2%	0%	2%	2%	0%	0%	2%
Parking (#/hr)					0	5						
Turn Type					NA		Split	NA				Perm
Protected Phases					2		4	4				
Permitted Phases												4
Actuated Green, G (s)					65.5		24.0	24.0				24.0
Effective Green, g (s)					66.5		25.0	25.0				25.0
Actuated g/C Ratio					0.66		0.25	0.25				0.25
Clearance Time (s)					6.0		5.0	5.0				5.0
Vehicle Extension (s)					3.0		3.0	3.0				3.0
Lane Grp Cap (vph)					1845		403	416				360
v/s Ratio Prot					c0.64		0.01	0.10				
v/s Ratio Perm												c0.11
v/c Ratio					0.96		0.06	0.41				0.43
Uniform Delay, d1					15.8		28.8	31.6				31.7
Progression Factor					1.00		1.00	1.00				1.00
Incremental Delay, d2					13.6		0.1	0.7				0.8
Delay (s)					29.4		28.8	32.3				32.6
Level of Service					C		C	C				C
Approach Delay (s)		0.0			29.4			31.9			32.6	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	1398	0	0	568	0	385
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.80	0.80
Hourly flow rate (vph)	1520	0	0	617	0	481
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage veh)	1			1		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1520		2137	760
vC1, stage 1 conf vol					1520	
vC2, stage 2 conf vol					617	
vCu, unblocked vol			1520		2137	760
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	0
cM capacity (veh/h)			435		130	351

Direction, Lane #	EB 1	EB 2	WB 1	NE 1
Volume Total	760	760	617	481
Volume Left	0	0	0	0
Volume Right	0	0	0	481
cSH	1700	1700	1700	351
Volume to Capacity	0.45	0.45	0.36	1.37
Queue Length 95th (ft)	0	0	0	597
Control Delay (s)	0.0	0.0	0.0	214.4
Lane LOS				F
Approach Delay (s)	0.0		0.0	214.4
Approach LOS				F

Intersection Summary			
Average Delay	39.4		
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	1764	0	0	168	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.96	0.92	0.92	0.69	0.69
Hourly flow rate (vph)	0	1838	0	0	243	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			873			
pX, platoon unblocked						
vC, conflicting volume	0				919	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				919	0
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				11	100
cM capacity (veh/h)	1622				274	1091

Direction, Lane #	EB 1	EB 2	SB 1
Volume Total	919	919	243
Volume Left	0	0	243
Volume Right	0	0	0
cSH	1700	1700	274
Volume to Capacity	0.54	0.54	0.89
Queue Length 95th (ft)	0	0	196
Control Delay (s)	0.0	0.0	69.6
Lane LOS			F
Approach Delay (s)	0.0		69.6
Approach LOS			F

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	134.9%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT
Lane Group Flow (vph)	145	1913
v/c Ratio	0.10	0.64
Control Delay	0.1	1.0
Queue Delay	0.0	0.0
Total Delay	0.2	1.0
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		793
Turn Bay Length (ft)	330	
Base Capacity (vph)	1486	3002
Starvation Cap Reductn	0	0
Spillback Cap Reductn	436	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.14	0.64

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	136	1798	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Total Lost time (s)	5.0	5.0				
Lane Util. Factor	1.00	0.95				
Frt	1.00	1.00				
Flt Protected	0.95	1.00				
Satd. Flow (prot)	1486	3002				
Flt Permitted	0.95	1.00				
Satd. Flow (perm)	1486	3002				
Peak-hour factor, PHF	0.94	0.94	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	1913	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	145	1913	0	0	0	0
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%
Turn Type	Split	NA				
Protected Phases	2 4	2 4				
Permitted Phases						
Actuated Green, G (s)	100.5	100.5				
Effective Green, g (s)	96.5	96.5				
Actuated g/C Ratio	0.96	0.96				
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	1426	2882				
v/s Ratio Prot	0.10	c0.64				
v/s Ratio Perm						
v/c Ratio	0.10	0.66				
Uniform Delay, d1	0.1	0.2				
Progression Factor	1.00	1.00				
Incremental Delay, d2	0.0	0.6				
Delay (s)	0.1	0.8				
Level of Service	A	A				
Approach Delay (s)		0.8	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	0.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	125.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	31	1764	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	1838	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1075			
pX, platoon unblocked						
vC, conflicting volume	0				983	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				983	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	100
cM capacity (veh/h)	1636				241	1084

Direction, Lane #	EB 1	EB 2	EB 3
Volume Total	32	919	919
Volume Left	32	0	0
Volume Right	0	0	0
cSH	1636	1700	1700
Volume to Capacity	0.02	0.54	0.54
Queue Length 95th (ft)	2	0	0
Control Delay (s)	7.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.1		
Approach LOS			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	0	0	0	1560	31	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.91	0.88	0.62	0.95
Hourly flow rate (vph)	0	0	0	1773	50	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1066		
pX, platoon unblocked					0.54	
vC, conflicting volume			0		886	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
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		91	100
cM capacity (veh/h)			1636		555	1091

Direction, Lane #	WB 1	WB 2	NW 1
Volume Total	886	886	50
Volume Left	0	0	50
Volume Right	0	0	0
cSH	1700	1700	555
Volume to Capacity	0.52	0.52	0.09
Queue Length 95th (ft)	0	0	7
Control Delay (s)	0.0	0.0	12.1
Lane LOS			B
Approach Delay (s)	0.0		12.1
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	955	404	1251	351	105	477
v/c Ratio	0.79	0.87	0.84	0.93	0.27	0.74
Control Delay	51.6	64.3	38.8	37.0	6.1	46.2
Queue Delay	0.9	52.4	48.3	45.8	4.1	0.0
Total Delay	52.5	116.7	87.1	82.7	10.2	46.2
Queue Length 50th (ft)	183	117	345	221	22	152
Queue Length 95th (ft)	m228	m132	m366	m#327	m25	210
Internal Link Dist (ft)	748		247		90	324
Turn Bay Length (ft)		230				
Base Capacity (vph)	1206	464	1485	376	396	642
Starvation Cap Reductn	0	0	458	68	222	0
Spillback Cap Reductn	78	151	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	1.29	1.22	1.14	0.60	0.74

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	776	103	372	1131	20	323	97	0	108	331	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	11	11	11
Total Lost time (s)		5.0		5.0	5.0		5.0	5.0			5.0	
Lane Util. Factor		0.91		0.97	0.95		1.00	1.00			0.95	
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		0.98		1.00	1.00		1.00	1.00			1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)		4829		3319	3375		1711	1801			3380	
Flt Permitted		1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (perm)		4829		3319	3375		1711	1801			3380	
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	843	112	404	1229	22	351	105	0	117	360	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	955	0	404	1250	0	351	105	0	0	477	0
Confl. Peds. (#/hr)						500			500			151
Turn Type		NA		Prot	NA		Split	NA		Split	NA	
Protected Phases		1		2	1 2		5	5		4	4	
Permitted Phases												
Actuated Green, G (s)		25.0		14.0	44.0		22.0	22.0			19.0	
Effective Green, g (s)		25.0		14.0	44.0		22.0	22.0			19.0	
Actuated g/C Ratio		0.25		0.14	0.44		0.22	0.22			0.19	
Clearance Time (s)		5.0		5.0			5.0	5.0			5.0	
Lane Grp Cap (vph)		1207		464	1485		376	396			642	
v/s Ratio Prot		0.20		0.12	c0.37		c0.21	0.06			c0.14	
v/s Ratio Perm												
v/c Ratio		0.79		0.87	0.84		0.93	0.27			0.74	
Uniform Delay, d1		35.1		42.1	24.9		38.3	32.3			38.2	
Progression Factor		1.37		1.22	1.39		0.24	0.16			1.00	
Incremental Delay, d2		3.1		12.6	3.6		23.3	1.0			7.6	
Delay (s)		51.2		64.0	38.2		32.6	6.0			45.8	
Level of Service		D		E	D		C	A			D	
Approach Delay (s)		51.2			44.5			26.5			45.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	44.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Build Mitigated Conditions

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	53	218	0	0	270	81
Peak Hour Factor	0.94	0.94	0.50	0.50	0.86	0.86
Hourly flow rate (vph)	56	232	0	0	314	94

Direction, Lane #	WB 1	SB 1
Volume Total (vph)	288	408
Volume Left (vph)	56	314
Volume Right (vph)	232	0
Hadj (s)	-0.15	0.29
Departure Headway (s)	4.8	4.9
Degree Utilization, x	0.39	0.56
Capacity (veh/h)	701	699
Control Delay (s)	10.8	14.0
Approach Delay (s)	10.8	14.0
Approach LOS	B	B

Intersection Summary			
Delay	12.7		
Level of Service	B		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	142	500	0	0	96	120
Peak Hour Factor	0.84	0.84	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	169	595	0	0	113	141

Direction, Lane #	WB 1	SB 1
Volume Total (vph)	764	254
Volume Left (vph)	169	113
Volume Right (vph)	595	0
Hadj (s)	-0.39	0.11
Departure Headway (s)	4.3	5.8
Degree Utilization, x	0.91	0.41
Capacity (veh/h)	827	607
Control Delay (s)	34.0	12.7
Approach Delay (s)	34.0	12.7
Approach LOS	D	B

Intersection Summary			
Delay	28.7		
Level of Service	D		
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	41	18	120	90	94	217
Peak Hour Factor	0.71	0.71	0.83	0.83	0.85	0.85
Hourly flow rate (vph)	58	25	145	108	111	255

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	83	253	366
Volume Left (vph)	58	145	0
Volume Right (vph)	25	0	255
Hadj (s)	-0.01	0.16	-0.38
Departure Headway (s)	5.2	4.7	4.0
Degree Utilization, x	0.12	0.33	0.41
Capacity (veh/h)	617	749	863
Control Delay (s)	8.9	9.9	9.8
Approach Delay (s)	8.9	9.9	9.8
Approach LOS	A	A	A

Intersection Summary			
Delay	9.7		
Level of Service	A		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	92	2	167	267	32	71
Peak Hour Factor	0.53	0.53	0.93	0.93	0.74	0.74
Hourly flow rate (vph)	174	4	180	287	43	96

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	177	467	139
Volume Left (vph)	174	180	0
Volume Right (vph)	4	0	96
Hadj (s)	0.32	0.08	-0.37
Departure Headway (s)	5.6	4.7	4.6
Degree Utilization, x	0.28	0.61	0.18
Capacity (veh/h)	584	750	726
Control Delay (s)	10.8	14.6	8.6
Approach Delay (s)	10.8	14.6	8.6
Approach LOS	B	B	A

Intersection Summary			
Delay	12.7		
Level of Service	B		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

Crash Data Reports

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

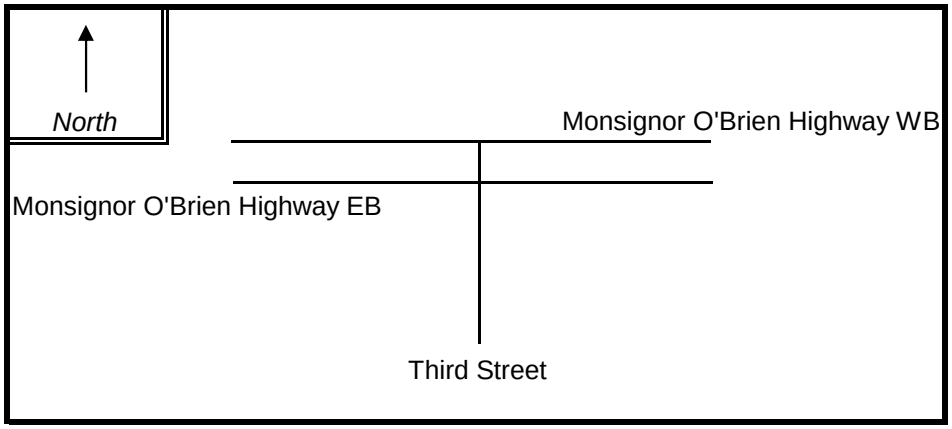
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Monsignor O'Brien Highway

MINOR STREET(S) : Third Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	832	3	1,309	1,040		**3,184**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **35,378**

TOTAL # OF CRASHES : 17 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **5.67**

CRASH RATE CALCULATION : 0.44

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

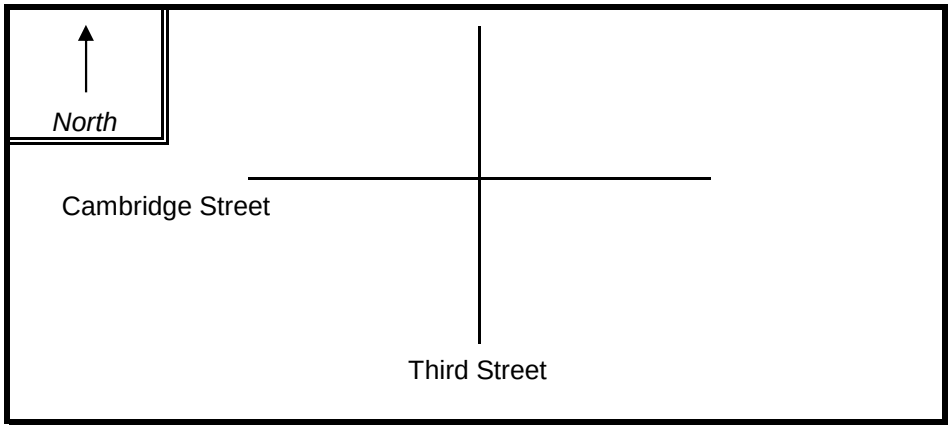
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : Third Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	526	427	351	470		**1,774**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **19,711**

TOTAL # OF CRASHES : 15 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **5.00**

CRASH RATE CALCULATION : 0.69

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

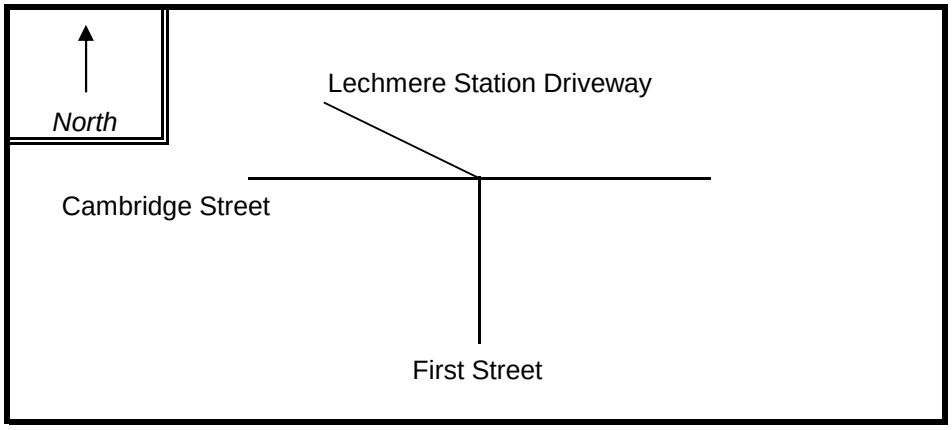
~ INTERSECTION DATA ~

MAJOR STREET : Cambridge Street

MINOR STREET(S) : First Street

Lechmere Station Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	615	0	295	313		**1,223**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **13,589**

TOTAL # OF CRASHES : 14 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.67**

CRASH RATE CALCULATION : 0.94

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

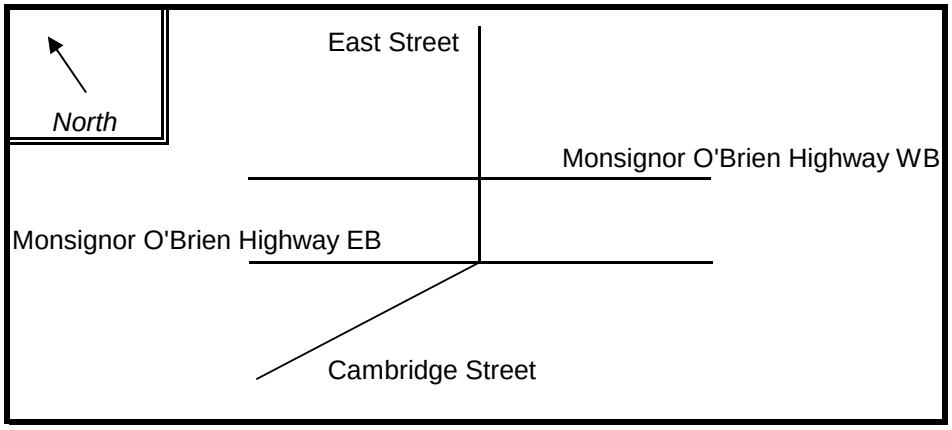
~ INTERSECTION DATA ~

MAJOR STREET : Monsignor O'Brien Highway

MINOR STREET(S) : Cambridge Street

East Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NWB	SEB	SB	EB		
PEAK HOURLY VOLUMES (PM) :	983	903	119	713		**2,718**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **30,200**

TOTAL # OF CRASHES : 13 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.33**

CRASH RATE CALCULATION : 0.39

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

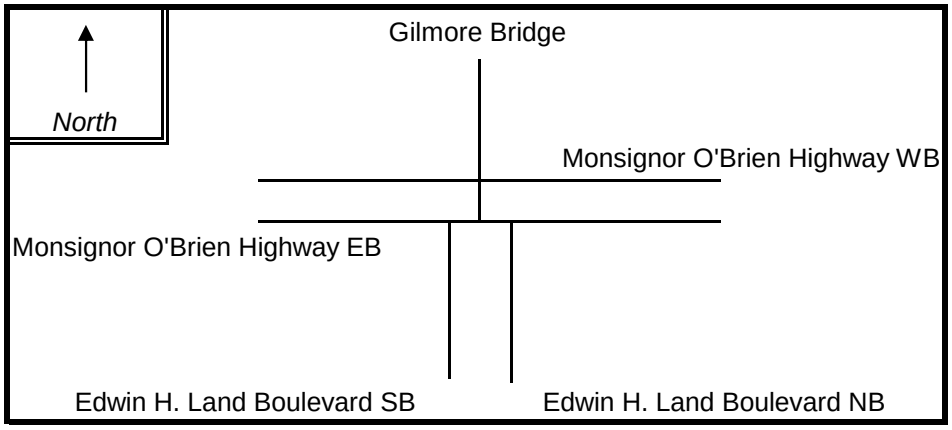
~ INTERSECTION DATA ~

MAJOR STREET : Monsignor O'Brien Highway

MINOR STREET(S) : Edwin H. Land Boulevard

Charlestown Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	1,525	654	1,136	1,023		**4,338**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **48,200**

TOTAL # OF CRASHES : 36 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **12.00**

CRASH RATE CALCULATION : 0.68

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

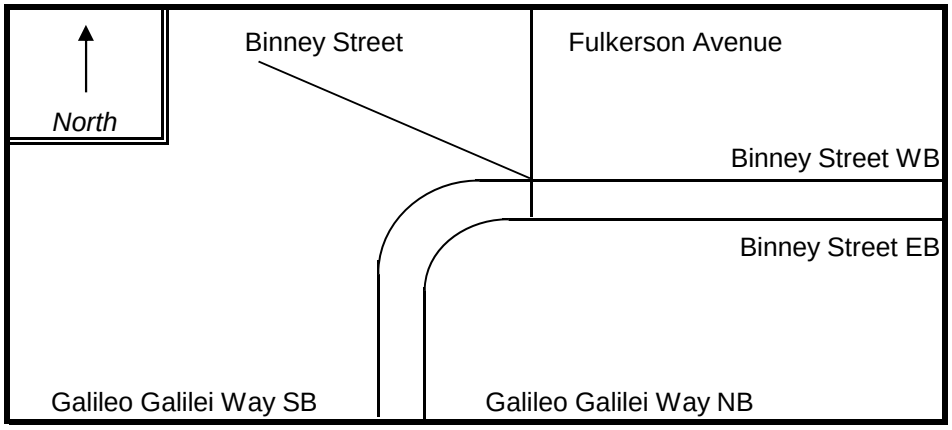
~ INTERSECTION DATA ~

MAJOR STREET : Binney Street

MINOR STREET(S) : Galileo Galilei Way

Fulkerson Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	598	247	285	391		**1,521**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **16,900**

TOTAL # OF CRASHES : 7 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **2.33**

CRASH RATE CALCULATION : 0.38

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

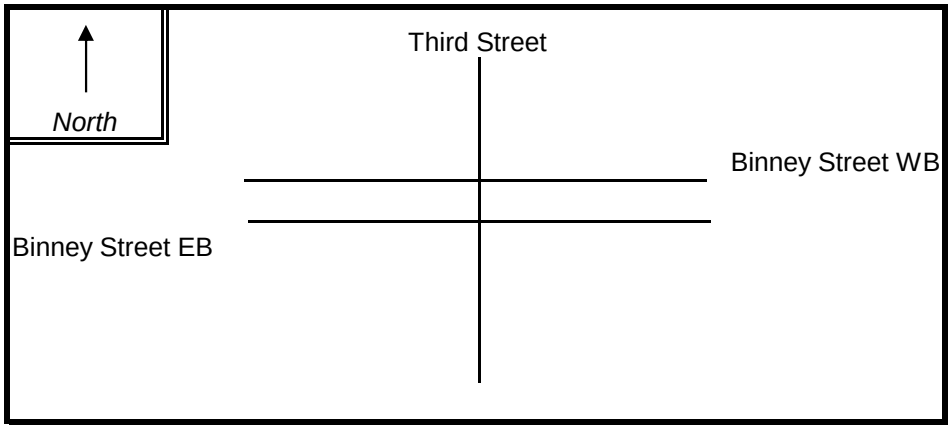
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Binney Street

MINOR STREET(S) : Third Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	478	320	799	326		**1,923**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **21,367**

TOTAL # OF CRASHES : 15 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **5.00**

CRASH RATE CALCULATION : 0.64

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

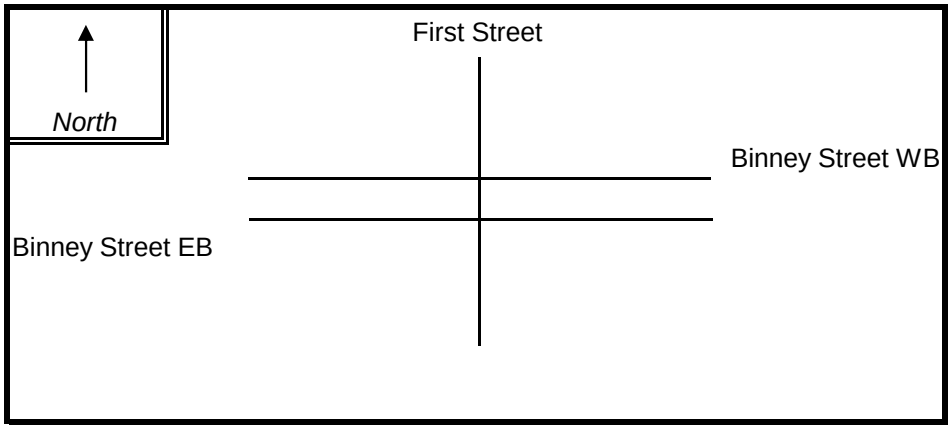
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Binney Street

MINOR STREET(S) : First Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	17	343	565	497		1,422

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **15,800**

TOTAL # OF CRASHES : 11 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **3.67**

CRASH RATE CALCULATION : 0.64

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

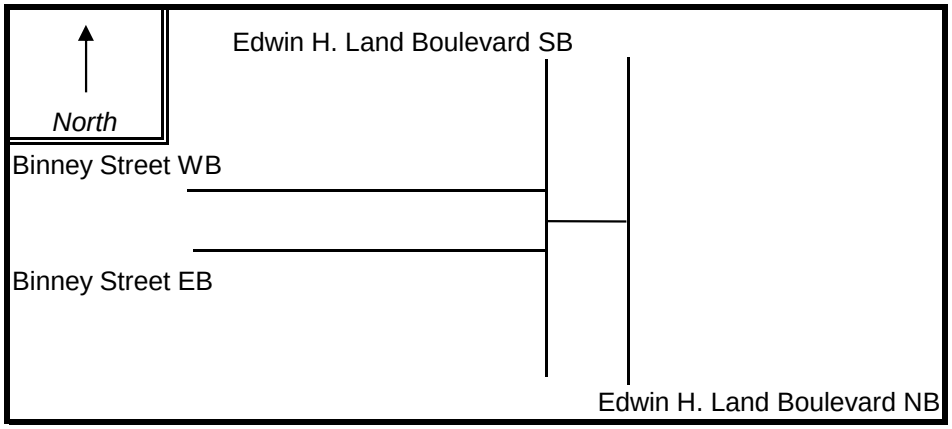
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Edwin H. Land Boulevard

MINOR STREET(S) : Binney Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB			
PEAK HOURLY VOLUMES (AM/PM) :	1,426	904	242			**2,572**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **28,578**

TOTAL # OF CRASHES : 7 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **2.33**

CRASH RATE CALCULATION : 0.22

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

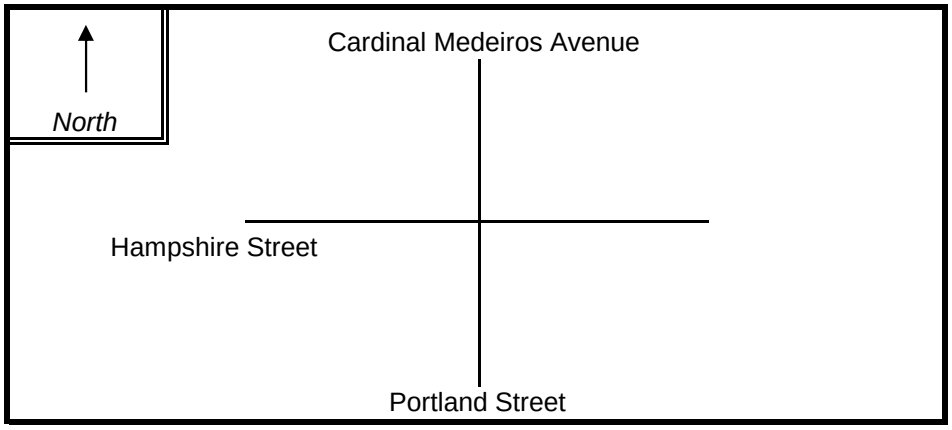
~ INTERSECTION DATA ~

MAJOR STREET : Hampshire Street

MINOR STREET(S) : Portland Street

Cardinal Medeiros Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	457	290	310	430		**1,487**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **16,522**

TOTAL # OF CRASHES : 12 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.00**

CRASH RATE CALCULATION : 0.66

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

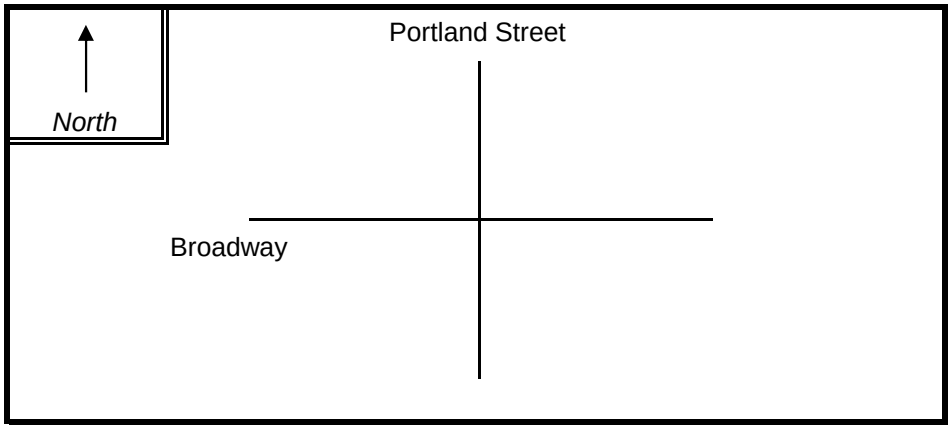
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Portland Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	504	270	371	448		**1,593**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,700**

TOTAL # OF CRASHES : 10 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **3.33**

CRASH RATE CALCULATION : 0.52

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

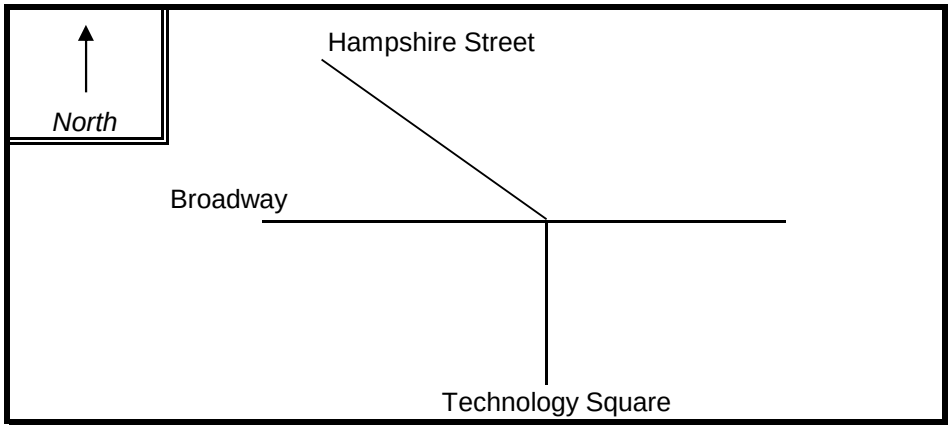
~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Hampshire Street

Technology Square

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	162	305	360	722		**1,549**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,211**

TOTAL # OF CRASHES : 19 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **6.33**

CRASH RATE CALCULATION : 1.01

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

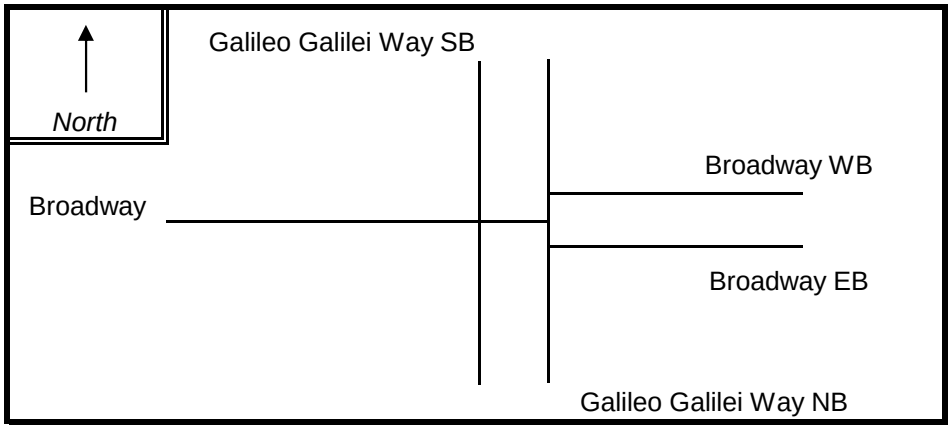
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Galileo Galilei Way

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	161	563	616	639		**1,979**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **21,989**

TOTAL # OF CRASHES : 23 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **7.67**

CRASH RATE CALCULATION : 0.96

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

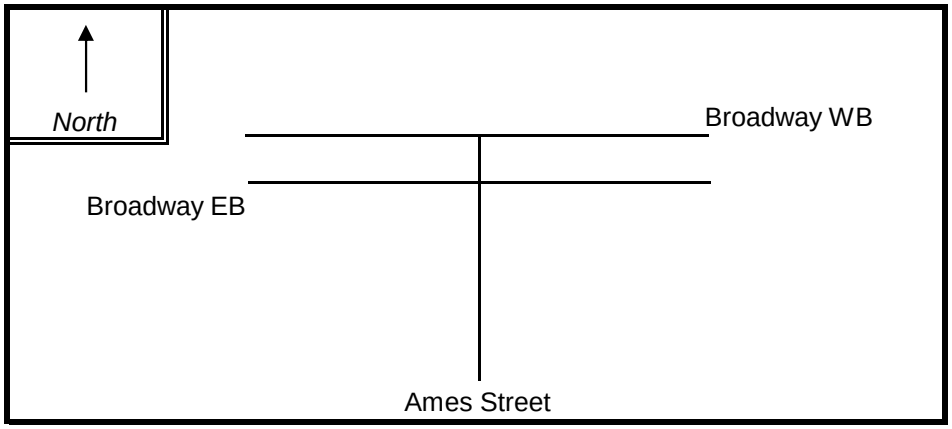
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Ames Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	277	603	463			1,343

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **14,922**

TOTAL # OF CRASHES : 10 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **3.33**

CRASH RATE CALCULATION : 0.61

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

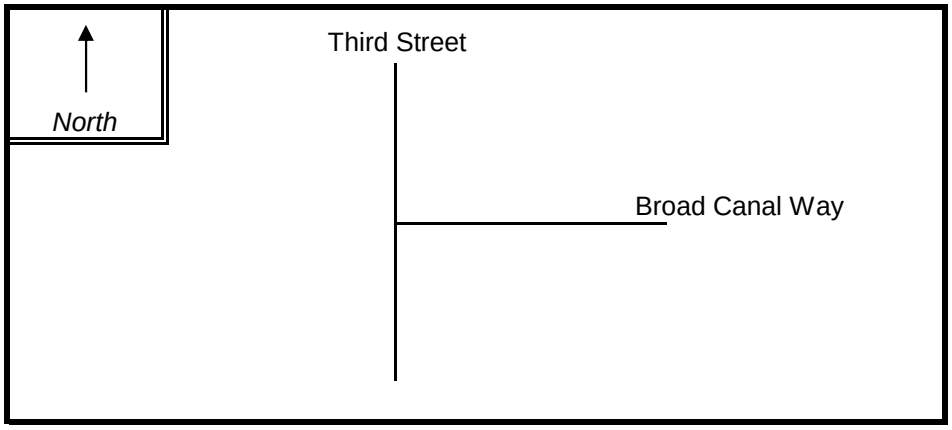
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Third Street

MINOR STREET(S) : Broad Canal Way

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	382	454	101			937

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **10,411**

TOTAL # OF CRASHES : 0 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.00**

CRASH RATE CALCULATION : 0.00

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

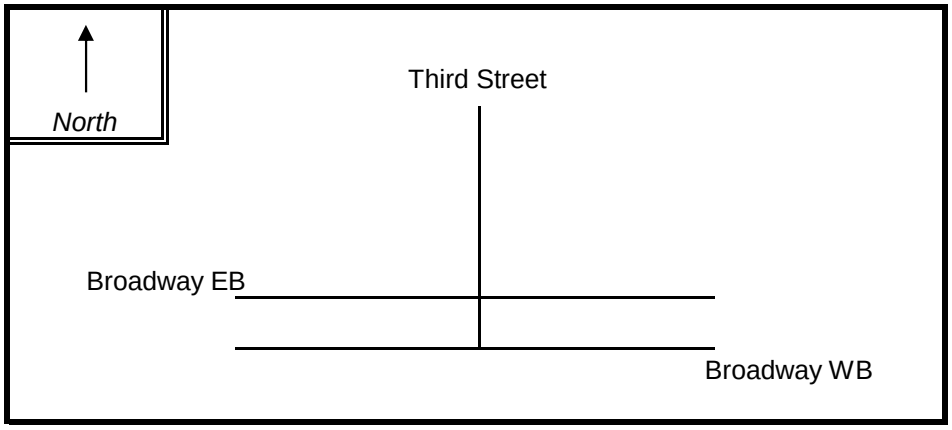
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Third Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	522	826	575			1,923

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **21,367**

TOTAL # OF CRASHES : 12 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.00**

CRASH RATE CALCULATION : 0.51

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

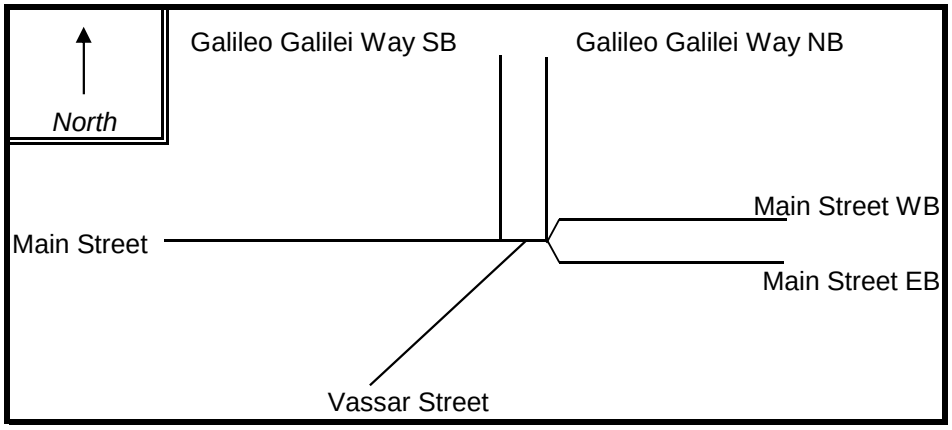
~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Galileo Galilei Way

Vassar Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	445	536	596	204		**1,781**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **19,789**

TOTAL # OF CRASHES : 19 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **6.33**

CRASH RATE CALCULATION : 0.88

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

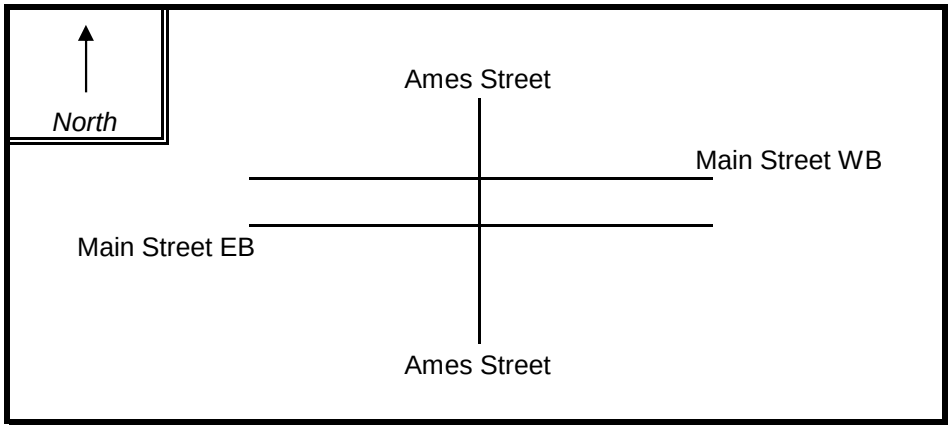
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Ames Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	231	209	458	87		**985**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **10,944**

TOTAL # OF CRASHES : 3 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **1.00**

CRASH RATE CALCULATION : 0.25

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

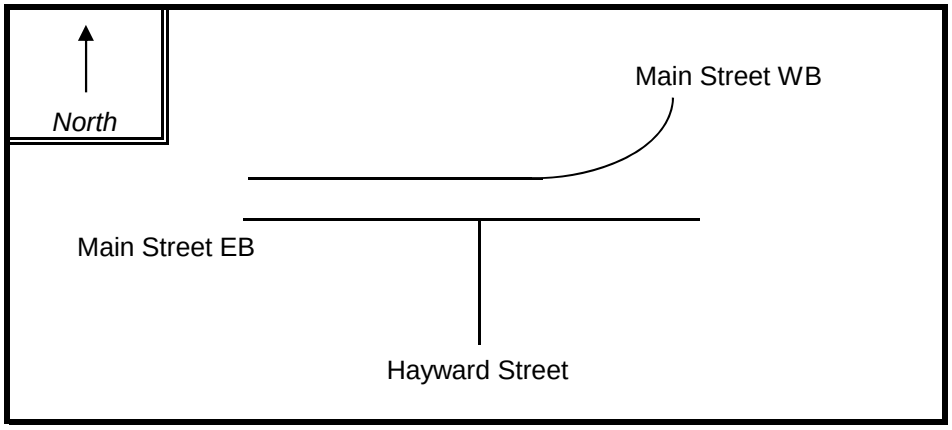
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Hayward Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	25	387	73			485

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **5,389**

TOTAL # OF CRASHES : 1 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.33**

CRASH RATE CALCULATION : 0.17

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

0.58 0.76

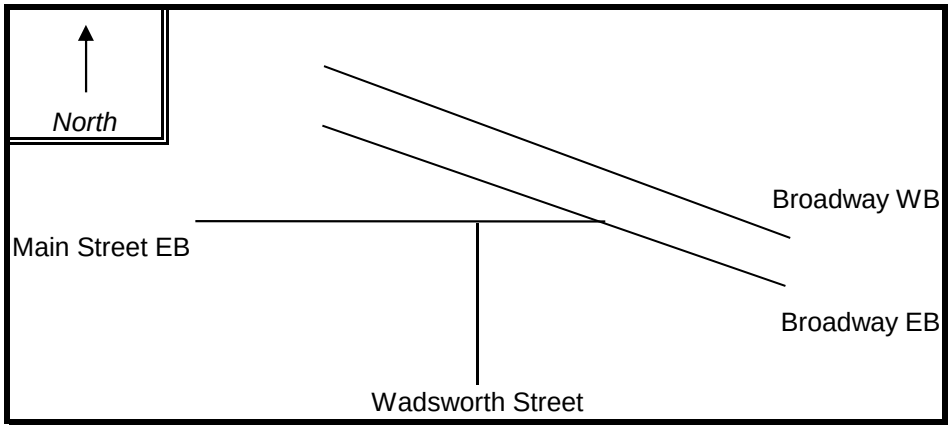
~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Main Street EB

Wadsworth Street

INTERSECTION DIAGRAM
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB				
PEAK HOURLY VOLUMES (AM/PM) :	51	359				410

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **4,556**

TOTAL # OF CRASHES : 1 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.33**

CRASH RATE CALCULATION : 0.20

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

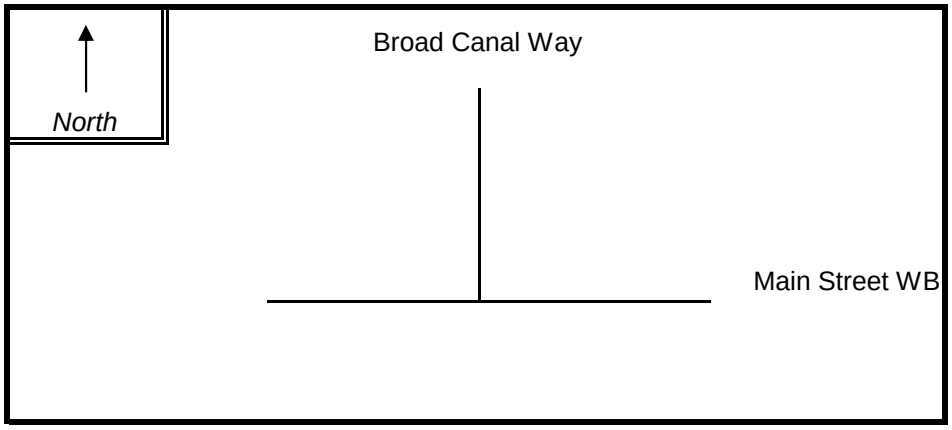
DISTRICT : 6 UNSIGNALIZED : X (0.58) SIGNALIZED : (0.76)

~ INTERSECTION DATA ~

MAJOR STREET : Main Street WB

MINOR STREET(S) : Broad Canal Way

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	WB				
PEAK HOURLY VOLUMES (AM/PM) :	24	555				579

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **6,433**

TOTAL # OF CRASHES : 1 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.33**

CRASH RATE CALCULATION : 0.14

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X (0.58) SIGNALIZED : (0.76)

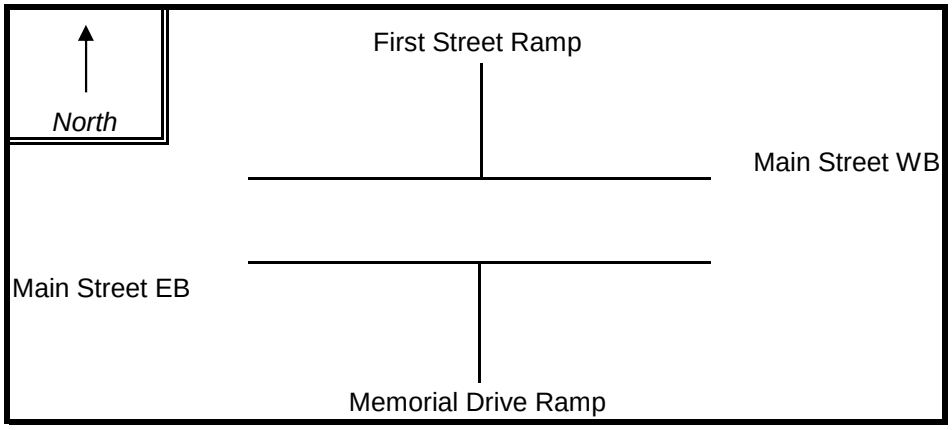
~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Memorial Drive Ramp

First Street Ramp

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	376	69	1,356	619		**2,420**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **26,889**

TOTAL # OF CRASHES : 12 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.00**

CRASH RATE CALCULATION : 0.41

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

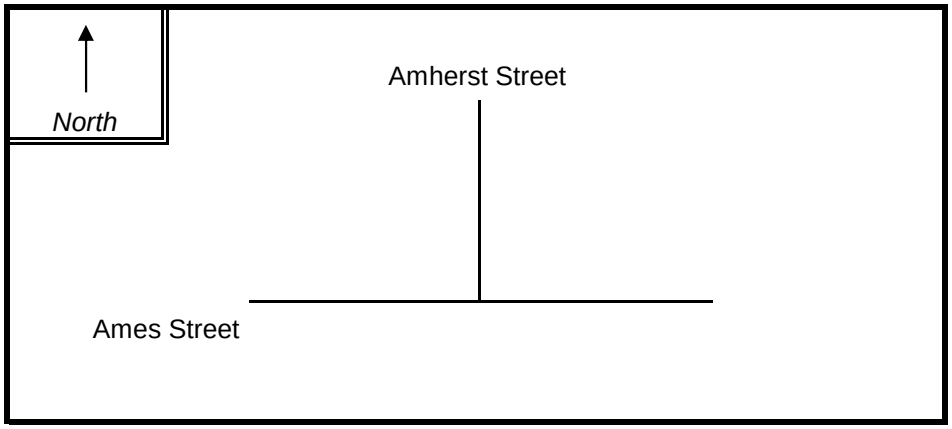
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Ames Street

MINOR STREET(S) : Amherst Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	WB				
PEAK HOURLY VOLUMES (AM/PM) :	155	311				466

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **5,178**

TOTAL # OF CRASHES : 8 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **2.67**

CRASH RATE CALCULATION : 1.41

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

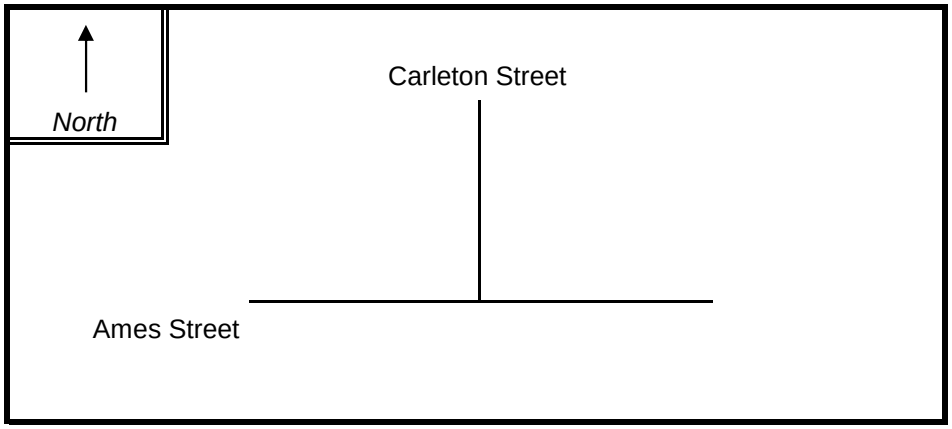
DISTRICT : 6 UNSIGNALIZED : X (0.58) SIGNALIZED : (0.76)

~ INTERSECTION DATA ~

MAJOR STREET : Carleton Street

MINOR STREET(S) : Amherst Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	WB	EB			
PEAK HOURLY VOLUMES (AM/PM) :	37	285	38			360

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **4,000**

TOTAL # OF CRASHES : 1 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.33**

CRASH RATE CALCULATION : 0.23

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

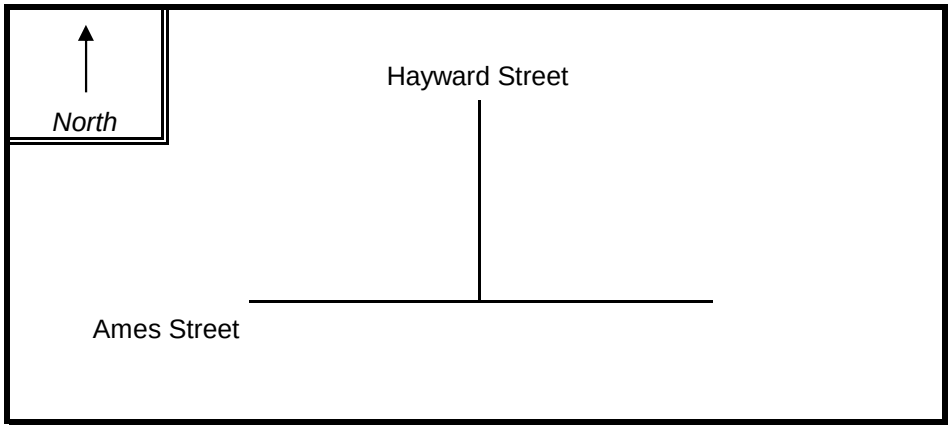
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Hayward Street

MINOR STREET(S) : Amherst Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	WB	EB			
PEAK HOURLY VOLUMES (AM/PM) :	105	228	29			362

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **4,022**

TOTAL # OF CRASHES : 2 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.67**

CRASH RATE CALCULATION : 0.45

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

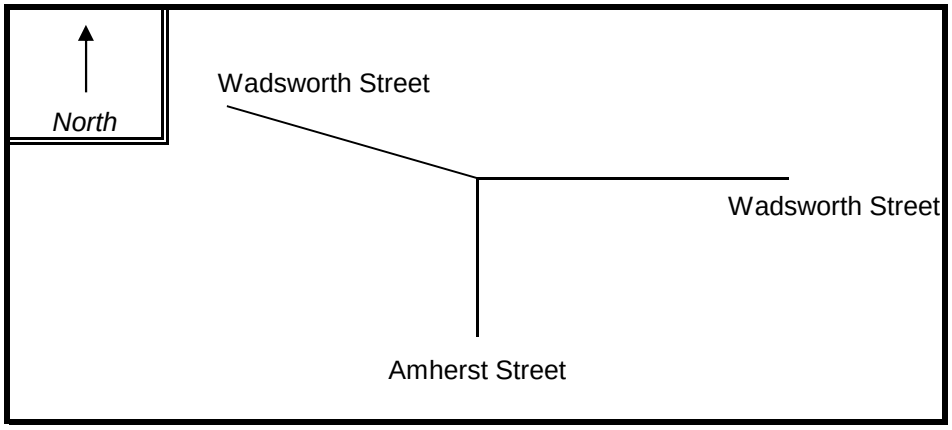
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Amherst Street

MINOR STREET(S) : Wadsworth Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB			
PEAK HOURLY VOLUMES (AM/PM) :	177	158	40			375

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **4,167**

TOTAL # OF CRASHES : 0 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.00**

CRASH RATE CALCULATION : 0.00

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2013

DISTRICT : 6 UNSIGNALIZED : X SIGNALIZED :

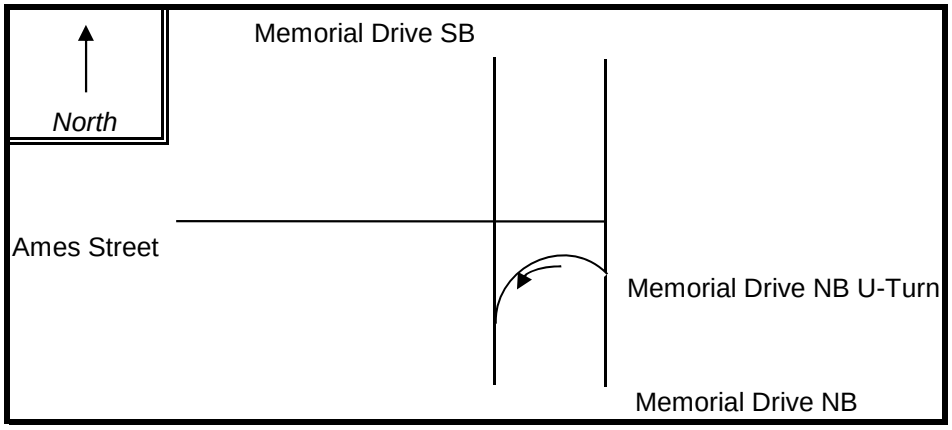
0.58 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Memorial Drive

MINOR STREET(S) : Ames Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	196	1,597	1,327			**3,120**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **34,667**

TOTAL # OF CRASHES : 9 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **3.00**

CRASH RATE CALCULATION : 0.24

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE : 2014

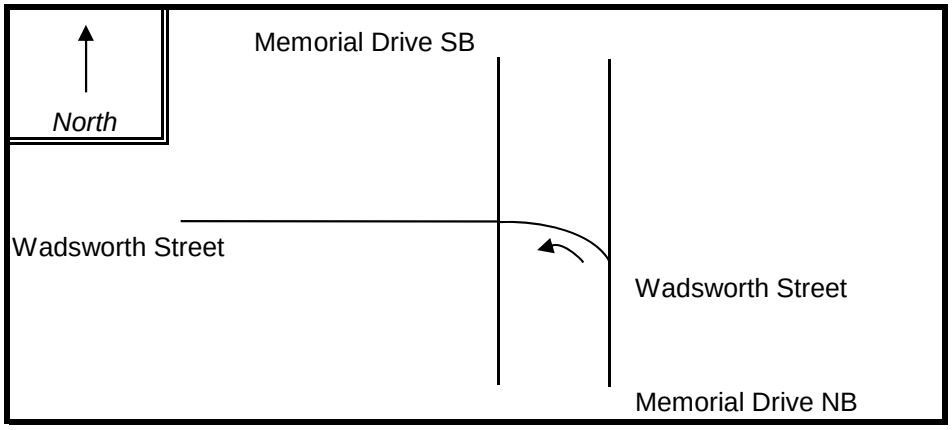
DISTRICT : 6 UNSIGNALIZED : [ ] 0.58 SIGNALIZED : [X] 0.76

~ INTERSECTION DATA ~

MAJOR STREET : Memorial Drive

MINOR STREET(S) : Wadsworth Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	68	1,673	1,326			**3,067**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **34,078**

TOTAL # OF CRASHES : 9 # OF YEARS : 3 AVERAGE # OF CRASHES PER YEAR (**A**) : **3.00**

CRASH RATE CALCULATION : 0.24

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : MassDOT Accident Data

Project Title & Date:

Existing Conditions LOS Comparison Tables

Courthouse Redevelopment LOS Tables

Table 19
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
Third Street at O'Brien Highway										
Weekday Morning Peak Hour:										
O'Brien Highway EB	1.38	206.5	F	1.40	213.7	F	--	1.48	248.7	F
O'Brien Highway WB	0.27	17.7	B	0.27	17.7	B	--	0.33	18.3	B
Third Street NB	0.19	11.9	B	0.20	11.9	B	--	0.21	11.5	B
Overall	**0.67**	**166.5**	**F**	**0.67**	**172.3**	**F**	No	**0.70**	**196.7**	**F**
Weekday Evening Peak Hour:										
O'Brien Highway EB	0.76	30.3	C	0.76	30.5	C	--	0.84	33.3	C
O'Brien Highway WB	1.86	48.9	D	1.86	50.2	D	--	1.95	70.9	E
Third Street NB	0.91	30.2	C	0.93	31.7	C	--	0.94	32.5	C
Overall	**0.95**	**38.1**	**D**	**0.96**	**39.1**	**D**	No	**1.00**	**49.0**	**D**
Third Street at Cambridge Street										
Weekday Morning Peak Hour:										
Cambridge Street EB	0.56	24.8	C	0.59	25.8	C	--	0.74	31.0	C
Cambridge Street WB	0.46	5.6	A	0.47	5.7	A	--	0.56	15.2	B
Third Street NB	0.24	12.5	B	0.24	12.5	B	--	0.30	13.3	B
Third Street SB	0.78	25.2	C	0.79	25.0	C	--	0.85	27.3	C
Overall	**0.69**	**19.8**	**B**	**0.70**	**20.0**	**C**	No	**0.81**	**24.3**	**C**
Weekday Evening Peak Hour:										
Cambridge Street EB	0.78	38.8	D	0.79	39.6	D	--	0.98	68.0	E
Cambridge Street WB	0.64	12.5	B	0.68	13.4	B	--	0.65	22.4	C
Third Street NB	1.04	69.8	E	1.06	74.8	E	--	1.16	110.4	F
Third Street SB	0.37	23.1	C	0.38	23.1	C	--	0.41	23.0	C
Overall	**0.93**	**40.2**	**D**	**0.94**	**41.9**	**D**	No	**1.08**	**64.0**	**E**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
Third Street at Binney Street										
Weekday Morning Peak Hour:										
Binney Street EB	0.27	19.4	B	0.27	19.4	B	--	0.34	20.2	C
Binney Street WB	1.32	87.2	F	1.35	91.3	F	--	1.54	109.9	F
Third Street NB	0.81	31.4	C	0.82	32.9	C	--	1.21	96.8	F
Third Street SB	1.14	115.0	F	1.15	118.5	F	--	1.35	200.2	F
Overall	**0.79**	**71.6**	**E**	**0.80**	**73.3**	**E**	No	**1.00**	**114.5**	**F**
Weekday Evening Peak Hour:										
Binney Street EB	0.89	33.1	C	0.89	33.0	C	--	1.05	46.5	D
Binney Street WB	0.72	47.6	D	0.84	50.7	D	--	1.12	69.3	E
Third Street NB	0.86	44.8	D	0.86	45.5	D	--	1.03	68.9	E
Third Street SB	0.56	28.8	C	0.56	28.9	C	--	0.66	33.0	C
Overall	**0.76**	**38.2**	**D**	**0.76**	**39.4**	**D**	No	**0.91**	**55.5**	**E**
Second Street at Cambridge Street										
Weekday Morning Peak Hour:										
Cambridge Street EB	0.37	10.0	B	0.39	10.7	B	--	0.44	9.8	A
Cambridge Street WB	0.34	3.0	A	0.36	3.4	A	--	0.43	14.3	B
Second Street NB	0.06	18.1	B	0.07	18.1	B	--	0.08	18.3	B
Second Street SB	0.21	19.7	B	0.24	20.1	C	--	0.24	20.0	C
Overall	**0.30**	**9.2**	**A**	**0.33**	**9.9**	**A**	No	**0.36**	**13.4**	**B**
Weekday Evening Peak Hour:										
Cambridge Street EB	0.30	7.1	A	0.31	7.3	A	--	0.36	6.6	A
Cambridge Street WB	0.35	8.1	A	0.37	8.9	A	--	0.32	12.7	B
Second Street NB	0.22	19.9	B	0.23	20.1	C	--	0.26	20.5	C
Second Street SB	0.03	17.7	B	0.04	17.8	B	--	0.06	18.0	B
Overall	**0.30**	**9.7**	**A**	**0.31**	**10.3**	**B**	No	**0.32**	**11.6**	**B**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
First Street at Cambridge Street										
Weekday Morning Peak Hour:										
Cambridge Street EB	0.75	31.4	C	0.82	38.1	D	--	0.74	47.8	D
Cambridge Street WB	1.00	45.8	D	1.05	55.4	E	--	--	--	--
First Street NB	0.24	20.6	C	0.23	21.3	C	--	0.16	7.0	A
First Street SB	0.03	34.2	C	0.27	34.2	C	--	2.62	757.9	F
Overall	**0.75**	**38.4**	**D**	**0.81**	**45.5**	**D**	No	**2.17**	**656.5**	**F**
Weekday Evening Peak Hour:										
Cambridge Street EB	0.84	40.3	D	0.87	43.6	D	--	0.81	50.3	D
Cambridge Street WB	0.42	16.0	B	0.42	15.8	B	--	--	--	--
First Street NB	0.90	44.4	D	1.04	61.0	E	--	1.89	215.1	F
First Street SB	0.05	34.4	C	0.05	34.4	C	--	0.97	45.8	D
Overall	**0.81**	**36.1**	**D**	**0.89**	**45.9**	**D**	No	**1.52**	**88.8**	**F**
First Street at Thorndike Street										
Weekday Morning Peak Hour:										
Thorndike Street EB	0.57	20.3	C	0.60	18.1	B	--	0.60	18.1	B
First Street NB	0.19	7.2	A	0.23	9.7	A	--	0.28	10.1	B
First Street SB	0.53	10.6	B	0.68	16.5	B	--	0.84	24.4	C
Overall	**0.54**	**12.2**	**B**	**0.65**	**15.8**	**B**	No	**0.72**	**20.5**	**C**
Weekday Evening Peak Hour:										
Thorndike Street EB	0.64	18.9	B	0.84	26.0	C	--	0.84	25.7	C
First Street NB	0.70	17.7	B	0.44	30.0	C	--	1.03	63.5	E
First Street SB	0.25	10.3	B	0.17	15.3	B	--	0.41	16.7	B
Overall	**0.67**	**13.0**	**B**	**0.65**	**26.0**	**C**	No	**0.90**	**40.9**	**D**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2 Indicator[d]	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS		V/C	Delay	LOS
First Street at Charles Street and Cambridgeside Place										
Weekday Morning Peak Hour:										
Charles Street EB	0.38	22.4	C	0.29	19.3	B	–	0.32	18.7	B
Cambridgeside Place WB	0.55	23.4	C	0.56	20.9	C	–	0.65	22.7	C
First Street NB	0.44	8.5	A	0.59	13.3	B	–	0.65	16.4	B
First Street SB	0.31	7.3	A	0.38	10.4	B	–	0.55	14.4	B
Overall	**0.47**	**12.1**	**B**	**0.58**	**14.6**	**B**	No	**0.65**	**17.4**	**B**
Weekday Evening Peak Hour:										
Charles Street EB	0.54	21.4	C	0.53	21.2	C	–	0.58	22.2	C
Cambridgeside Place WB	0.62	22.2	C	0.63	22.5	C	–	0.67	23.9	C
First Street NB	0.57	14.1	B	0.60	14.9	B	–	0.78	21.4	C
First Street SB	0.26	10.0	B	0.40	11.7	B	–	0.61	15.8	B
Overall	**0.59**	**16.5**	**B**	**0.61**	**16.7**	**B**	No	**0.73**	**20.3**	**C**
First Street at Binney Street										
Weekday Morning Peak Hour:										
Binney Street EB	0.44	18.7	B	0.59	21.6	C	–	0.84	31.7	C
Binney Street WB	0.43	9.7	A	0.46	10.1	B	–	0.56	11.5	B
First Street NB	0.07	40.1	D	0.07	40.1	D	–	0.29	44.4	D
First Street SB	0.59	49.6	D	0.65	51.5	D	–	1.00	83.7	F
Overall	**0.50**	**20.4**	**C**	**0.59**	**21.8**	**C**	No	**0.83**	**32.4**	**C**
Weekday Evening Peak Hour:										
Binney Street EB	0.67	23.1	C	0.70	24.1	C	–	1.00	46.5	D
Binney Street WB	0.24	7.9	A	0.25	7.9	A	–	0.28	8.2	A
First Street NB	0.06	40.0	D	0.06	40.0	D	–	0.13	41.0	D
First Street SB	0.66	51.4	D	0.90	68.6	E	–	0.94	84.0	F
Overall	**0.63**	**25.6**	**C**	**0.71**	**33.0**	**C**	No	**0.87**	**45.8**	**D**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
O'Brien Highway at Cambridge Street and East Street										
Weekday Morning Peak Hour:										
O'Brien Highway EB	0.80	34.0	C	0.80	34.0	C	–			
O'Brien Highway WB	0.54	30.4	C	0.56	31.3	C	–			
Cambridge Street NB	0.54	21.5	C	0.56	23.5	C	–			
East Street SB	0.29	28.2	C	0.29	28.2	C	–	Unsignalized Under 2018 Build Conditions		
Overall	**0.75**	**31.0**	**C**	**0.77**	**31.5**	**C**	No			
Weekday Evening Peak Hour:										
O'Brien Highway EB	0.68	26.6	C	0.67	26.5	C	–			
O'Brien Highway WB	0.77	30.6	C	0.77	30.6	C	–			
Cambridge Street NB	1.05	32.9	C	1.08	33.9	C	–			
East Street SB	0.43	30.9	C	0.43	31.1	C	–			
Overall	**0.74**	**30.0**	**C**	**0.77**	**30.4**	**C**	No			
Cambridgeside Place at Land Boulevard										
Weekday Morning Peak Hour:										
Cambridgeside Place EB	0.29	27.6	C	0.29	28.6	C	–	0.41	29.3	C
Cambridgeside Place WB	0.05	25.2	C	0.05	26.1	C	–	0.05	25.2	C
Land Boulevard NB	0.78	21.5	C	0.80	20.6	C	–	0.80	21.6	C
Land Boulevard SB	0.64	20.7	C	0.64	20.3	C	–	0.73	22.6	C
Overall	**0.55**	**21.6**	**C**	**0.55**	**21.2**	**C**	No	**0.64**	**23.1**	**C**
Weekday Evening Peak Hour:										
Cambridgeside Place EB	0.52	27.7	C	0.52	27.7	C	–	0.57	28.6	C
Cambridgeside Place WB	0.10	23.3	C	0.10	23.3	C	–	0.10	23.4	C
Land Boulevard NB	0.61	19.4	B	0.61	19.4	B	–	0.63	20.0	C
Land Boulevard SB	0.47	15.9	B	0.47	15.9	B	–	0.50	16.2	B
Overall	**0.53**	**20.0**	**B**	**0.53**	**20.0**	**B**	No	**0.61**	**20.4**	**C**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2 Indicator[d]	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS		V/C	Delay	LOS
Binney Street at Land Boulevard										
Weekday Morning Peak Hour:										
Binney Street EB	0.41	29.6	C	0.41	29.6	C	–	0.43	29.6	C
Land Boulevard NB	0.78	16.1	B	0.88	20.8	C	–	0.57	13.1	B
Land Boulevard SB	0.78	25.4	C	0.78	25.4	C	–	0.87	29.2	C
Overall	**0.71**	**21.9**	**C**	**0.75**	**23.8**	**C**	No	**0.66**	**22.3**	**C**
Weekday Evening Peak Hour:										
Binney Street EB	0.49	29.7	C	0.49	29.7	C	–	0.53	29.9	C
Land Boulevard NB	0.54	8.7	A	0.51	8.4	A	–	0.33	8.3	A
Land Boulevard SB	0.75	26.1	C	0.75	26.1	C	–	0.82	28.9	C
Overall	**0.61**	**18.0**	**B**	**0.60**	**17.8**	**B**	No	**0.56**	**18.9**	**B**
O'Brien Highway at Land Boulevard and Charlestown Avenue										
Weekday Morning Peak Hour:										
O'Brien Highway EB	0.68	38.1	D	0.69	39.0	D	–	0.89	60.2	E
O'Brien Highway WB	0.54	42.3	D	0.54	42.4	D	–	0.80	87.1	F
Land Boulevard NB	0.50	36.3	D	0.50	36.4	D	–	0.86	72.9	E
Charlestown Avenue SB	1.46	258.9	F	1.61	324.5	F	–	1.37	211.4	F
Overall	**0.95**	**97.9**	**F**	**0.99**	**117.9**	**F**	No	**1.16**	**109.0**	**F**
Weekday Evening Peak Hour:										
O'Brien Highway EB	0.73	104.0	F	0.83	138.0	F	–	0.80	59.9	E
O'Brien Highway WB	0.59	42.9	D	0.59	42.9	D	–	1.03	145.9	F
Land Boulevard NB	0.92	63.0	E	0.92	63.0	E	–	0.84	49.5	D
Charlestown Avenue SB	2.36	670.1	F	2.40	691.2	F	–	1.60	328.8	F
Overall	**1.20**	**162.5**	**F**	**1.24**	**175.2**	**F**	No	**1.14**	**118.6**	**F**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
Third Street at Charles Street										
Weekday Morning Peak Hour:										
Charles Street EB	0.18	20.4	C	0.21	20.7	C	–	0.30	21.9	C
Charles Street WB	0.03	18.8	B	0.03	18.8	B	–	0.03	18.8	B
Third Street NB	0.19	6.1	A	0.20	6.1	A	–	0.22	6.2	A
Third Street SB	0.60	10.3	B	0.60	10.3	B	–	0.69	12.1	B
Overall	**0.49**	**10.5**	**B**	**0.50**	**10.5**	**B**	No	**0.55**	**12.1**	**B**
Weekday Evening Peak Hour:										
Charles Street EB	0.27	21.4	C	0.28	21.6	C	–	0.38	23.1	C
Charles Street WB	0.08	19.2	B	0.08	19.2	B	–	0.12	19.7	B
Third Street NB	0.68	11.9	B	0.68	11.9	B	–	0.74	13.7	B
Third Street SB	0.26	6.5	A	0.26	6.6	A	–	0.30	6.9	A
Overall	**0.57**	**11.7**	**B**	**0.57**	**11.7**	**B**	No	**0.61**	**13.4**	**B**
Binney Street at Second Street										
Weekday Morning Peak Hour:										
Binney Street EB	0.49	18.3	B	0.42	15.6	B	–	0.43	18.0	B
Binney Street WB	0.45	14.0	B	0.46	14.9	B	–	0.47	15.7	B
Second Street NB	0.11	27.0	C	0.11	27.0	C	–	0.13	27.3	C
Second Street SB	0.16	27.7	C	0.17	27.8	C	–	0.25	28.9	C
Overall	**0.26**	**16.9**	**B**	**0.29**	**16.3**	**B**	No	**0.40**	**17.7**	**B**
Weekday Evening Peak Hour:										
Binney Street EB	0.63	17.2	B	0.63	17.6	B	–	0.64	16.0	B
Binney Street WB	0.43	17.2	B	0.43	17.4	B	–	0.44	18.0	B
Second Street NB	0.55	35.4	D	0.55	35.3	D	–	0.61	37.2	D
Second Street SB	0.23	28.8	C	0.28	29.6	C	–	0.55	35.8	D
Overall	**0.44**	**20.7**	**C**	**0.42**	**20.8**	**C**	No	**0.50**	**21.4**	**C**

See notes at end of table.

Table 19 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY – SIGNALIZED INTERSECTIONS

Intersection/Peak Hour/Movement	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	Indicator[d]	V/C	Delay	LOS
Third Street at Broadway										
Weekday Morning Peak Hour:										
Broadway EB	0.68	27.5	C	0.68	27.5	C	--	0.72	28.4	C
Broadway WB	0.69	23.1	C	0.69	23.4	C	--	0.75	25.1	C
Third Street NB	0.32	19.1	B	0.33	19.9	B	--	0.35	20.5	C
Overall	**0.59**	**23.8**	**C**	**0.60**	**24.1**	**C**	No	**0.64**	**25.3**	**C**
Weekday Evening Peak Hour:										
Broadway EB	0.70	29.2	C	0.70	29.2	C	--	0.78	31.3	C
Broadway WB	0.53	24.7	C	0.53	24.8	C	--	0.56	25.2	C
Third Street NB	0.88	44.4	D	0.91	46.8	D	--	1.00	58.7	E
Overall	**0.68**	**32.2**	**C**	**0.69**	**33.0**	**C**	No	**0.76**	**37.8**	**D**

[a]Volume to capacity ratio.
[b]Average control delay per vehicle (in seconds) for the critical movements.
[c]Level of service.
[d]Special Permit Criteria 2 – Level of Service.

Table 20
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY - UNSIGNALIZED INTERSECTIONS

Unsignalized Intersection/ Critical Movement/Peak Hour	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	Demand[a]	Delay[b]	LOS[c]	Demand	Delay	LOS	Indicator[d]	Demand	Delay	LOS
Thorndike Street at Third Street										
All movements from Thorndike Street EB:										
Weekday Morning	29	26.8	D	29	28.1	D	No	29	28.1	D
Weekday Evening	26	18.9	C	25	18.9	C	No	26	21.7	C
Thorndike Street at Second Street										
All movements from Thorndike Street EB:										
Weekday Morning	100	12.1	B	115	12.8	B	No	117	13.5	B
Weekday Evening	60	10.4	B	63	10.7	B	No	65	11.0	B
Spring Street at Third Street										
All movements from Spring Street EB:										
Weekday Morning	32	58.5	F	32	56.9	F	No	32	56.9	F
Weekday Evening	15	12.4	B	15	12.4	B	No	15	13.4	B
All movements from Spring Street WB:										
Weekday Morning	51	103.8	F	50	99.0	F	No	50	99.0	F
Weekday Evening	83	21.8	C	83	21.8	C	No	87	26.4	D
Spring Street at Second Street										
All movements from Spring Street WB:										
Weekday Morning	69	10.9	B	75	11.1	B	No	75	11.1	B
Weekday Evening	88	10.9	B	89	11.0	B	No	92	11.5	B
Spring Street at First Street										
All movements from Spring Street NB:										
Weekday Morning	226	4.7	A	344	7.7	A	No	344	7.7	A
Weekday Evening	492	1.2	A	524	2.1	A	No	627	2.1	A
Second Street at Site Drive										
All movements from Site Drive EB:										
Weekday Morning	4	10.9	B	8	11.4	B	No	8	11.4	B
Weekday Evening	2	9.5	A	32	9.8	A	No	34	10.2	B

See notes at end of table.

Table 20 (Continued)
SPECIAL PERMIT CRITERIA 2
VEHICLE LEVEL-OF-SERVICE SUMMARY - UNSIGNALIZED INTERSECTIONS

Unsignalized Intersection/ Critical Movement/Peak Hour	2013 Existing			2013 Build			Exceeds SPC 2	2018 Build		
	Demand[a]	Delay[b]	LOS[c]	Demand	Delay	LOS	Indicator[d]	Demand	Delay	LOS
Thorndike Street at First Street Garage Driveway										
All movements from First Street Garage NB:										
Weekday Morning	5	9.0	A	45	9.4	A	No	45	9.4	A
Weekday Evening	189	9.7	A	371	11.5	B	No	376	11.6	B
Spring Street at First Street Garage										
All movements from First Street Garage SB:										
Weekday Morning	2	9.5	A	2	10.2	B	No	2	10.2	B
Weekday Evening	0	0.0	A	0	0.0	A	No	0	0.0	A

[a]Demand (in vehicles per hour) for the critical movements.
[b]Average control delay per vehicle (in seconds) for the critical movements.
[c]Level of service.
[d]Special Permit Criteria 2 – Level of Service.
NB = northbound; SB = southbound; WB = westbound; SB = southbound.

88 Ames Street LOS Tables

Table 6.a.1
Intersection Level of Service – AM Peak Hour

Intersection	Approach	2014 Existing Condition			2014 Build Condition			2019 Future Condition with Cycle Track			2019 Future Condition with Buffered Bike Lanes		
		V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS
Broadway / Galileo Galilei Way (Signalized)	EB	0.76	41.0	D	0.77	41.2	D	0.97	55.8	E	0.97	55.8	E
	WB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	NB	0.81	35.5	D	0.81	33.8	C	0.86	35.9	D	0.86	37.2	D
	SB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	Overall	>1.0	69.3	E	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
Main Street / Galileo Galilei Way (Signalized)	EB	0.41	20.0	B	0.41	20.0	C	0.65	24.5	C	0.65	24.5	C
	WB	0.31	28.3	C	0.33	26.2	C	0.43	4.1	A	0.43	27.9	C
	NB	0.48	22.7	C	0.48	22.8	C	0.58	24.9	C	0.58	24.9	C
	SB	0.69	23.9	C	0.69	30.5	C	>1.0	28.8	C	>1.0	42.4	D
	Overall	0.54	23.5	C	0.54	25.6	C	0.85	22.8	C	0.85	32.1	C
Main Street / Ames Street (Signalized)	EB	0.79	24.7	C	0.82	27.2	C	>1.0	>80.0	F	0.97	48.9	D
	WB	0.15	11.6	B	0.20	12.1	B	0.36	25.2	C	0.23	12.5	B
	NB	0.83	52.0	D	0.82	49.0	D	>1.0	>80.0	F	1.00	>80.0	F
	SB	0.73	40.0	D	0.73	43.3	D	>1.0	>80.0	F	>1.0	79.4	E
	Overall	0.81	34.1	C	0.82	34.1	C	>1.0	>80.0	F	1.00	60.3	E
Broadway / Ames Street (Signalized)	EB	0.76	20.5	C	0.74	22.3	C	>1.0	>80.0	F	0.82	21.1	C
	WB	0.86	40.4	D	0.86	43.0	D	>1.0	>80.0	F	>1.0	48.4	D
	NB	0.41	32.1	C	0.43	33.9	C	>1.0	>80.0	F	0.47	34.4	C
	Overall	0.61	30.9	C	0.59	32.7	C	>1.0	>80.0	F	0.72	35.3	D
Broadway / Third Street (Signalized)	EB	0.73	20.6	C	0.77	21.3	C	>1.0	30.3	C	>1.0	41.8	D
	WB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	SB	0.60	40.1	D	0.70	42.1	D	0.89	59.0	E	0.89	59.0	E
	Overall	0.85	55.9	E	0.90	55.8	E	>1.0	>80.0	F	>1.0	>80.0	F
Ames Street/ Cambridge Center East Garage/ New Alleyway (Unsignalized)	WB	0.03	17.1	C	0.13	17.7	C	0.15	20.0	C	0.15	20.0	C
Broadway/ Cambridge Center East Garage (Unsignalized)	NB	0.04	37.2	E	0.18	45.3	E	0.21	>50.0	F	0.22	>50.0	F

n/a Under existing conditions the site driveways are currently not in use and therefore not applicable.
Demand Vehicular demand on critical approach
Delay Average delay expressed in seconds per vehicle
VLOS Vehicular level of service

Table 6.a.2
Intersection Level of Service– PM Peak Hour

Intersection	Approach	2014 Existing Condition			2014 Build Condition			2019 Future Condition with Cycle Track			2019 Future Condition with Buffered Bike Lanes		
		V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS	V/C Ratio	Delay	VLOS
Broadway / Galileo Galilei Way (Signalized)	EB	>1.0	54.1	D	>1.0	54.2	D	>1.0	70.5	E	>1.0	70.5	E
	WB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	NB	0.85	37.7	D	0.85	37.7	D	0.96	37.3	D	0.96	36.7	D
	SB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	Overall	0.91	70.9	E	0.91	70.9	E	>1.0	>80.0	F	>1.0	>80.0	F
Main Street / Galileo Galilei Way (Signalized)	EB	0.77	25.6	C	0.77	25.7	C	>1.0	76.9	E	>1.0	76.9	E
	WB	0.22	25.9	C	0.23	24.1	C	0.28	4.0	A	0.28	25.7	C
	NB	0.79	34.2	C	0.79	34.5	C	0.94	50.7	D	0.94	50.7	D
	SB	0.54	36.2	D	0.54	36.2	D	0.75	8.9	A	0.75	37.4	D
	Overall	0.78	31.4	C	0.78	31.2	C	>1.0	41.8	D	>1.0	52.4	D
Main Street / Ames Street (Signalized)	EB	0.72	23.6	C	0.77	26.5	C	>1.0	>80.0	F	0.91	40.2	D
	WB	0.25	14.0	B	0.32	14.9	B	0.60	34.8	C	0.33	15.1	B
	NB	0.75	40.1	D	0.75	40.5	D	>1.0	>80.0	F	0.83	47.5	D
	SB	0.65	34.4	C	0.60	33.4	C	>1.0	>80.0	F	0.70	37.5	D
	Overall	0.73	29.3	C	0.76	29.7	C	>1.0	>80.0	F	0.88	37.9	D
Broadway / Ames Street (Signalized)	EB	0.73	27.5	C	0.74	27.5	C	>1.0	>80.0	F	0.82	30.5	C
	WB	>1.0	63.7	E	>1.0	66.9	E	>1.0	>80.0	F	>1.0	>80.0	F
	NB	0.51	48.2	D	0.55	54.7	D	>1.0	>80.0	F	0.64	77.2	E
	Overall	0.68	46.9	D	0.66	49.2	D	>1.0	>80.0	F	0.79	78.6	E
Broadway / Third Street (Signalized)	EB	0.86	36.1	D	0.89	37.6	D	>1.0	33.8	C	>1.0	52.6	D
	WB	0.81	34.3	C	0.81	34.7	C	0.88	39.4	D	0.88	39.4	D
	SB	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F	>1.0	>80.0	F
	Overall	0.94	57.4	E	0.98	68.8	E	>1.0	>80.0	F	>1.0	>80.0	F
Ames Street/ Cambridge Center East Garage/ New Alleyway (Unsignalized)	WB	0.23	33.0	D	0.53	37.8	E	0.92	>50.0	F	0.46	36.5	E
Broadway/ Cambridge Center East Garage (Unsignalized)	NB	>1.0	>50.0	F	>1.0	>50.0	F	>1.0	>50.0	F	>1.0	>80.0	F

n/a Under existing conditions the site driveways are currently not in use and therefore not applicable.
Demand Vehicular demand on critical approach
Delay Average delay expressed in seconds per vehicle
VLOS Vehicular level of service

Under existing and build conditions, the signalized intersections of Main Street/Vassar Street and Main Street/Ames Street operate at an overall VLOS C

MIT – Cambridge Portfolio

Address	Parcel ID
240 Albany St	54-7
258 Albany	54-16
287 Albany	67-66
1 Broadway	14-31
88 Auburn Pk; 84 Auburn Sq	92-124; 92-123
80 Auburn Pk; 1 Brookline Pl	92-130; 92-122
89 Brookline St	93-25
126-144 Brookline	95-73
8 Carleton St	48-120
35 Cherry St	75-118
12 Emily St; 3 Emily S	95-71; 95-68
57 Erie St	67-61
99 Erie St; 202 Brookline St; 208 Brookline S	95-75; 96-61; 96-60
34-40 Brookline St	92-120
96-152 Green St	92-119
79 Hamilton St	96-117
38 Henry St	65-47
26 Landsdowne St	68-77
35 Landsdowne	69-179
40 Landsdowne St	68-76
65 Landsdowne St	69-182
80 Landsdowne	68-75
100 Landsdowne St	68-74
45 Landsdowne; 50 Sidney St	69-180; 69-181
24 Magazine St	106-21
226-254 Main St	47-84
264 Main St	48-107
336 Main St; see additional parcels	48-15; 48-16; 48-26
41 Albany; 620 Main St	71-46; 71-20
650 Main St	71-54
700 Main	71-50
730 Main St	70-22
750 Main St	70-86
798 Main St	70-87
840 Main St; 19 State St	70-9; 70-12
884 Main St	70-97
76 Massachusetts Ave	57-169
1010 Massachusetts Ave	121-6
1039 Massachusetts Ave	134-32
134 Massachusetts Ave	56-4
135 Massachusetts Ave	53-54
181 Massachusetts Ave; 209 Massachusetts A	71-55; 70-74
220 Massachusetts Ave	68-50
233 Massachusetts Ave	70-51
1-7 Village St	70-92
306 Massachusetts Ave; see additional parcel	69-148; 69-103; 69-149
350 Massachusetts Ave	69-159
355 Massachuestts Ave	70-98
372 Massachusetts Ave; see additional parcel	92-58; 92-62; 92-95; 92-96
428 Massachusetts Ave; 119 Green St	92-89; 92-66
458 Massachusetts Ave	92-131
464 Massachusetts Ave	92-50
70 Memorial Dr	47-83
100 Memorial Dr	48-154
407 Memorial Dr	59-39
620 Memorial Dr	63-135
622 Memorial Dr	63-1
634 Memorial Dr; 632 Memorial Dr	64-6; 64-7
784 Memorial Dr	128-71
545 Technology Sq; see additional parcels	43A-28; 43A-16; 43A-21; 43A-19
115-119 Pacific St	92-116
0 Purington St	68-70
589 Putnam Ave	96-136
636 Putnam Ave; 140 Waverly St	66-29; 66-94
20 Sidney St CU; see additional parcels	69-62-CU; 69-62-GU; 69-62-HU;
23 Sidney St	92-118
38 Sidney St	69-165
45-75 Sidney St; 30 Pilgrim St	92-127; 92-125
64 Sidney St	69-173
88 Sidney St	69-183
91 Sidney St	92-126
146 Sidney St	67-47
135 Sidney St	95-60
148 Sidney St	67-48
137-149 Sidney St; 153 Sidney St	95-72; 95-70
170 Sidney St; 167 Sidney	67-56; 95-74
59 Hamilton St	96-118
63-71 Fulkerson St (condos)	Multiple
47 Windsor St	70-88
300 Third St	15-29
218 Thorndike St (condos)	Multiple
25-29 Tudor St	95-78
65 Sidney St	92-128
353 Vassar St.	63-131
65 Wadsworth St	47-71
117-141 Waverly St; 141 Waverly St	66-73; 66-125
13 Chestnut; see additional parcels	66-12; 66-11; 66-10
130 Albany St	56-9
NY Central RR	55-22
NY Central RR	53-70
NY Central RR	55-23

Transit Analysis

MBTA References

Service Delivery Policy

MBTA Board of Directors approved
June 2, 2010

Massachusetts Bay Transportation Authority

departure/arrival times. These standards reflect the long distances and wide station spacing of commuter rail, and the absence of intermediate stations on most boat services. Table 8 shows the Schedule Adherence standards for Commuter Rail and Boat services.

Table 8: Schedule Adherence Standards for Commuter Rail & Boat

Mode	Standard
Commuter Rail	95% of all trips departing and arriving at terminals within 5 minutes of scheduled departure and arrival times
Boat	95% of all trips departing and arriving at ports within 5 minutes of scheduled departure and arrival times

Safety & Comfort Service Standard

The public's perception of comfort and the reality of public safety are influenced by the number of passengers on the vehicle and whether or not a seat is available to each rider for all or most of the trip. The Vehicle Load Standards, which vary by mode and time of day, establish the average maximum number of passengers allowed per vehicle to provide a safe and comfortable ride.

- **Vehicle Load**
  As indicated in the Frequency of Service Standard, the level of service provided by the MBTA is primarily a function of demand, as demonstrated through the number of customers using the service at different times during the day. On weekends and during some weekday time periods, most MBTA services operate with sufficient frequency to provide every passenger with a seat. However, at the heaviest weekday travel times or locations some passengers will need to stand.

  During time periods when some passengers will be standing, the MBTA will provide sufficient service so that vehicles are not excessively crowded. The purpose of the Vehicle Load Standard is to define the levels of crowding that are acceptable by mode and time period. The time periods used by the MBTA for all modes, for both the Frequency of Service and Vehicle Load Standards, are defined earlier in this chapter (see Frequency of Service Standard).

  Because heavy and light rail in the core area are heavily used throughout the day, some standees can be expected during all time periods. For the purposes of this policy, the core area is defined as follows:

Table 9: MBTA Core Area Boundaries

Light Rail & Heavy Rail Core Area	
Blue Line	Bowdoin to Maverick
Orange Line	Back Bay to North Station
Red Line	Kendall to South Station
Green Line	All underground stations as well as Lechmere and Science Park

By mode and time period, the acceptable levels of crowding are shown in the following table. The load standards in the table are expressed as a ratio of the number of passengers on the vehicle to the number of seats on the vehicle. To determine whether a service has an acceptable level of crowding, the vehicle loads are averaged over specified periods of time. Due to scheduling constraints and peaking characteristics, some individual trips may exceed the load levels expressed in the standards.

For most modes the load standards shown represent average maximum loads over any time period on weekdays and over the whole day on weekends. For bus, on weekdays the loads cannot exceed the standard when averaged over any 30-minute segment of an Early AM, AM Peak, Midday School or PM Peak period, or any 60-minute segment of a Midday Base, Evening, Late Evening or Night/Sunrise period. On weekend days, the loads cannot exceed the standard when averaged over any 60-minute segment of the whole service day.

Table 10: Vehicle Load Standards by Mode

Mode	Time Period	Passengers/ Seats**
Bus*	Early AM, AM Peak, Midday School & PM Peak	140%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Surface routes	100%
	Tunnel portions of BRT routes	140%
Green Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Surface	100%
Red Line #1 & 2 Cars	Early AM, AM Peak, Midday School & PM Peak	270%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%
Red Line #3 Cars	Early AM, AM Peak, Midday School & PM Peak	334%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	174%
	Outside Core Area	100%
Orange Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%
Blue Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%
Commuter Rail	Early AM, AM Peak, Midday School & PM Peak	110%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	100%
Boat	Inner Harbor – All time periods	100%
	Outer Harbor – All time periods	100%

* For the purposes of the Vehicle Load Standard, "bus" encompasses all rubber-tired vehicles, including diesel, CNG, trackless trolley, dual-mode, etc.
** For Bus, Light Rail and Heavy Rail, the Vehicle Load Standard is based on the ratio of passengers to seated capacity at maximum load. For Commuter Rail the load standard is based on the ratio of boarding passengers per vehicle to seated capacity. For Boat the load standard is based on vessel passenger capacity.

In addition to looking at loads within time periods, the MBTA will routinely evaluate loads at the beginning and end of the service day to determine whether changes in frequency and/or span of service are warranted. The Net Cost/Passenger Standard will be used as one means of flagging routes that may be candidates for such changes.

Because there are a number of different types of vehicles in the MBTA's fleets at any given time, and because the fleets change over time, the actual seating capacity and maximum number of passengers allowed by the load standards for each type of vehicle are included in an addendum to this policy. This addendum will be regularly updated as the fleets change.

Ridership and Service Statistics

Fourteenth Edition
2014

Massachusetts Bay Transportation Authority

Revised July, 2014

Subway Operations Fleet Roster

as of April 2014

Assignment and Class	Year Built	Builder	Electrical System	Remanufacturer	Principal Construction	Fleet ID	Fleet Size	Length Over Coupler Faces	Width Over Side Sheets	Height TOR to Roof	Empty Weight (AW0 #)	Seats	Pax Cap'y (Policy)	Crush Cap'y (1.5 SF/ pax)
BLUE LINE HEAVY RAIL														
No. 5 East Boston	2007-2009	Siemens	Siemens	None	Stainless Steel	0700-0793	94	48' 10"	111"	12' 9.5"	69,000	35	95	145
ORANGE LINE HEAVY RAIL														
No. 12 Main Line	1979-81	Hawker-Siddeley (Canada)	GE	None	Cor-Ten Steel	01200-01319	120	65' 4"	111"	11' 11.75"	A: 68,780, B: 67,360	58	131	224
RED LINE HEAVY RAIL														
No. 1 Red Line	1969-70	Pullman Standard (USA)	WH	GE, 1985-86	Aluminum	01500-01523, 01600-01651	74	69' 9 3/4"	120"	12' 4 5/16"	01500 - 65,900 01600A - 64,650 01600B - 63,700	63	167	267
No. 2 Red Line	1987-89	UTDC (Canada)	WH	None	Aluminum	01700-01757	58	69' 9 3/4"	120"	12' 3 15/16"	71,600	62	167	260
No. 3 Red Line	1993-94	Bombardier (USA)	GE	None	Stainless Steel	01800-01885	86	69' 9 3/4"	120"	12' 3 3/4"	80,000	50 + 2 WC = 52	167	277
RED LINE HEAVY RAIL TOTAL							218							
ALL HEAVY RAIL TOTAL							**432**							
MATTAPAN-ASHMONT TROLLEY														
"Wartime" PCC	1945-46	Pullman Standard (USA)	WH	MBTA, 1978-83 and 1999-2005	Cor-Ten Steel	See below	10	46' (A)	100"	10'10"	39,700-40,035	40	None Designated	130
GREEN LINE LIGHT RAIL ACTIVE VEHICLES														
Type 7 (1)	1986-88	Kinki-Sharyo (Japan)	WH	None	Cor-Ten Steel	3600-3699	91	74'	104" (B)	11'10" (C)	85,500	46	101	269
Type 7 (2)	1997	Kinki-Sharyo (Japan)	ADTranz	None	Cor-Ten Steel	3700-3719	19	74'	104" (B)	11'10" (C)	85,500	46	101	269
Type 8	1998-2007	Breda (Italy)	ADTranz	None	Cor-Ten Steel	3800-3894	95	74'	104"	11' 9.5"	87,000	44	101	199 (D)
GREEN LINE LIGHT RAIL TOTAL							205							
SYSTEMWIDE FLEET TOTAL: HEAVY RAIL, TROLLEY, AND LIGHT RAIL							**647**							

NOTES

Red Line 01500 cars as-built were capable of autonomous operation, but have since had one operator's cab removed.
Red Line 01600 cars as-built were operated in pairs. Cars 01604 and 01605 were damaged in a 1975 collision and are scrapped.
All Red, Orange, and Blue line cars are operated in 2-car sets. A Cars are even numbered. B Cars are odd numbered.
The MBTA also rosters 34 work cars for non-revenue service, such as tool cars, flat cars, cranes, snow plows, and diesel locomotives. Blue Line - 2, Orange Line - 8, Red Line - 11, Green Line - 13
Nine Type 7 cars (3612, 3623, 3637, 3638, 3648, 3657, 3666, 3667 3672) have been scrapped. 3703 is stored awaiting final disposition.
PCC numbers: 3087, 3230, 3234, 3238, 3254, 3260, 3262, 3263, 3265, 3268.
(A) Over Bumpers (B) At Floor Level (C) Over air conditioning unit (D) At 1.35 SF/Pax
Not included are Green Line historic cars 5734 (owned by the Seashore Trolley Museum) and 3295.

Bus Ridership as of Fall 2012

Typical for day and direction shown

Route	Garage	Terminals	Weekday Boardings			Saturday Boardings			Sunday Boardings		
			Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
1	Cabot	Harvard Square - Dudley Station via Mass. Ave.	6477	6738	13214	4774	4736	9510	3000	3211	6212
4	Cabot	North Station - Tide Street	248	222	470	x	x	x	x	x	x
5	Cabot	City Point - McCormack Housing	76	85	161	38	55	93	x	x	x
7	Cabot	City Point - Otis & Summer Streets	2448	2004	4452	429	281	709	x	x	x
8	Cabot	Harbor Point /U Mass - Kenmore Station	1828	2165	3992	732	900	1631	540	603	1143
9	Cabot	City Point - Copley Square via Broadway Station	3433	3171	6604	1610	1208	2818	917	773	1690
10	Cabot	City Point - Copley Square Via BU Med Center	1583	1804	3387	954	952	1907	503	510	1013
11	Cabot	City Point - Downtown	2254	1159	3413	1003	518	1521	604	383	987
14	Arborway	Roslindale Square - Heath Street Loop	714	663	1377	560	471	1030	x	x	x
15	Cabot	Kane Square or Fields Corner - Ruggles Station	3276	3032	6309	2303	1990	4293	1579	1555	3134
16	Cabot	Forest Hills Station - U Mass. Or Andrew Station	2479	2851	5330	1361	1415	2776	814	951	1764
17	Cabot	Fields Corner Station - Andrew Station	1726	1710	3436	804	712	1516	321	265	586
18	Cabot	Ashmont Station - Andrew Station	276	343	619	77	99	175	x	x	x
19	Cabot	Fields Corner Station - Ruggles or Kenmore Station	1846	1754	3600	x	x	x	x	x	x
21	Arborway	Ashmont Station - Forest Hills Station	2612	2387	4999	661	736	1397	407	306	714
22	Cabot	Ashmont Station - Ruggles Station Via Talbot Ave	4397	4259	8656	2741	2590	5330	1887	1912	3799
23	Cabot	Ashmont Station - Ruggles Station via Washington Street	6172	6356	12527	3618	3539	7157	2427	2299	4726
24	Arborway	Wakefield Ave. - Mattapan or Ashmont Station	787	943	1730	x	x	x	x	x	x
24/27	Arborway	Wakefield Ave. - Ashmont Station	x	x	x	590	729	1319	327	397	724
26	Arborway	Ashmont Station - Norfolk & Morton Belt Line	1165	975	2139	699	459	1157	227	108	336
27	Arborway	Mattapan Station - Ashmont Station	470	417	887	x	x	x	x	x	x
28	Southampton	Mattapan Station - Ruggles Station	6896	7161	14057	5198	5258	10456	3816	3742	7558
29	Arborway	Mattapan Station - Jackson Sq or Ruggles	1108	1070	2178	297	255	552	x	x	x
30	Arborway	Mattapan Station - Forest Hills Station	1354	1142	2496	543	513	1056	251	230	480
31	Arborway	Mattapan Station - Forest Hills Station	3274	3131	6405	1686	1667	3353	1254	1362	2616
32	Arborway	Wolcott Square or Cleary Square - Forest Hills Station	5631	5389	11020	2362	2379	4741	1618	1658	3275
33	Arborway	River & Milton Streets - Mattapan Station	651	596	1246	226	236	462	x	x	x
34	Arborway	Walpole Center or Dedham Line - Forest Hills Station (Includes 34E)	2127	1903	4030	868	908	1775	514	444	958
35	Arborway	Dedham Mall - Forest Hills Station	1145	1277	2422	625	518	1142	192	279	471
36	Arborway	VA Hosp - Forest Hills Station Via Chas. River Loop	1570	1752	3323	862	897	1759	792	795	1587
37	Arborway	Baker & Vermont Streets - Forest Hills Station	786	806	1593	485	516	1000	x	x	x
38	Arborway	Wren Street - Forest Hills Station	496	525	1021	146	155	301	x	x	x
39	Southampton	Forest Hills Station - Back Bay Station	7672	7205	14877	4211	3661	7871	2854	3052	5907
40	Arborway	Georgetowne - Forest Hills Station	704	640	1344	371	344	715	x	x	x
40/50	Arborway	Georgetowne - Cleary Sq - Forest Hills Station	x	x	x	x	x	x	104	205	309
41	Arborway	Centre & Eliot Streets - JFK U Mass Station	1097	1149	2245	456	560	1016	249	305	555
42	Arborway	Forest Hills Station - Dudley or Ruggles Station	1507	1540	3047	706	732	1438	366	403	769
43	Cabot	Ruggles Station - Park & Tremont Streets	1032	820	1853	510	453	963	347	302	649
44	Cabot	Jackson Sq Station - Ruggles Station	1791	1724	3515	971	895	1866	353	422	775
45	Cabot	Franklin Park - Ruggles Station	1740	1714	3453	1017	1078	2095	481	499	980
47	Cabot	Central Square Cambridge. - Broadway Station	2642	2394	5036	989	944	1933	558	491	1048
50	Arborway	Cleary Sq - Forest Hills Station Via Metropolitan	664	646	1310	236	176	412	x	x	x
51	Arborway	Reservoir - Forest Hills Station	1152	992	2145	371	326	697	x	x	x
52	Arborway	Dedham Mall - Watertown Yard	382	383	766	x	x	x	x	x	x
55	Cabot	Queensberry Street - Park & Tremont Streets	511	406	917	213	171	384	168	149	317
57	Albany	Watertown Yard - Kenmore Station (Includes 57A)	5012	5082	10094	4352	3618	7969	2777	2676	5453
59	Albany	Needham Junction - Watertown Square	743	754	1497	244	244	488	127	144	271
60	Albany	Chestnut Hill - Kenmore Station	657	732	1389	348	378	726	184	194	378
62	Somerville	Bedford V.A. Hospital - Alewife Station	922	722	1644	x	x	x	x	x	x
62/76	Somerville	Bedford V.A. Hospital - Alewife Station via Hanscom Airforce Base	x	x	x	297	365	662	x	x	x
64	Somerville	Oak Square - University Pk. Cambridge	1140	837	1977	455	316	770	262	157	418
65	Albany	Brighton Center - Kenmore Station	1306	1210	2516	186	159	345	x	x	x
66	Cabot	Harvard Square - Dudley Station via Brookline	6716	7217	13933	4263	4718	8980	3102	3344	6446
67	Somerville	Turkey Hill - Alewife Station	312	276	588	x	x	x	x	x	x
68	Somerville	Harvard Square - Kendall MIT Station	244	224	468	x	x	x	x	x	x
69	Somerville	Harvard Square - Lechmere Station	1588	1598	3185	999	1092	2092	543	508	1051
70	Somerville	Cedarwood - Central Square Cambridge (Includes 70A)	2597	2658	5255	1898	1997	3894	1605	1841	3445

Route	Garage	Terminals	Weekday Boardings			Saturday Boardings			Sunday Boardings		
			Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
72/75	Somerville	Belmont Center - Harvard Station via Huron Ave	x	x	x	63	116	179	231	277	508
74	Somerville	Belmont Center - Harvard Station via Concord Ave	528	568	1096	211	141	352	x	x	x
75	Somerville	Belmont Center - Harvard Station via Fresh Pond Pkwy	316	278	594	163	170	334	x	x	x
76	Somerville	Hanscom Air Force Base - Alewife Station	560	431	991	x	x	x	x	x	x
77	Somerville	Arlington Heights - Harvard Station	3635	4004	7640	3235	2942	6177	1867	2016	3882
78	Somerville	Arlmont Village - Harvard Station	694	795	1488	253	280	532	189	272	462
79	Somerville	Arlington Heights - Alewife Station	684	577	1261	x	x	x	x	x	x
80	Somerville	Arlington Center - Lechmere Station	1063	995	2058	748	667	1415	428	398	826
83	Somerville	Rindge Ave. - Central Square, Cambridge	1096	1142	2237	683	648	1331	282	349	631
84	Somerville	Arlmont Loop - Alewife Station	227	128	356	x	x	x	x	x	x
85	Somerville	Spring Hill - Kendall MIT Station	301	288	589	x	x	x	x	x	x
86	Somerville	Sullivan Station - Reservoir Station	2591	3027	5618	1430	1780	3210	895	1022	1917
87	Somerville	Arlington Center or Clarendon Hill - Lechmere Station via Somerville Avenue	1943	1853	3796	1436	1422	2858	817	925	1742
88	Somerville	Clarendon Hill - Lechmere Station via Highland Avenue	2003	2073	4075	1418	1376	2794	862	803	1664
89	Charlestown	Clarendon Hill or Davis Square - Sullivan Station via Broadway	2079	2077	4156	973	945	1917	367	492	858
90	Charlestown	Davis Square Station - Wellington Station	588	593	1182	334	350	684	230	163	393
91	Charlestown	Sullivan Station - Central Square, Cambridge	784	909	1693	713	860	1574	354	389	743
92	Charlestown	Assembly Square Mall - Downtown Via Main Street	667	654	1321	294	285	579	x	x	x
93	Charlestown	Sullivan Station - Downtown Via Bunker Hill	2420	2454	4874	1079	1182	2261	541	481	1022
94	Fellsway	Medford Square - Davis Square Station	840	756	1596	409	319	728	276	269	544
95	Fellsway	West Medford - Sullivan Station	896	986	1881	445	491	936	206	236	442
96	Fellsway	Medford Sq - Harvard Station	1109	1084	2192	776	589	1364	319	377	696
97	Fellsway	Malden Station - Wellington Station	535	522	1057	239	260	498	244	211	455
99	Fellsway	Boston Reg. Med Center Stoneham - Wellington Station	693	862	1555	462	587	1049	258	333	591
100	Fellsway	Elm Street - Wellington Station	490	432	922	270	252	522	168	146	314
101	Charlestown	Malden Station - Sullivan Station Via Medford Square	2453	2314	4767	1165	1232	2397	603	516	1119
104	Charlestown	Malden Station - Sullivan Station Via Ferry Street	1872	2159	4031	1329	1299	2627	607	706	1313
105	Fellsway	Malden Station - Sullivan Station Via Main Street	487	487	974	341	412	752	234	262	497
106	Charlestown	Franklin Sq or Lebanon Street Loop - Wellington Station	1544	1593	3136	825	805	1629	559	565	1123
108	Charlestown	Linden Square - Wellington Station	1610	1565	3175	1028	922	1950	399	397	796
109	Charlestown	Linden Square - Sullivan Station	1430	1839	3269	939	1024	1963	678	707	1385
110	Charlestown	Wonderland Station - Wellington Station	1739	1715	3454	741	888	1629	496	521	1018
111	Charlestown	Woodlawn or Bway & Park - Haymarket Station	6244	5889	12133	4193	3926	8119	2588	2502	5090
112	Charlestown	Wellington Station - Wood Island Station	673	724	1397	512	540	1051	299	307	606
114	Lynn	Bellingham Square or Market Basket - Maverick Station	209	250	459	x	x	x	x	x	x
116	Lynn	Wonderland Station - Maverick Station Via Revere	3047	3008	6054	1713	1789	3502	1040	1382	2423
117	Lynn	Wonderland Station - Maverick Station via Beach	2440	2541	4981	1567	1631	3198	1375	1312	2687
119	Lynn	Northgate Shopping Center - Beachmont Station	741	446	1187	354	207	561	302	214	516
120	Lynn	Orient Heights Station - Maverick Station	1378	1656	3034	696	803	1499	396	477	873
121	Lynn	Wood Island Station - Maverick Station	218	268	486	x	x	x	x	x	x
131	Fellsway	Melrose Highlands - Malden Station	324	346	669	x	x	x	x	x	x
132	Fellsway	Redstone Shopping Center - Malden Station	507	451	958	154	160	314	x	x	x
134	Fellsway	North Woburn - Wellington Station	1158	991	2149	712	645	1357	321	309	630
136	Fellsway	Reading Depot - Malden Station Via Lowell St	665	485	1150	231	252	483	x	143	143
137	Fellsway	Reading Depot - Malden Station Via North Ave	532	624	1157	240	226	466	144	x	144
170	Albany	Waltham - Dudley Station (Limited Service)	49	43	92	x	x	x	x	x	x
171	Cabot	Logan Airport - Dudley Station Sunrise	x	36	36	x	39	39	x	48	48
201&202	Quincy	Fields Corner Station - Fields Corner Station	633	706	1339	266	304	570	123	137	260
210	Quincy	Quincy Center Station - No. Quincy Stn. or Fields Corner Stn.	357	379	736	71	133	204	x	x	x
211	Quincy	Quincy Center Station - Squantum	493	443	936	110	106	216	55	65	119
212	Quincy	Quincy Center Station - North Quincy Station	151	142	293	72	79	151	x	x	x
214	Quincy	Quincy Center Station - Germantown	663	819	1482	x	x	x	x	x	x
214/216	Quincy	Quincy Center Station - Germantown - Houghs Neck	x	x	x	589	1040	1629	337	631	968
215	Quincy	Quincy Center Station - Ashmont Station	890	802	1693	513	459	972	271	270	542
216	Quincy	Quincy Center Station - Houghs Neck	533	768	1302	x	x	x	x	x	x
217	Quincy	Quincy Center Station - Ashmont Station	120	119	239	x	x	x	x	x	x
220	Quincy	Quincy Center Station - Hingham	868	851	1719	509	582	1091	277	328	606
221	Quincy	Quincy Center Station - Fort Point	74	48	123	x	x	x	x	x	x
222	Quincy	Quincy Center Station - East Weymouth	791	898	1690	331	413	744	252	302	554
225	Quincy	Quincy Center Station - Weymouth Landing or Columbian Sq	1395	1663	3058	592	743	1335	300	353	653

Route	Garage	Terminals	Weekday Boardings			Saturday Boardings			Sunday Boardings		
			Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
230	Quincy	Quincy Center Station - Montello Station	821	912	1733	367	388	756	244	248	492
236	Quincy	Quincy Center Station - South Shore Plaza	307	376	683	214	323	537	214	205	419
238	Quincy	Quincy Center Station - Holbrook/Randolph Comm. Rail St	1004	1074	2077	613	692	1304	314	421	735
240	Quincy	Avon Line - Ashmont Station	1438	1474	2912	830	810	1640	428	484	912
245	Quincy	Quincy Center Station - Mattapan Station	296	265	561	x	x	x	x	x	x
325	Charlestown	Elm Street - Haymarket Station	161	143	305	x	x	x	x	x	x
326	Charlestown	West Medford - Haymarket Station	243	193	436	x	x	x	x	x	x
350	Somerville	North Burlington - Alewife Station	665	989	1653	263	519	781	154	323	477
351	Somerville	EMD Serono/Bedford Woods - Alewife Station	97	93	190	x	x	x	x	x	x
352	Charlestown	Burlington - State Street	229	183	412	x	x	x	x	x	x
354	Fellsway	Woburn Line - State Street	350	378	728	x	x	x	x	x	x
411	Fellsway	Malden Station - Revere/Jack Satter House	570	518	1087	272	291	563	x	x	x
424	Lynn	Eastern & Essex - Haymarket or Wonderland	154	104	258	x	x	x	x	x	x
426	Lynn	Central Sq Lynn - Haymarket or Wonderland Sta Via Cliftondale Sq	886	1091	1977	338	498	836	364	332	696
428	Lynn	Oaklandvale - Haymarket Station via Granada Highlands	86	78	164	x	x	x	x	x	x
429	Lynn	Northgate Shopping Center - Central Sq Lynn	774	761	1534	554	532	1085	292	271	563
430	Fellsway	Malden Ctr Station - Saugus Center via Square One Mall	580	712	1292	310	429	739	x	x	x
431	Lynn	Neptune Towers - Central Sq Lynn	31	14	45	41	-	41	6	1	7
434	Lynn	Peabody Sq - Haymarket Station via Goodwins Circle	30	30	60	x	x	x	x	x	x
435	Lynn	Liberty Tree Mall - Central Sq Lynn	418	494	912	371	373	744	194	190	385
436	Lynn	Liberty Tree Mall - Central Sq Lynn	392	431	823	213	314	527	x	x	x
439	Lynn	Bass Point Nahant - Central Sq Lynn	55	42	97	x	x	x	x	x	x
441	Lynn	Marblehead - Haymarket or Wonderland Stn. via Paradise Rd.	706	691	1397	460	401	861	317	307	624
442	Lynn	Marblehead - Haymarket or Wonderland Stn via Humphry St.	940	1116	2056	567	626	1193	448	444	892
448	Lynn	Marblehead - Downtown Crossing	69	107	176	x	x	x	x	x	x
449	Lynn	Marblehead - Downtown Crossing	81	77	158	x	x	x	x	x	x
450	Lynn	Salem Depot - Haymarket or Wonderland Station via Western Ave	830	955	1785	585	558	1143	382	507	889
451	Lynn	North Beverly - Salem Depot	69	94	163	x	x	x	x	x	x
455	Lynn	Salem Depot - Wonderland Station	1229	874	2103	1304	1103	2407	806	646	1452
456	Lynn	Salem Depot - Central Sq Lynn	139	184	324	x	x	x	x	x	x
459	Lynn	Salem Depot - Downtown Crossing	620	563	1184	x	x	x	x	x	x
465	Lynn	Danvers Square - Salem Depot	203	210	414	119	148	267	x	x	x
501	Albany	Brighton Center - Downtown Boston	827	863	1690	x	x	x	x	x	x
502	Albany	Watertown Yard - Copley Square	665	540	1206	x	x	x	x	x	x
503	Albany	Brighton Center - Copley	309	255	564	x	x	x	x	x	x
504	Albany	Watertown Yard - Downtown Boston	849	698	1548	315	244	558	x	x	x
505	Albany	Waltham Center - Downtown Boston	556	453	1009	x	x	x	x	x	x
553	Albany	Roberts - Downtown Boston	465	513	978	229	194	423	x	x	x
554	Albany	Waverley Square - Downtown Boston	321	328	649	x	x	x	x	x	x
556	Albany	Waltham Highlands - Downtown Boston	283	232	515	x	x	x	x	x	x
558	Albany	Auburndale - Downtown Boston	208	222	429	x	x	x	x	x	x
CT1 (701)	Albany	Central Sq. Camb. - So. End Medical Area	1,094	1,097	2191	x	x	x	x	x	x
CT2 (747)	Albany	Kendall MIT Sta - Ruggles Sta	1,425	1,390	2815	x	x	x	x	x	x
CT3 (708)	Albany	Longwood Medical Area - Andrew Sta.	596	797	1393	x	x	x	x	x	x
		TOTAL BUS	**196,535**	**195,878**	**392,413**	**102,726**	**101,672**	**204,398**	**60,417**	**62,464**	**122,881**

MBTA Service and Infrastructure Profile
April 2014

MBTA Service District

Cities and Towns	175
Size in Square Miles	3,244
Population (2010 Census)	4,812,658

Typical Weekday Ridership (FY 2013)

By Line Unlinked	
Red Line	272,684
Orange Line	203,406
Blue Line	63,225
Total Heavy Rail	**539,315**
Total Green Line (Light Rail & Trolley)	**227,645**
Bus (includes Silver Line)	376,227
Silver Line SL1 & SL2	16,056
Silver Line SL4 & SL5	13,783
Trackless Trolley	11,588
Total Bus and Trackless Trolley	**387,815**
TOTAL MBTA-Provided Urban Service	**1,154,775**

System Unlinked	
MBTA - Provided Urban Service	1,154,775
Commuter Rail Boardings (Inbound + Outbound)	129,075
Contracted Bus	2,513
Ferry	4,464
THE RIDE Paratransit Trips Delivered	6,823
TOTAL ALL MODES UNLINKED	**1,297,650**

Notes:

Unlinked trips are the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

Annual Ridership (FY 2013)

Unlinked Trips by Mode	
Heavy Rail - Red Line	84,270,589
Heavy Rail - Orange Line	61,002,832
Heavy Rail - Blue Line	20,091,588
Light Rail (includes Mattapan-Ashmont Trolley)	72,207,726
Bus (includes Silver Line)	111,730,664
Trackless Trolley	3,216,191
TOTAL Subway & Bus/Trackless Trolley	**352,519,591**
Commuter Rail	**35,323,276**
THE RIDE Paratransit	**2,108,870**
Ferry	**1,253,167**
Contracted Bus	**706,826**
TOTAL with THE RIDE Paratransit	**391,911,730**
TOTAL Scheduled Service (Without THE RIDE)	**389,802,860**

Total Heavy Rail
165,365,009

Total Rubber Tire
114,946,856

Route Miles (One-Way, Non-Duplicative), April 2014

Red Line (Ashmont and Braintree)	21
Orange Line	11
Blue Line	6
Green Line	23
B: 4, C: 3, D: 9, Outer E: 2, Inner E: 1, Subway: 4	
Mattapan-Ashmont Trolley	3
Total Subway	**64**
Silver Line Bus Rapid Transit	
Silver Line Waterfront Transitway Tunnel (SL1, SL2)	1
Silver Line Waterfront Surface (SL1, SL2)	7
Silver Line SL4	2
Silver Line SL5	2
Total Silver Line Bus Rapid Transit	**13**
Bus	734
Trackless Trolley	11
Total Bus & Trackless Trolley	**745**
Commuter Rail	**388**
Inner Harbor Ferry	1
Commuter Ferry*	37
Total Ferry	**38**
700-Series Private Carrier	29
Suburban Bus	114
Total Contracted Bus	**143**
Total Route Miles	**1392**

** Commuter Ferry calculated as mileage one-way from Boston-Hingham, Quincy-Hull, Hull-Logan, and Logan-Boston*

Total Heavy Rail (Red Orange, Blue)
38

Notes: Route mile figures are rounded to the nearest whole number.

Ridership and Service Statistics

Thirteenth Edition
2010

Massachusetts Bay Transportation Authority

MBTA Service and Infrastructure Profile
July 2010

MBTA Service District

Cities and Towns	175
Size in Square Miles	3,244
Population (2000 Census)	4,663,565

Typical Weekday Ridership (FY 2010)

By Line Unlinked	
Red Line	241,603
Orange Line	184,961
Blue Line	57,273
Total Heavy Rail	**483,837**
Total Green Line (Light Rail & Trolley)	**236,096**
Bus (includes Silver Line)	361,676
Silver Line SL1 & SL2*	14,940
Silver Line SL4 & SL5**	15,086
Trackless Trolley	12,364
Total Bus and Trackless Trolley	**374,040**
TOTAL MBTA-Provided Urban Service	**1,093,973**

System Unlinked	
MBTA - Provided Urban Service	1,093,973
Commuter Rail Boardings (Inbound + Outbound)	132,720
Contracted Bus	2,603
Water Transportation	4,372
THE RIDE Paratransit Trips Delivered	6,773
TOTAL ALL MODES UNLINKED	**1,240,441**

Notes:
Unlinked trips are the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

** Average weekday ridership taken from 2009 CTPS surveys for Silver Line SL1 & SL2.*
*** SL4 service began in October 2009. Ridership represents a partial year of operation.*

Annual Ridership (FY 2010)

Unlinked Trips by Mode	
Heavy Rail - Red Line	74,445,042
Heavy Rail - Orange Line	54,596,634
Heavy Rail - Blue Line	17,876,009
Light Rail (includes Mattapan-Ashmont Trolley)	75,916,005
Bus (includes Silver Line)	108,088,300
Trackless Trolley	3,438,160
TOTAL Subway & Bus/Trackless Trolley	**334,360,150**
Commuter Rail	**36,930,089**
THE RIDE Paratransit	**2,095,932**
Ferry (ex. Georges Island)	**1,290,900**
Contracted Bus	**734,107**
TOTAL with THE RIDE Paratransit	**375,411,178**
TOTAL Scheduled Service (Without THE RIDE)	**373,315,246**

Total Heavy Rail: **146,917,685**

Total Rubber Tire: **111,526,460**

Route Miles (One-Way, Non-Duplicative, March 2010)

Red Line (Ashmont and Braintree)	21
Orange Line	11
Blue Line	6
Green Line	23
B: 4, C: 3, D: 9, Outer E: 2, Inner E: 1, Subway: 4	
Mattapan-Ashmont Trolley	3
Total Subway	**64**
Silver Line Bus Rapid Transit	
Silver Line Waterfront Transitway Tunnel (SL1, SL2)	1
Silver Line Waterfront Surface (SL1, SL2)	7
Silver Line SL4	2
Silver Line SL5	2
Total Silver Line Bus Rapid Transit	**13**
Bus	740
Trackless Trolley	11
Total Bus & Trackless Trolley	**751**
Commuter Rail	**394**
Inner Harbor Ferry	1
Commuter Ferry*	37
Total Ferry	**38**
700-Series Private Carrier	79
Suburban Bus	165
Total Contracted Bus	**244**
Total Route Miles	**1506**

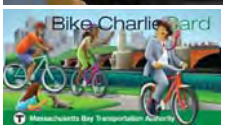
** Commuter Ferry calculated as mileage one-way from Boston-Hingham, Quincy-Hull, Hull-Logan, and Logan-Boston*

Total Heavy Rail (Red Orange, Blue): **38**

Notes: Route mile figures are rounded to the nearest whole number.

Ridership and Service Statistics

Twelfth Edition
2009



Massachusetts Bay Transportation Authority

MBTA Service and Infrastructure Profile
February 2009

MBTA Service District

Cities and Towns	175
Size in Square Miles	3,244
Population (2000 Census)	4,663,565

Typical Weekday Ridership (FY 2008)

By Line Unlinked	
Red Line	242,926
Orange Line	182,071
Blue Line	58,421
Total Heavy Rail	**483,418**
Total Green Line (Light Rail & Trolley)	**250,219**
Bus (includes Silver Line)	354,060
Silver Line Waterfront*	11,006
Silver Line Washington Street*	14,709
Trackless Trolley	13,968
Total Bus and Trackless Trolley	**368,028**
TOTAL MBTA-Provided Urban Service	**1,101,665**

System Unlinked	
MBTA - Provided Urban Service	1,101,665
Commuter Rail Boardings (Inbound + Outbound)	142,368
Contracted Bus	4,109
Water Transportation	4,491
THE RIDE Paratransit Trips Delivered	5,746
TOTAL ALL MODES UNLINKED	**1,258,379**

Notes:
Unlinked trips can be defined as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

** Average weekday ridership taken from 2005 CTPS surveys for Mattapan Line and Silver Line Washington and 2007 for Silver Line Waterfront.*

Annual Ridership (FY 2008)

Unlinked Trips by Mode		
Bus (includes Silver Line)	105,881,740	Total Rubber Tire
Trackless Trolley	3,855,103	**109,736,844**
Light Rail (includes Mattapan-Ashmont Trolley)	81,181,602	Total Light Rail **81,181,602**
Heavy Rail - Red Line	73,185,914	Total
Heavy Rail - Orange Line	54,390,138	Heavy Rail
Heavy Rail - Blue Line	18,300,339	**145,876,391**
TOTAL Rapid Transit & Bus/T.T. Operations	**336,794,836**	
Commuter Rail Boardings	**39,207,425**	
THE RIDE Paratransit Trips	**1,764,066**	
Contracted Bus Carrier Boardings	1,116,502	
Ferry Boardings (inc. Georges Island)	1,295,373	
TOTAL Contracted Services	**2,411,875**	
TOTAL With THE RIDE Paratransit	**380,178,202**	
TOTAL Scheduled Service (Without THE RIDE)	**378,414,136**	

** Mattapan Trolley partial year. Re-opened December 2007.*

Route Miles (One-Way, Non-Duplicative, August 2008)

Red Line (Ashmont and Braintree)	21	Total Heavy Rail
Orange Line	11	(Red Orange, Blue)
Blue Line	6	**38**
Green Line	23	
B: 4, C: 3, D: 9, Outer E: 2, Inner E: 1, Subway: 4		
Mattapan-Ashmont Trolley	3	
Total Subway	**64**	
Silver Line Washington St	**2**	
Silver Line Waterfront Transitway Tunnel	1	
Silver Line Waterfront Surface	7	
Silver Line Waterfront Total	**8**	
Bus	740	
Trackless Trolley	11	
Total Bus & Trackless Trolley	**751**	
Commuter Rail	**394**	
Inner Harbor Ferry	1	
Commuter Ferry*	37	
Total Water Transportation	**38**	

** Commuter Ferry calculated as mileage one-way from Boston-Hingham, Quincy-Hull, Hull-Logan, and Logan-Boston*

700-Series Private Carrier	79
Suburban Bus	161
Total Contracted Bus Routes*	**240**

** Excludes contracted bus routes under EOT auspices*

Total Route Miles	**1497**

Notes: Route mile figures are rounded to the nearest whole number.

Ridership and Service Statistics

Eleventh Edition
2007

Massachusetts Bay Transportation Authority

MBTA Service and Infrastructure Profile
August 2007

MBTA Service District

Cities and Towns	175
Size in Square Miles	3,244
Population (2000 Census)	4,663,565

Typical Weekday Ridership

Total System for FY 2007	
Rapid Transit and Bus (Linked)	721,344
Commuter Rail Boardings (Inbound + Outbound)	140,825
Contracted Bus (estimated)	4,900
Water Transportation	4,900
TOTAL	**871,969**

By Line (Unlinked) for FY 2007	
Red Line	226,417
Orange Line	216,183
Blue Line	50,515
Total Heavy Rail	**493,115**
Green Line Surface	88,911
Green Line Subway	148,499
Mattapan - Ashmont Trolley (Closed for Construction)	0
Total Green Line (Light Rail & Trolley)	**237,410**
Bus (with estimate of paper transfer slip use)	344,111
Trackless Trolley	11,447
Total Bus and Trackless Trolley	**355,558**
TOTAL MBTA-Provided Urban Service	**1,086,083**

System Unlinked for FY 2007	
MBTA - Provided Urban Service	1,086,083
Commuter Rail Boardings (Inbound + Outbound)	140,825
Contracted Bus (estimated)	4,650
Water Transportation	4,900
THE RIDE Paratransit Trips Delivered	5,173
TOTAL ALL MODES UNLINKED	**1,241,631**

Notes:
For more detailed ridership information, see following chapters

Linked trips can be defined as a trip from origin to destination on the transit system. Even if a person must make several transfers during a journey, the trip is counted as one linked trip on the system.
Unlinked trips can be defined as the number of passengers who board public transportation vehicles. Passengers are counted each time they boa vehicles no matter how many vehicles they use to travel from their origin to their destination.
Source: www.ntdprogram.gov/ntdprogram

Annual Ridership (FY 2007)

Unlinked Trips by Mode		
Bus Including Silver Line/Washington Street	101,331,725	Total Rubber Tire
Trackless Trolley	3,827,300	**105,159,025**
Light Rail - Subway	50,193,587	Total Light Rail
Light Rail - Surface & Mattapan-Ashmont	30,055,442	**80,249,029**
Heavy Rail - Red Line	66,793,396	Total
Heavy Rail - Orange Line	62,522,460	Heavy Rail
Heavy Rail - Blue Line	15,752,242	**145,068,098**
TOTAL Rapid Transit & Bus/T.T. Operations	**330,476,152**	
Rapid Transit and Bus, **Linked** Trips	211,603,826	
Commuter Rail Boardings	**38,816,100**	
THE RIDE Paratransit Trips	**1,584,382**	
Contracted Bus Carrier Boardings	1,248,251	
Water Transportation Boardings	1,406,071	
TOTAL Contracted Services	**2,654,322**	
TOTAL With THE RIDE Paratransit	**373,530,956**	
TOTAL Scheduled Service (Without THE RIDE)	**371,946,574**	

Route Miles (One-Way, Non-Duplicative, August 2007)

Red Line (Ashmont and Braintree)	21	Total Heavy Rail
Orange Line	11	(Red Orange, Blue)
Blue Line	6	**38**
Green Line	23	
B: 4, C: 3, D: 9, Outer E: 2, Inner E: 1, Subway: 4		
Mattapan-Ashmont Trolley	3	
Total Subway	**64**	
Silver Line Washington St	**2**	
Silver Line Waterfront Transitway Tunnel	1	
Silver Line Waterfront Surface	7	
Silver Line Waterfront Total	**8**	
Bus	740	
Trackless Trolley	11	
Total Bus & Trackless Trolley	**751**	
Commuter Rail	**368**	
Inner Harbor Ferry	1	
Commuter Boats*	37	
Total Water Transportation	**38**	

* Note: Commuter Boat calculated as mileage one-way from Boston-Hingham, Quincy-Hull, Hull-Logan, Logan-Boston

Total Route Miles	**1231**

Route mile figures are rounded to the nearest whole number.

massDOT

Massachusetts Department of Transportation

2014 Annual Performance Report

Prepared By: The Office of Performance Management and Innovation

December 2014

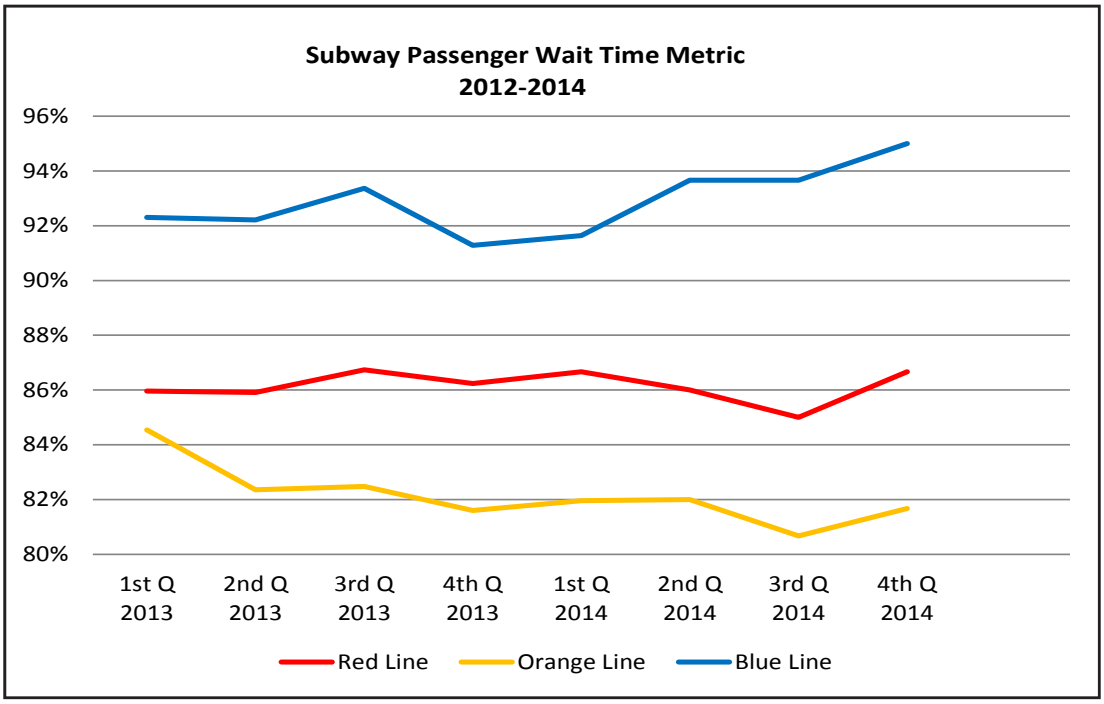
The data in this report represents the 2014 State Fiscal Year (July 1, 2013 - June 30, 2014) unless otherwise noted.

Rail and Transit Division - 2014 Scorecard					
Division/Performance Measure	Policy Goal	Target	Current	Trending Toward Goal	Reporting Schedule
Reliably operate equipment on the transit system (MMBF)					
Red Line	Customer Service	≥47,000	56,584	✓	Qtrly
Orange Line	Customer Service	≥37,000	41,986	✓	Qtrly
Blue Line	Customer Service	≥35,000	56,986	✓	Qtrly
Green Line	Customer Service	≥5,500	5,491	-	Qtrly
Bus	Customer Service	≥12,000	13,359	✓	Qtrly
Commuter Rail	Customer Service	≥10,200	5,773	-	Qtrly
Provide reliable on-time performance of the transit system					
Red Line Passenger Wait Time	Customer Service/ GreenDOT	88%	86%	✓	Qtrly
Orange Line Passenger Wait Time	Customer Service/ GreenDOT	83%	82%	-	Qtrly
Blue Line Passenger Wait Time	Customer Service/ GreenDOT	95%	93%	✓	Qtrly
Commuter Rail On Time Performance	Customer Service/ GreenDOT	95%	90%	-	Qtrly
Key Bus Routes & Silver Line On Time Performance	Customer Service/ GreenDOT	75%	73%	-	Qtrly
Paratransit On Time Performance	Customer Service/ GreenDOT	93%	93%	✓	Qtrly
Provide a safe environment for customers of the transit system					
Average Rate of Crime in Transit Locations	Safety	≤1.9	2.1	-	Qtrly
Operate an efficient and fiscally responsible transit system					
Ridership on all lines	Fiscal Responsibility/ Customer Service	n/a	351,599,677	n/a	Qtrly
Farebox recovery	Fiscal Responsibility	10% in-crease	31%	✓	Qtrly
Responsibly manage transit capital projects					
Complete construction projects on time	Fiscal Responsibility/ Customer Service	n/a	70%	n/a	Annual
Number of projects completed in year	Fiscal Responsibility	n/a	6	n/a	Annual
Number of projects advertised early or on time	Fiscal Responsibility	n/a	4	n/a	Annual
Number of projects currently under construction	Fiscal Responsibility	n/a	46	n/a	Annual
Number of projects planned for the next year	Fiscal Responsibility	n/a	18	n/a	Annual
Maintain accessibility for all users					
Elevator availability	Customer Service	99%	99%	✓	Qtrly
Escalator availability	Customer Service	99%	99%	✓	Qtrly
Response rate to MBTA customer inquiries are closed within 5 days	Customer Service	95% closed within 5 days	87%	-	Qtrly

Provide reliable on-time performance of the transit system

While the MMBF measures the condition of the MBTA's rolling stock, the passenger wait time performance metric provides a reliability measure from the customer perspective. It captures the percent of customers who wait on the platform no longer than the scheduled time between trains. Certainly the vehicle condition (measured by MMBF) has an impact on on-time performance, but this measure also captures operational issues that influence the ability of the MBTA to operate on schedule.

Over the course of SFY 2104, the Red Line and Orange line passenger wait time both decreased during the third quarter (consistent with the trends in MMBF) and showed an overall stable trend. The Blue Line's passenger wait time performance trended positively. Since 2012, the Blue Line is also the only subway line to display a positive performance direction in this area.



Passenger Wait Time Metric

How it is Measured: The passenger wait time metric was developed in conjunction with MIT. It correlates Automated Fare Collection data and track circuitry data to determine the percent of passengers whose wait time was less than or equal to the scheduled interval between trains.

Why this Matters: This measure provides the MBTA with the picture of how the operations of each line is performing, from the customer experience perspective.

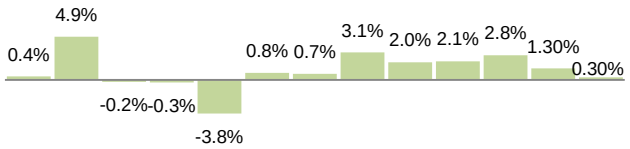
ScoreCard

Nov 2014 [Oct 14 Data]

Ridership

Average Weekday Ridership
Sep 14: 1.38M*
Up 0.3% from Sep 2013

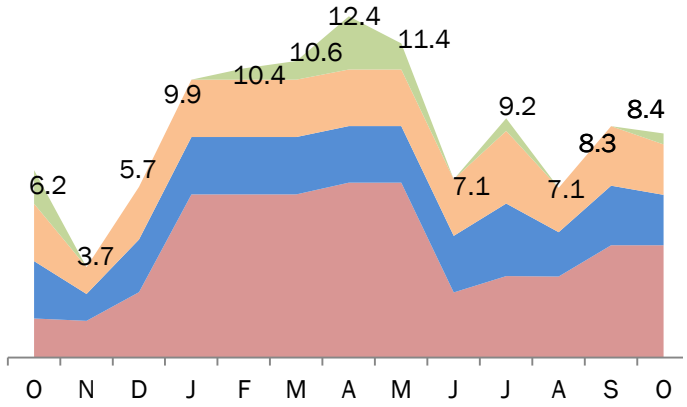
Year-to-Year Change: Sep '13 to Present



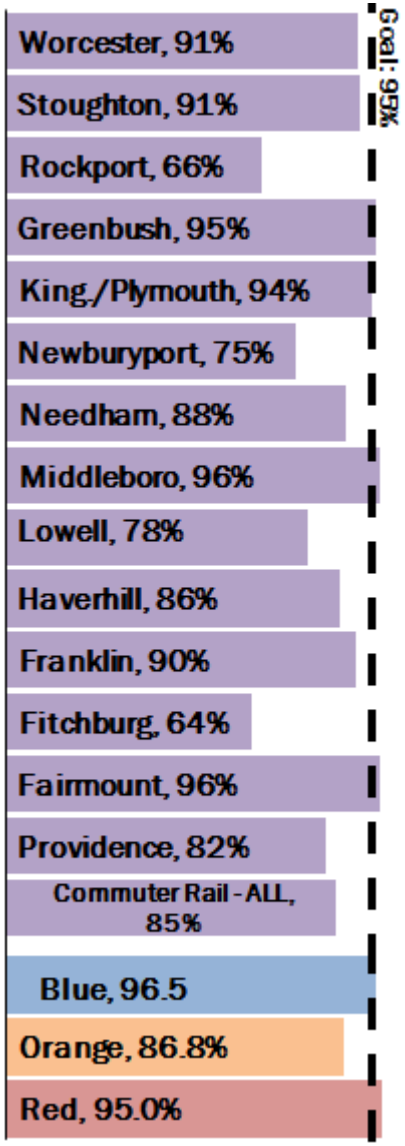
*Ridership is reported for the previous month.

System Maintenance

A key measure of system maintenance is the travel time impact of slowdowns caused by track condition. Impact is measured as minutes of speed restrictions.



On-Time Performance



On-Time performance is a key measure of Commuter Rail performance. A train is considered "on time" if it arrives less than five minutes after the scheduled time.
For Subway, On-Time Performance compares the scheduled frequency of service to the actual frequency. An on-time train must leave the first station within 1.5x of the scheduled interval between it and the previous train.

Vehicle Maintenance

The MBTA measures in mean-miles between failures, the average distance a vehicle travels between breakdowns.

	Goal	Oct-14
Red	47,000	68,573
Orange	37,000	36,952
Blue	35,000	76,444
Green	5,000	6,279
Commuter Rail	10,200	3,193
Bus	6,000	11,913

Accessibility

Elevator Uptime	Escalator Uptime
99.6%	98.7%

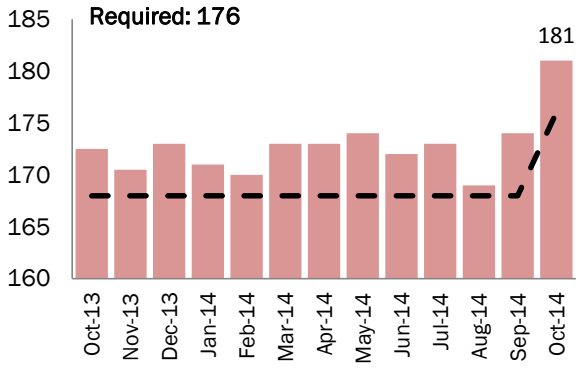
Schedule Performance

he MBTA measures reliability as the percentage of eduled service operated. This measure captures our lity to maintain the system well and operate reliably.

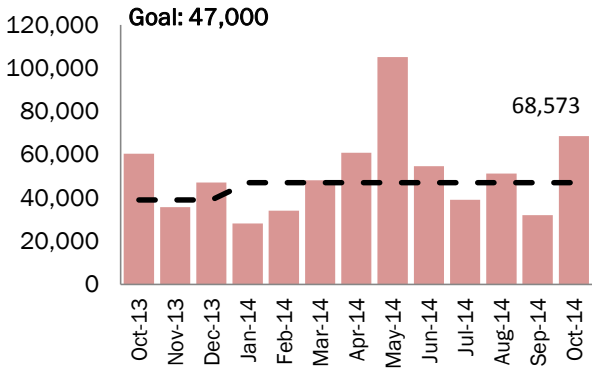
	Oct-14
Red	99%
Orange	100%
Blue	100%
Green	100%
Bus	98%

Red Line

Vehicle Availability

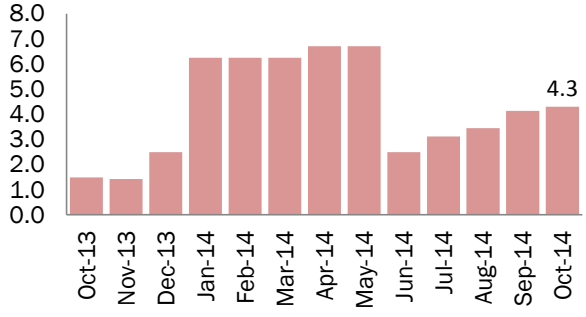


Mean Miles Between Failures

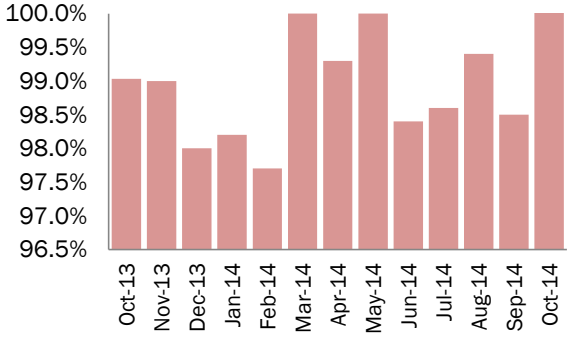


Speed Restrictions

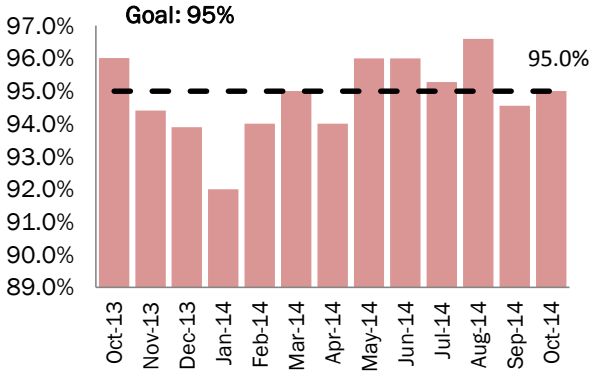
Travel Time in Minutes



Percentage of Scheduled Service Operated

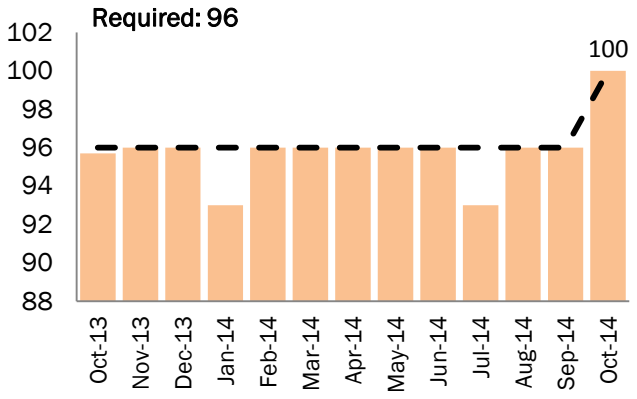


On-Time Performance

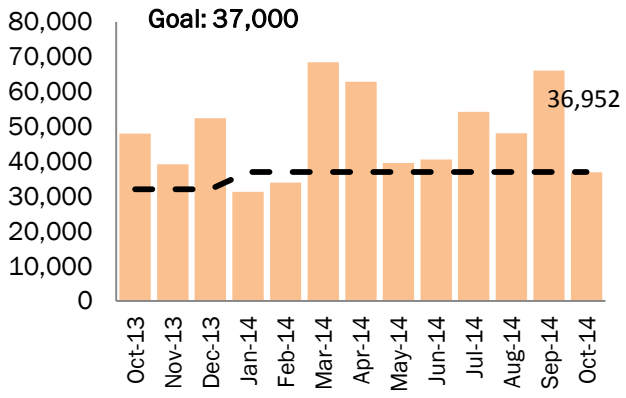


Orange Line

Vehicle Availability

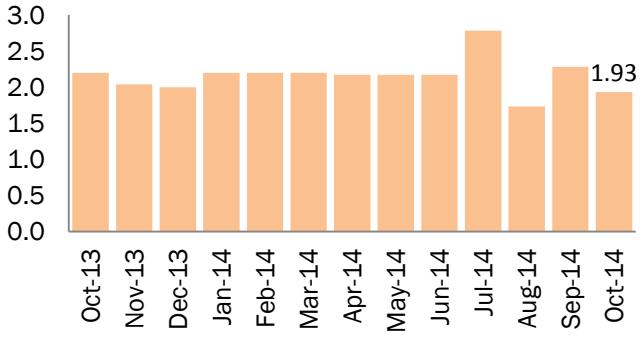


Mean Miles Between Failures

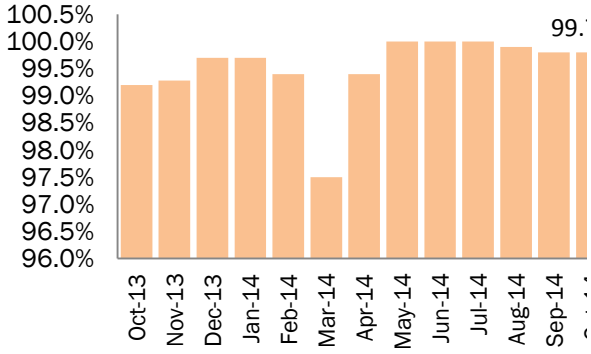


Speed Restrictions

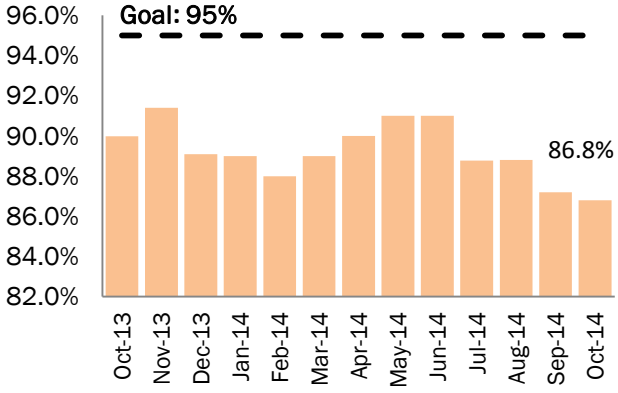
Travel Time in Minutes



Percentage of Scheduled Service Operated

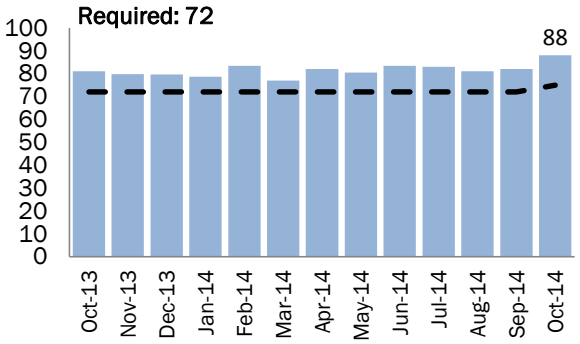


On-Time Performance

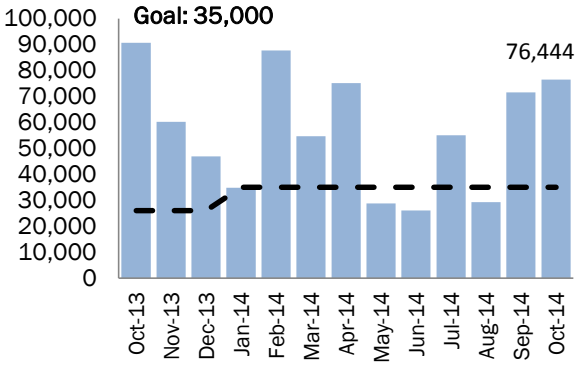


Blue Line

Vehicle Availability

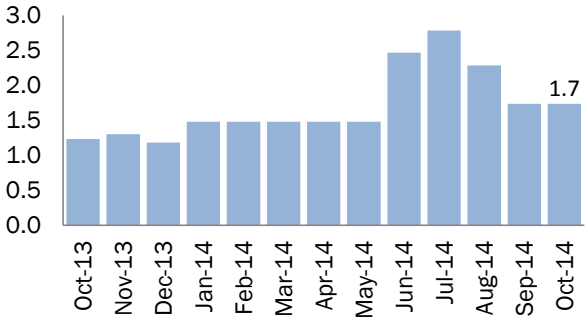


Mean Miles Between Failures

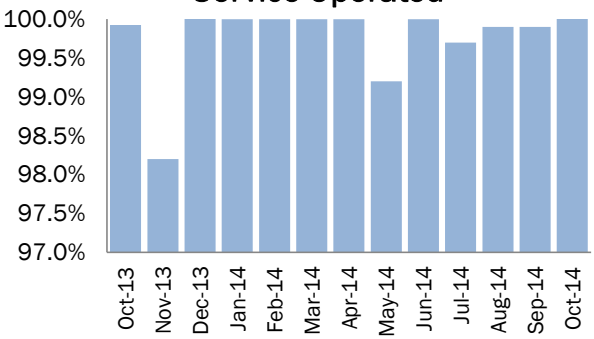


Speed Restrictions

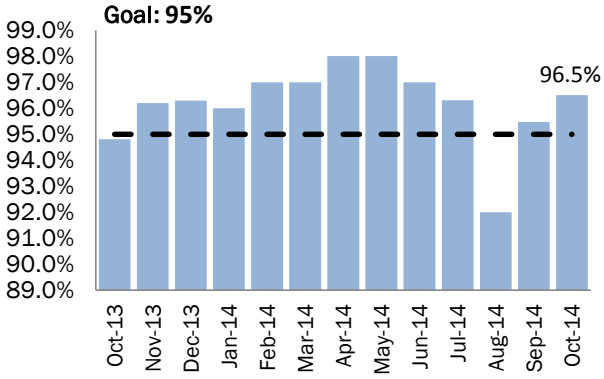
Travel Time in Minutes



Percentage of Scheduled Service Operated

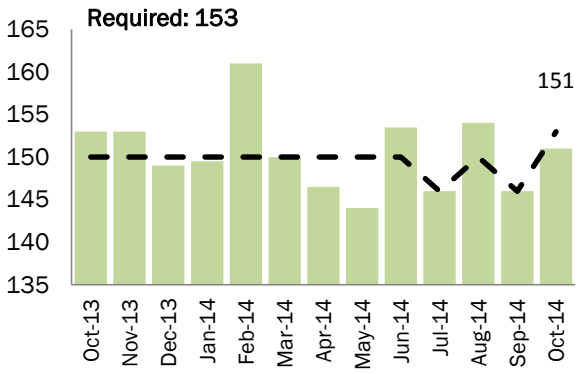


On-Time Performance

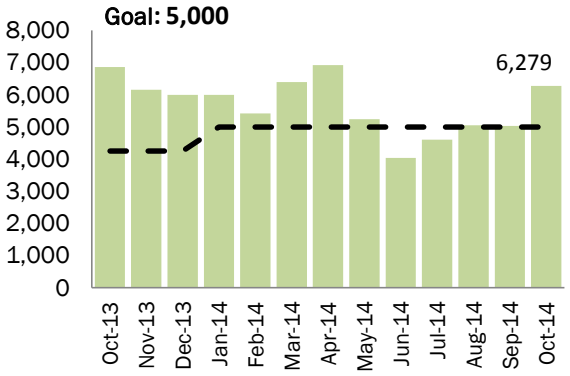


Green Line

Vehicle Availability

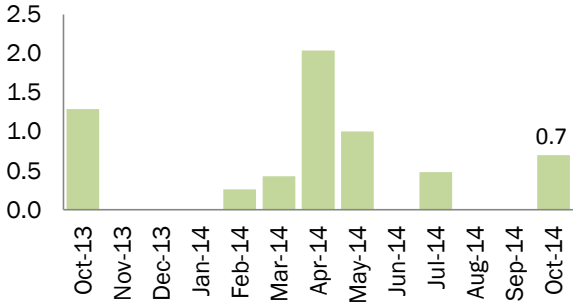


Mean Miles Between Failures

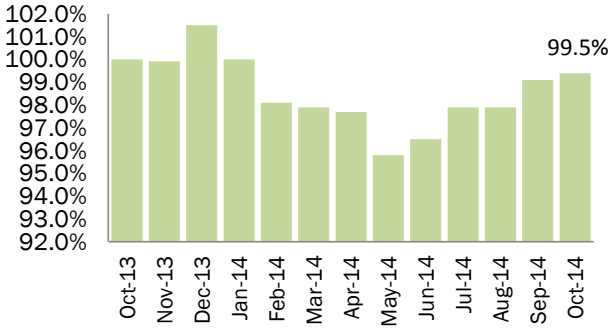


Speed Restrictions

Travel Time in Minutes

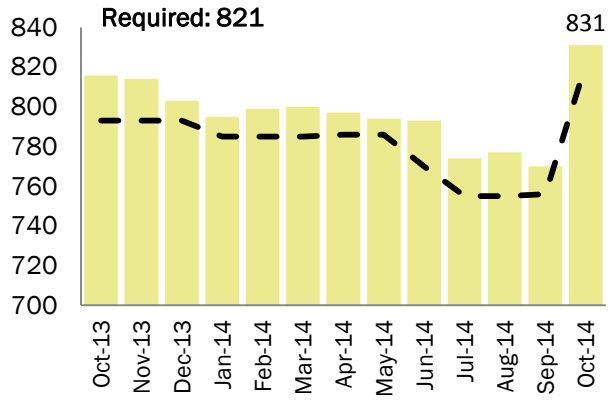


Percentage of Scheduled Service Operated

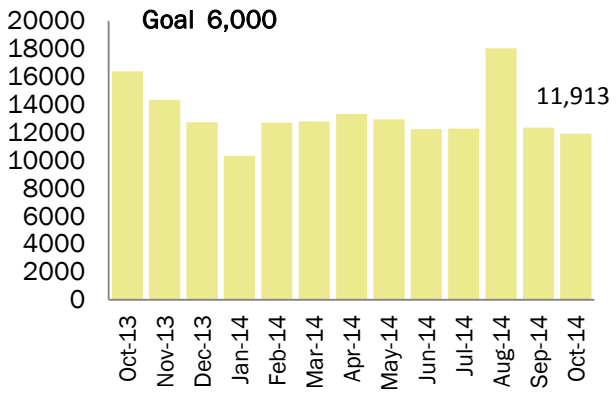


Bus

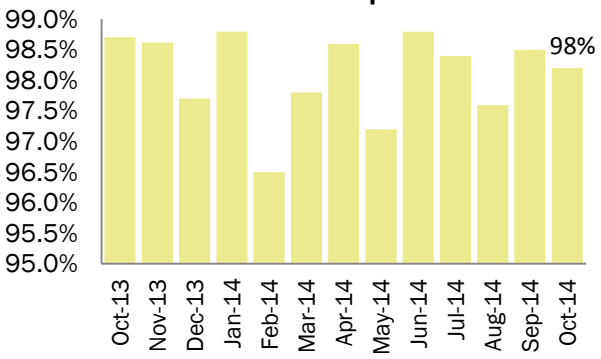
Vehicle Availability



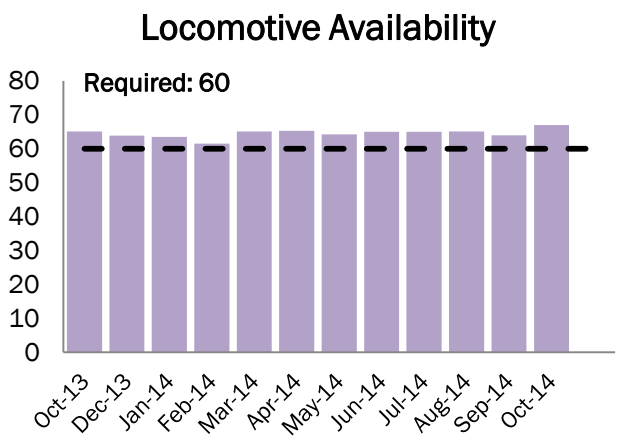
Mean Miles Between Failures

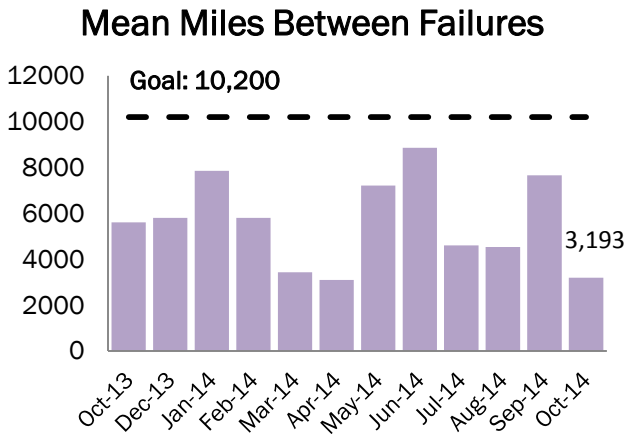


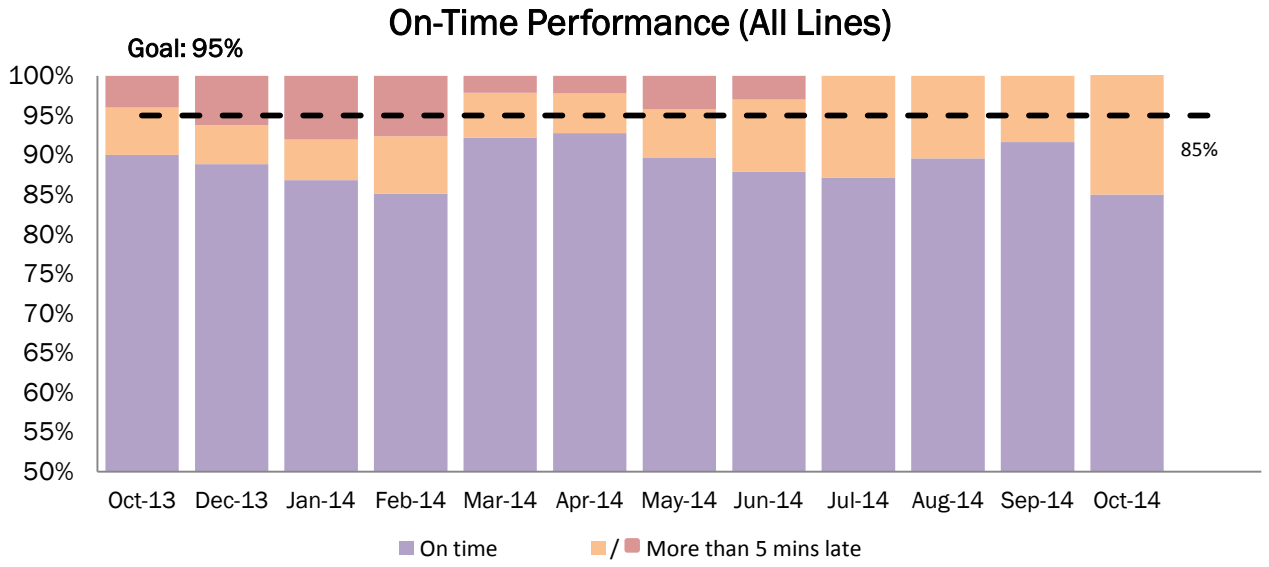
Percentage of Scheduled Service Operated

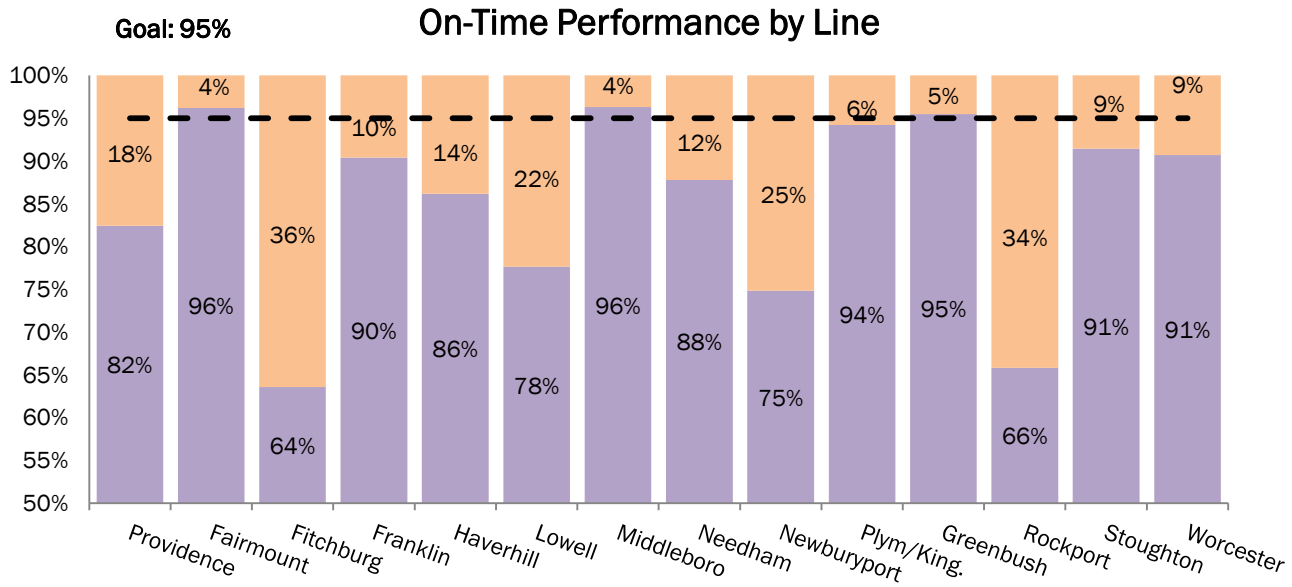


Commuter Rail

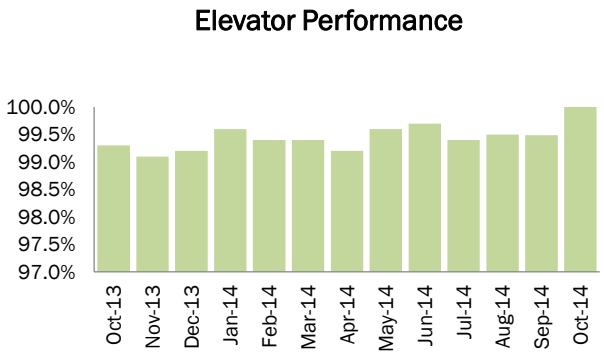


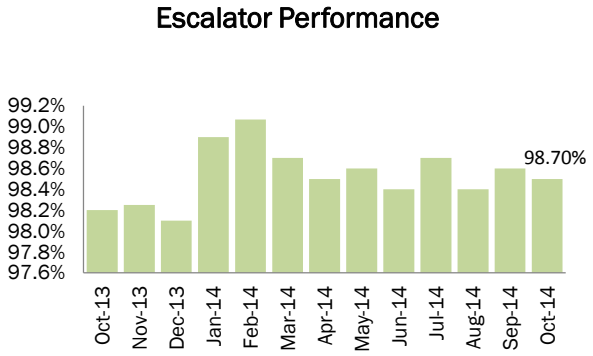




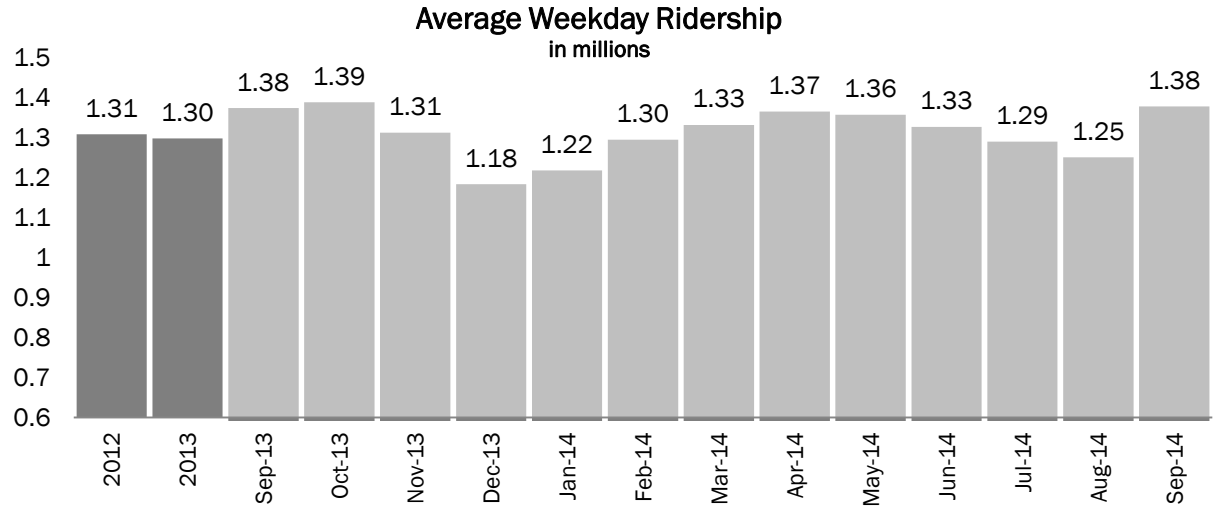


Stations


Elevator Performance
100.0%
99.5%
99.0%
98.5%
98.0%
97.5%
97.0%
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14

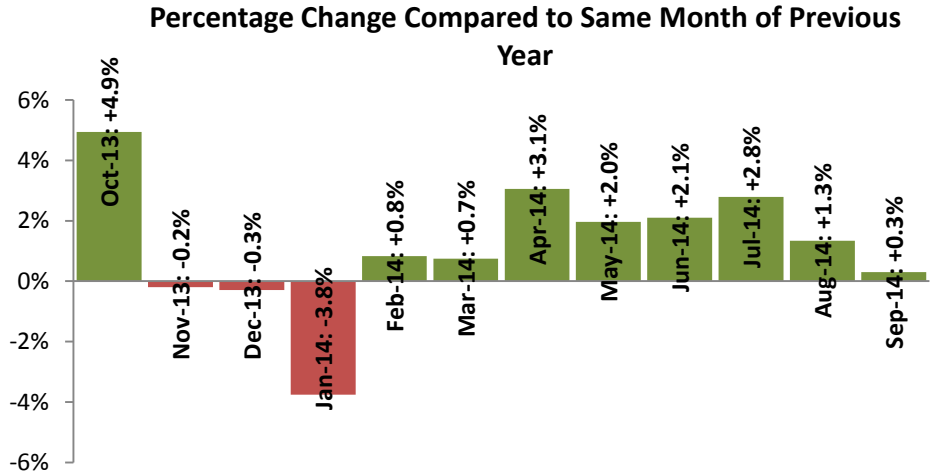

Escalator Performance
99.2%
99.0%
98.8%
98.6%
98.4%
98.2%
98.0%
97.8%
97.6%
98.70%
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14

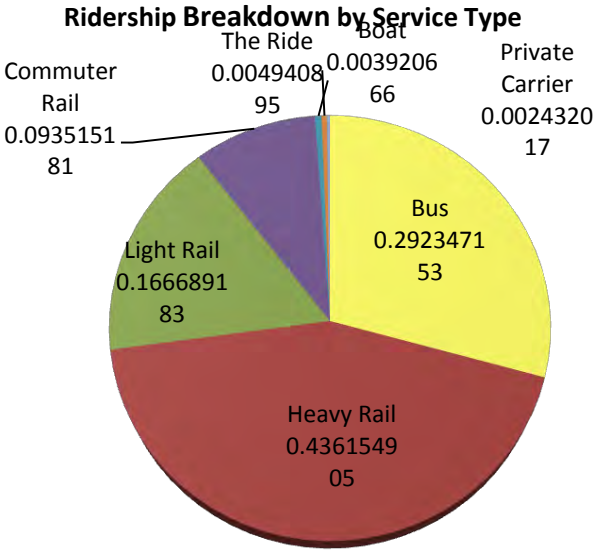
Ridership



FY-to-date Percentage Change Compared to Previous FY

1.09%





Ridership is the measure of how many trips customers take on the MBTA. Specifically it counts "unlinked trips." (A customer who transferred from a bus to the subway would count as two unlinked trips, one on bus and one on subway.) Increasing ridership is always a goal at the MBTA.

Bus and subway counts are from the fare collection equipment and are adjusted to account for those who ride without interacting with it (such as young children.) Commuter rail and boat counts are collected by the conductor or captain.

Currently a month's ridership data is not immediately available by the end of that month, although making the data available immediately is a goal for the future.

About The Measures

Vehicle availability (Subway, Bus, Commuter Rail)

Vehicle availability measures whether there are enough vehicles available to run all the service that is scheduled each day. A vehicle might not be available if it has a mechanical problem or if it is undergoing routine maintenance. Vehicle maintenance works to have enough buses and trains available each day. The number of vehicles required for service varies seasonally and over time as schedules change.

Mean Miles Between Failures (Subway, Bus, Commuter Rail)

Mean Miles Between Failures (MMBF) measures vehicle reliability. It is the average number of miles a vehicle travels between breakdowns. If one vehicle travels 5,000 miles in a month, and breaks down twice during that time, that vehicle has an MMBF of 2,500. Values can fluctuate greatly from month to month if the total number of failures is already small. High MMBF is achieved through ongoing vehicle maintenance, which includes everything from oil changes to major midlife overhauls, and by periodically buying new vehicles to replace old ones as they reach the end of their useful life.

Speed Restrictions (Subway)

Speed restrictions measure the amount of slowdown caused by track conditions. If a section of track falls below standards in some way, such as if the rail is worn down, a speed restriction is put in place to ensure safe operation. Trains operate at a reduced speed when traveling that section of track until the issue is addressed. If the impact on the Orange Line for a month is three minutes, that means that speed restrictions add three minutes to the fastest possible round trip. Trains don't actually operate at the maximum speed allowed by track conditions at all times (they slow down to a stop to pick up passengers, for instance) so the actual impact on travel time may be less than the theoretical impact that's shown.

Percent of Scheduled Service Operated (Subway, Bus)

Percent of Scheduled Service Operated shows the percentage of scheduled trips that the MBTA operated. The MBTA strives to come as close as possible to operating every scheduled trip on every day.
That requires having enough operators, well-maintained vehicles and track, and good schedules; and also keeping a certain number of extra operators and vehicles on standby to fill in if there's a problem. If a trip is nonetheless "dropped" on a frequent bus route or a subway line the MBTA will spread out other trips on the route to try to fill the gap as much as possible. If there's no way to avoid missing a trip on an infrequent bus route the MBTA will notify as many customers as it can via T-Alerts, mbta.com, and the customer support hotline.

On the subway system the trains on standby are sometimes used to run extra trips, so more trips may be operated than scheduled.

On-Time Performance (Subway, Commuter Rail)

On-time performance (OTP) shows how well our service follows our schedules. For each type of service we measure on-time performance differently to reflect the way the customer experiences it.

Subway customers walk to the subway platform at any time and wait for the next train, expecting the trains to run frequently. So the subway OTP standard compares the scheduled frequency of service to the actual frequency. Trains must leave the first station within 150% of the scheduled interval between them. If a Blue Line train is scheduled to leave Wonderland four minutes after the previous

train was scheduled to leave, and it leaves more than six minutes after the previous train left, then the train is late.

Commuter Rail customers use a published schedule of trip times. A Commuter Rail train is considered “on time” if it arrives four minutes or less after the scheduled time. The MBTA also tracks how many trips are less than 10 minutes late, which includes trips that are not “on time” but are still relatively close to schedule.

Subway Operations Fleet Roster

as of April 2014

Assignment and Class	Year Built	Builder	Electrical System	Remanufacturer	Principal Construction	Fleet ID	Fleet Size	Length Over Coupler Faces	Width Over Side Sheets	Height TOR to Roof	Empty Weight (AW0 #)	Seats	Pax Cap'y (Policy)	Crush Cap'y (1.5 SF/ pax)
BLUE LINE HEAVY RAIL														
No. 5 East Boston	2007-2009	Siemens	Siemens	None	Stainless Steel	0700-0793	94	48' 10"	111"	12' 9.5"	69,000	35	95	145
ORANGE LINE HEAVY RAIL														
No. 12 Main Line	1979-81	Hawker-Siddeley (Canada)	GE	None	Cor-Ten Steel	01200-01319	120	65' 4"	111"	11' 11.75"	A: 68,780, B: 67,360	58	131	224
RED LINE HEAVY RAIL														
No. 1 Red Line	1969-70	Pullman Standard (USA)	WH	GE, 1985-86	Aluminum	01500-01523, 01600-01651	74	69' 9 3/4"	120"	12' 4 5/16"	01500 - 65,900 01600A - 64,650 01600B - 63,700	63	167	267
No. 2 Red Line	1987-89	UTDC (Canada)	WH	None	Aluminum	01700-01757	58	69' 9 3/4"	120"	12' 3 15/16"	71,600	62	167	260
No. 3 Red Line	1993-94	Bombardier (USA)	GE	None	Stainless Steel	01800-01885	86	69' 9 3/4"	120"	12' 3 3/4"	80,000	50 + 2 WC = 52	167	277
RED LINE HEAVY RAIL TOTAL							218							
ALL HEAVY RAIL TOTAL							**432**							
MATTAPAN-ASHMONT TROLLEY														
"Wartime" PCC	1945-46	Pullman Standard (USA)	WH	MBTA, 1978-83 and 1999-2005	Cor-Ten Steel	See below	10	46' (A)	100"	10'10"	39,700-40,035	40	None Designated	130
GREEN LINE LIGHT RAIL ACTIVE VEHICLES														
Type 7 (1)	1986-88	Kinki-Sharyo (Japan)	WH	None	Cor-Ten Steel	3600-3699	91	74'	104" (B)	11'10" (C)	85,500	46	101	269
Type 7 (2)	1997	Kinki-Sharyo (Japan)	ADTranz	None	Cor-Ten Steel	3700-3719	19	74'	104" (B)	11'10" (C)	85,500	46	101	269
Type 8	1998-2007	Breda (Italy)	ADTranz	None	Cor-Ten Steel	3800-3894	95	74'	104"	11' 9.5"	87,000	44	101	199 (D)
GREEN LINE LIGHT RAIL TOTAL							205							
SYSTEMWIDE FLEET TOTAL: HEAVY RAIL, TROLLEY, AND LIGHT RAIL							**647**							

NOTES

Red Line 01500 cars as-built were capable of autonomous operation, but have since had one operator's cab removed.
Red Line 01600 cars as-built were operated in pairs. Cars 01604 and 01605 were damaged in a 1975 collision and are scrapped.
All Red, Orange, and Blue line cars are operated in 2-car sets. A Cars are even numbered. B Cars are odd numbered.
The MBTA also rosters 34 work cars for non-revenue service, such as tool cars, flat cars, cranes, snow plows, and diesel locomotives. Blue Line - 2, Orange Line - 8, Red Line - 11, Green Line - 13
Nine Type 7 cars (3612, 3623, 3637, 3638, 3648, 3657, 3666, 3667 3672) have been scrapped. 3703 is stored awaiting final disposition.
PCC numbers: 3087, 3230, 3234, 3238, 3254, 3260, 3262, 3263, 3265, 3268.
(A) Over Bumpers (B) At Floor Level (C) Over air conditioning unit (D) At 1.35 SF/Pax
Not included are Green Line historic cars 5734 (owned by the Seashore Trolley Museum) and 3295.

Fares

PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75***
Cash-on-Board	$2.10	$4.20	$2.65	$4.75***
Student*	$0.80	$0.80	$1.05	$1.05
Senior/TAP**	$0.80	$0.80	$1.05	$1.05
UNLIMITED TRIP PASSES				
1-Day	$12.00	$12.00	$12.00	$12.00
7-Day	$19.00	$19.00	$19.00	$19.00
Monthly	$50.00	$50.00	$75.00	$75.00
Senior/TAP Monthly$29.00/month for unlimited travel on Local Bus and Rapid Transit				

VALID PASSES: LinkPass ($75/mo.); StudentPass* ($26/Month for 5-Day validity Mon. - Fri. or 7 day validity on all days); Senior/TAP Pass* ($29/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free: if using a guide, the guide rides free

* Available to students through participating middle schools and high schools.

** Available to Medicare cardholders, seniors 65+, and persons with disabilities.

***For Silver Line SL4 or SL5 pay $2.65. Also see "transfers."

TRANSFERS

If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines, and in either of the following cases you must ask for a transfer ticket from the operator before paying your fare:

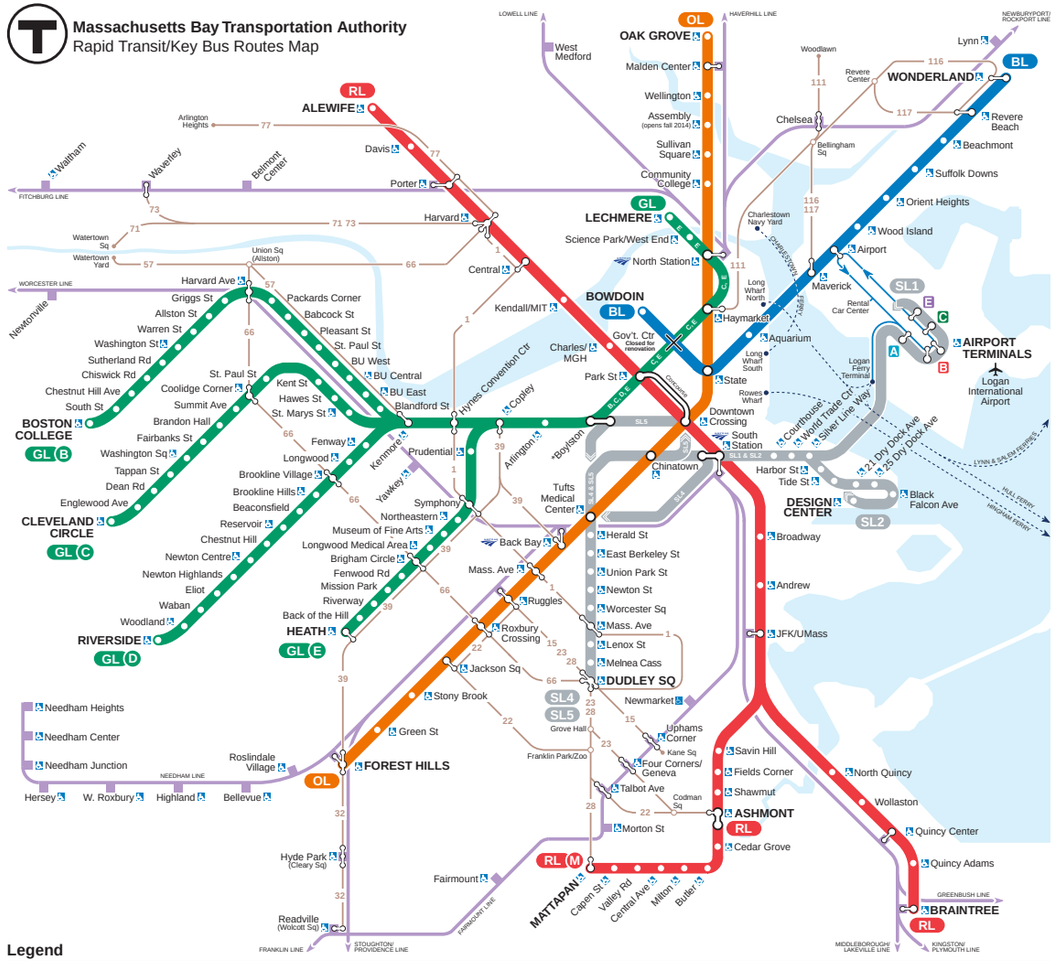
- Boarding Silver Line SL4 or SL5 and transferring to other rapid transit.
- Boarding at a farebox aboard the Green Line or Silver Lines and transferring to Silver Line SL4 or SL5 later in your trip.

Free transfers between the Mattapan High Speed Line and the Red Line at Ashmont.

SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden, Harvard, Government Center (Green Line Level), Back Bay, Downtown Crossing (Orange Line Level), and Quincy Center, or ask a Customer Service Agent. Schedules are also available at Boston City Hall, the State Transportation Building Library (10 Park Plaza), 45 High St, and online at mbta.com.

Massachusetts Bay Transportation Authority
Rapid Transit/Key Bus Routes Map



Rapid Transit

Spring March 21, 2015 - June 19, 2015

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100 (TTY) 617-222-5146 • www.mbta.com

Weekday

Rapid Transit Line	First Trip	Rush Hour Service	Midday Service	Evening Service	Late Night Service	Last Trip Monday-Thursday	Last Trip Friday
Red Line							
Alewife	5:24AM	9 min	14 min	12 min	12 min	12:15AM	w 2:10AM
Braintree	5:15AM	9 min	14 min	12 min	12 min	12:18AM	1:52AM
Alewife	5:16AM	9 min	14 min	12 min	12 min	w12:22AM	w 2:15AM
Ashmont	5:16AM	9 min	14 min	12 min	12 min	w12:30AM	w 2:07AM
"M" Ashmont	5:17AM	5 min	8 min	12 min	12 min	w1:05AM	w 2:45AM
Mattapan	5:05AM	5 min	8 min	12 min	12 min	12:53AM	2:33AM
Blue Line							
Wonderland	5:13AM	5 min	9 min	9 min	10 min	12:35AM	2:05AM
Orient Heights	5:13AM	5 min	9 min	9 min	10 min	12:40AM	2:10AM
Bowdoin	5:29AM	5 min	9 min	9 min	10 min	w1:00AM	w 2:30AM
Orange Line							
Oak Grove	5:16AM	6 min	8 min	10 min	10 min	w12:30AM	w 2:13AM
Forest Hills	5:16AM	6 min	8 min	10 min	10 min	w12:35AM	w 2:13AM
Green Line							
"B" Boston College	5:01AM	7 min	8 min	8 min	9 min	12:10AM	1:48AM
Park Street	5:39AM	7 min	8 min	8 min	9 min	w12:52AM	w 2:28AM
"C" Cleveland Circle	5:01AM*	6 min	8 min	7 min	9 min	12:10AM	1:40AM
North Station	5:55AM	6 min	8 min	7 min	9 min	w12:46AM	w 2:25AM
***"D" Riverside**	4:56AM	7 min	8 min	8 min	10 min	12:05AM	1:43AM
Park Street*	5:36AM	7 min	8 min	8 min	10 min	w12:49AM	w 2:30AM
"E" Lechmere	5:01AM	6 min	7 min	9 min	9 min	12:30AM	2:15AM
Heath Street	5:30AM	6 min	7 min	9 min	9 min	w12:53AM	w 2:11AM
Silver Line							
SL1 Logan Airport	5:38AM	*8 min	8 min	8 min	12 min	12:44AM	2:03AM
South Station	5:40AM	*8 min	8 min	8 min	12 min	12:30AM	2:15AM
SL2 Design Center	6:03AM	5 min	10 min	9 min	15 min	12:30AM	12:30AM
South Station	5:45AM	5 min	10 min	9 min	15 min	w12:50AM	12:50AM
Additional Waterfront-only service							
Silver Line Way	5:28AM	5 min	**Use SL1/SL2**				
South Station	5:35AM	5 min				12:53AM	w 2:30AM
SL4 Dudley Station	5:20AM	10 min	15 min	15 min	20 min	12:20AM	2:20AM
South Station	5:40AM	10 min	15 min	15 min	20 min	12:40AM	2:05AM
SL5 Dudley Station	5:15AM	7 min	10 min	8 min	15 min	12:48AM	2:05AM
Downtown Xing	5:30AM	7 min	10 min	8 min	15 min	w1:02AM	w 2:30AM

Saturday

Rapid Transit Line	First Trip	A.M. Peak Service	P.M. Peak Service	Evening Service	Late Night Service	Last Trip
Red Line						
Alewife	5:24AM	14 min	14 min	14 min	14 min	w 2:10AM
Braintree	5:15AM	14 min	14 min	14 min	14 min	1:52AM
Alewife	5:16AM	14 min	14 min	14 min	14 min	w 2:15AM
Ashmont	5:16AM	14 min	14 min	14 min	14 min	w 2:07AM
"M" Ashmont	5:15AM	26 min	12 min	12 min	26 min	w 2:45AM
Mattapan	5:05AM	26 min	12 min	12 min	26 min	2:33AM
Blue Line						
Wonderland	5:25AM	9 min	9 min	9 min	13 min	2:05AM
Orient Heights	5:13AM	9 min	9 min	9 min	13 min	2:10AM
Bowdoin	5:29AM	9 min	9 min	9 min	13 min	w 2:29AM
Orange Line						
Oak Grove	5:16AM	10 min	8 min	10 min	10 min	w 2:13AM
Forest Hills	5:16AM	10 min	8 min	10 min	10 min	w 2:13AM
Green Line						
"B" Boston College	4:45AM*	7 min	7 min	7 min	11 min	1:48AM
Park Street	5:33AM	7 min	7 min	7 min	11 min	w 2:28AM
"C" Cleveland Circle	4:50AM*	10 min	8 min	8 min	10 min	1:40AM
North Station	5:30AM	10 min	8 min	8 min	10 min	w 2:25AM
***"D" Riverside**	4:55AM	10 min	8 min	10 min	10 min	1:43AM
Park Street*	5:39AM	10 min	8 min	10 min	10 min	w 2:30AM
"E" Lechmere	5:01AM	10 min	9 min	10 min	10 min	2:15AM
Heath Street	5:30AM	10 min	9 min	10 min	10 min	w 2:11AM
Silver Line						
SL1 Logan Airport	5:33AM	12 min	12 min	12 min	12 min	2:00AM
South Station	5:35AM	12 min	12 min	12 min	12 min	2:15AM
SL2 Design Center	6:10AM	15 min	15 min	15 min	15 min	12:35AM
South Station	5:50AM	15 min	15 min	15 min	15 min	12:49AM
Additional Waterfront-only service						
Silver Line Way	5:28AM		**Use SL1/SL2**			
South Station						w 2:30AM
SL4 Dudley Station	5:23AM	15 min	15 min	15 min	20 min	2:20AM
South Station	5:40AM	15 min	15 min	15 min	20 min	2:05AM
SL5 Dudley Station	5:19AM	10 min	10 min	11 min	11 min	2:05AM
Downtown Xing	5:34AM	10 min	10 min	11 min	11 min	w 2:30AM

Sunday

Rapid Transit Line	First Trip	A.M. Peak Service	P.M. Peak Service	Evening Service	Late Night Service	Last Trip
Red Line						
Alewife	6:08AM	16 min	16 min	16 min	16 min	12:15AM
Braintree	6:00AM	16 min	16 min	16 min	16 min	12:18AM
Alewife	6:00AM	16 min	16 min	16 min	16 min	w12:22AM
Ashmont	6:00AM	16 min	16 min	16 min	16 min	w12:30AM
"M" Ashmont	6:03AM	26 min	12 min	12 min	26 min	w1:05AM
Mattapan	5:51AM	26 min	12 min	12 min	26 min	12:53AM
Blue Line						
Wonderland	5:58AM	13 min	9 min	9 min	13 min	12:26AM
Orient Heights	6:03AM	13 min	9 min	9 min	13 min	12:31AM
Bowdoin	6:21AM	13 min	9 min	9 min	13 min	w1:00AM
Orange Line						
Oak Grove	6:00AM	13 min	10 min	10 min	10 min	w12:30AM
Forest Hills	6:00AM	13 min	10 min	10 min	10 min	w12:35AM
Green Line						
"B" Boston College	5:20AM*	10 min	9 min	7 min	10 min	12:10AM
Park Street	6:06AM	10 min	9 min	7 min	10 min	w12:48AM
"C" Cleveland Circle	5:30AM*	10 min	10 min	10 min	10 min	12:10AM
North Station	6:06AM	10 min	10 min	10 min	10 min	w12:48AM
***"D" Riverside**	5:25AM	10 min	10 min	10 min	10 min	12:00AM
Park Street*	6:09AM	10 min	10 min	10 min	10 min	w12:45AM
"E" Lechmere	5:35AM	12 min	12 min	12 min	12 min	12:30AM
Heath Street	6:15AM	12 min	12 min	12 min	12 min	w12:47AM
Silver Line						
SL1 Logan Airport	5:50AM	12 min	8 min	8 min	8 min	12:45AM
South Station	6:12AM	12 min	8 min	8 min	8 min	12:30AM
SL2 Design Center	6:50AM	15 min	15 min	15 min	15 min	12:34AM
South Station	6:35AM	15 min	15 min	15 min	15 min	w12:48AM
Additional Waterfront-only service						
Silver Line Way	6:05AM		**Use SL1/SL2**			
South Station						1:01AM
SL4 Dudley Station	6:02AM	15 min	15 min	15 min	20 min	12:20AM
South Station	6:20AM	15 min	15 min	15 min	20 min	12:40AM
SL5 Dudley Station	6:00AM	10 min	8 min	9 min	9 min	12:25AM
Downtown Xing	6:15AM	10 min	8 min	9 min	9 min	w12:47AM

Schedule Periods (approximate):

AM Rush Hour:	6:30 AM - 9:00 AM
Midday:	9:00 AM - 3:30 PM
PM Rush Hour:	3:30 PM - 6:30 PM
Evening:	6:30 PM - 8:00 PM
Late Night:	8:00 PM - CLOSE

Government Center:
Due to the closure of Government Center Station, please use Orange Line and Haymarket Station to transfer between Blue and Green Lines. For travel around the Government Center area, walking to/from a nearby station will often be fastest. A shuttle bus (Rt. 608) also operates every 20 minutes from 5:20AM – 1:00AM, starting at Haymarket and serving State, Government Center, and Bowdoin Stations, 7 days a week. Shuttle operates until 2:30AM on Friday/Saturday nights, and begins at 6:00AM on Sundays.

Green Line Notes:
*The first two "C" Line AM inbound trips run through to Lechmere Station on weekdays.

*The first "B" Line and second "C" Line AM inbound trips run through to Lechmere Station on weekends.

*The "D" Line will run to/from North Station off peak, late night and all trips on weekends. Except the last trip on Friday and Saturday will run to/from Park Street Station.

w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

* Silver Line - For AM rush 8 minutes and for the PM rush 10 minutes.

Spring 2015 Holidays
April 20: see Weekday May 25: see Sunday

Southbound

		Kendall Square			Shawmut			Ashmont	
Hour	Net	Boardings	Alightings	Net	Boardings	Alightings	Net	Boardings	Alightings
5	622	30	50	601	2	6	76	0	76
6	2,342	90	216	2,216	3	31	206	0	206
7	6,722	286	782	6,225	4	60	247	0	247
8	9,524	471	1,482	8,514	3	43	122	0	122
9	4,631	292	955	3,968	2	42	135	0	135
10	2,389	212	449	2,153	2	42	157	0	157
11	1,922	244	281	1,884	2	61	184	0	184
12	1,893	334	282	1,946	2	84	269	0	269
13	1,900	332	254	1,977	0	102	303	0	303
14	2,109	462	197	2,373	2	197	543	0	543
15	2,694	860	196	3,358	3	252	776	0	776
16	3,221	1,404	188	4,437	5	359	936	0	936
17	4,033	1,665	229	5,469	4	395	1,029	0	1,029
18	2,830	869	218	3,481	1	219	588	0	588
19	1,872	473	153	2,192	3	147	370	0	370
20	1,389	300	115	1,575	3	123	287	0	287
21	1,419	250	101	1,568	2	91	239	0	239
22	1,205	196	81	1,320	1	97	206	0	206
23	734	113	41	806	0	58	157	0	157
0	265	44	17	293	0	23	48	0	48
1	3	0	2	2	0	1	2	0	2

Northbound

		Ashmont				Kendall Square			Central Square
Hour	Net	Boardings	Alightings	Net	Net	Boardings	Alightings	Net	Boardings
5	1,400	431	0	431	1,050	6	278	778	23
6	3,346	1,069	0	1,069	2,410	21	780	1,651	62
7	5,856	1,658	0	1,658	4,160	70	1,511	2,719	169
8	5,221	1,383	0	1,383	4,784	129	1,793	3,120	299
9	2,370	643	0	643	2,539	98	858	1,778	181
10	1,256	428	0	428	1,653	105	372	1,386	133
11	917	349	0	349	1,640	173	302	1,510	156
12	821	350	0	350	1,901	210	295	1,815	188
13	757	378	0	378	2,004	199	296	1,907	150
14	776	537	0	537	2,394	272	288	2,378	172
15	822	461	0	461	3,237	374	340	3,271	260
16	1,026	418	0	418	5,159	833	394	5,598	515
17	1,155	365	0	365	8,094	1,308	581	8,821	698
18	662	253	0	253	5,136	835	407	5,563	584
19	313	152	0	152	3,019	474	269	3,224	345
20	249	127	0	127	2,164	297	227	2,233	249
21	264	105	0	105	2,030	205	229	2,006	221
22	199	74	0	74	1,493	134	161	1,467	146
23	85	39	0	39	952	74	90	937	102
0	23	12	0	12	371	38	32	376	57
1	0	0	0	0	7	4	1	10	5

MBTA 2013 Data

Bus Operations *Fleet Roster*

Revised April 2014

Autonomous Fleet

Fleet ID	Fleet Size	Active Vehicles	Builder	Model	Propulsion	Year Built	A/C	Acce-ssible	Over-hauled	Length	Width	Seats	Crush Capacity	Planning Capacity
0755-0909	155	155	New Flyer	D40LF	Diesel Cummins ISL	2008	Y	R	None	40'	102"	39	75	54
0600-0754	155	155	New Flyer	D40LF	Diesel Cummins ISL	2006-2007	Y	R	None	40'	102"	39	75	54
6000, 6001	2	0	New Flyer	C40LF	CNG Detroit Series 50G	1999	Y	R	None	40'	102"	39	75	54
6002-6016	15	15	New Flyer	C40LF	CNG Detroit Series 50G	2001	Y	R	None	40'	102"	39	75	54
0401-0593	193	193	Neoplan	AN 440 LF	Diesel Caterpillar C9	2004-05	Y	R	Underway	40'	102"	38	72	53
2001-2124	124	124	NABI	40LFW	CNG Cummins C8.3	2003	Y	R	2011	40'	102"	39	73	54
2125-2299	175	175	NABI	40LFW	CNG Cummins C8.3	2004	Y	R	2012	40'	102"	39	73	54
0001-0400	142	45	TMC and Nova BUS	RTS T80206	Diesel Detroit Series 50	1994-95	Y	L	2004-05	40'	102"	40	77	56
1001-1044	44	44	Neoplan	AN 460 LF	CNG Series 60 400 HP	2003	Y	R	None	60'	102"	57	104	79
1101-1124 (SLW & SL2)	24	24	Neoplan	DMA LF	Diesel Detroit Series 60 500HP*	2004-05	Y	R	None	60'	102"	47	96	65
1125-1132 (SL1)	8	8	Neoplan	DMA LF	Diesel Detroit Series 60 500HP*	2005	Y	R	None	60'	102"	38	~96	~65
1200-1224	25	25	New Flyer	DE60LFR	Cummins Diesel/Electric Hybrid	2010	Y	R	None	60'	102"	57	104	79
Total	**1062**	**963**												

NOTES

Midlife overhaul of Neoplan ECD buses underway 2013-2015, 25-30 vehicles out of service for overhaul at any time.
Overhaul does not include periodic/preventative maintenance and engine rebuild/retrofits.
Units #1001-1020, 1030 assigned to Silver Line/Washington Street. #1021-1029, 1031-1044 assigned to Bus Route 39 (Forest Hills-Back Bay)
PLANNING CAPACITY refers to 140% of seated capacity.
CRUSH CAPACITY refers to seated capacity + 2 square feet of space per standing customer.
ACCESSIBILITY: L = Lift; R = Ramp
** Skoda ML 3444 K/4 Traction Motor

Trackless Trolley Fleet (For Routes 71, 72, 73)

Fleet ID	Fleet Size	Active Vehicles	Builder	Model	Propulsion	Year Built	A/C?	Acce-ssible	Over-hauled	Length	Width	Seats	Crush Capacity	Planning Capacity
4101-4128	28	28	Neoplan	AN 440 LF/ETB	Straight Electric*	2003-2004	Y	R	None	40'	102"	31	68	43

Trackless trolley routes are served by autonomous buses when Sunday schedules are operated.
*Skoda 7ML3550K/4, 420VAC, 50Hz traction motor

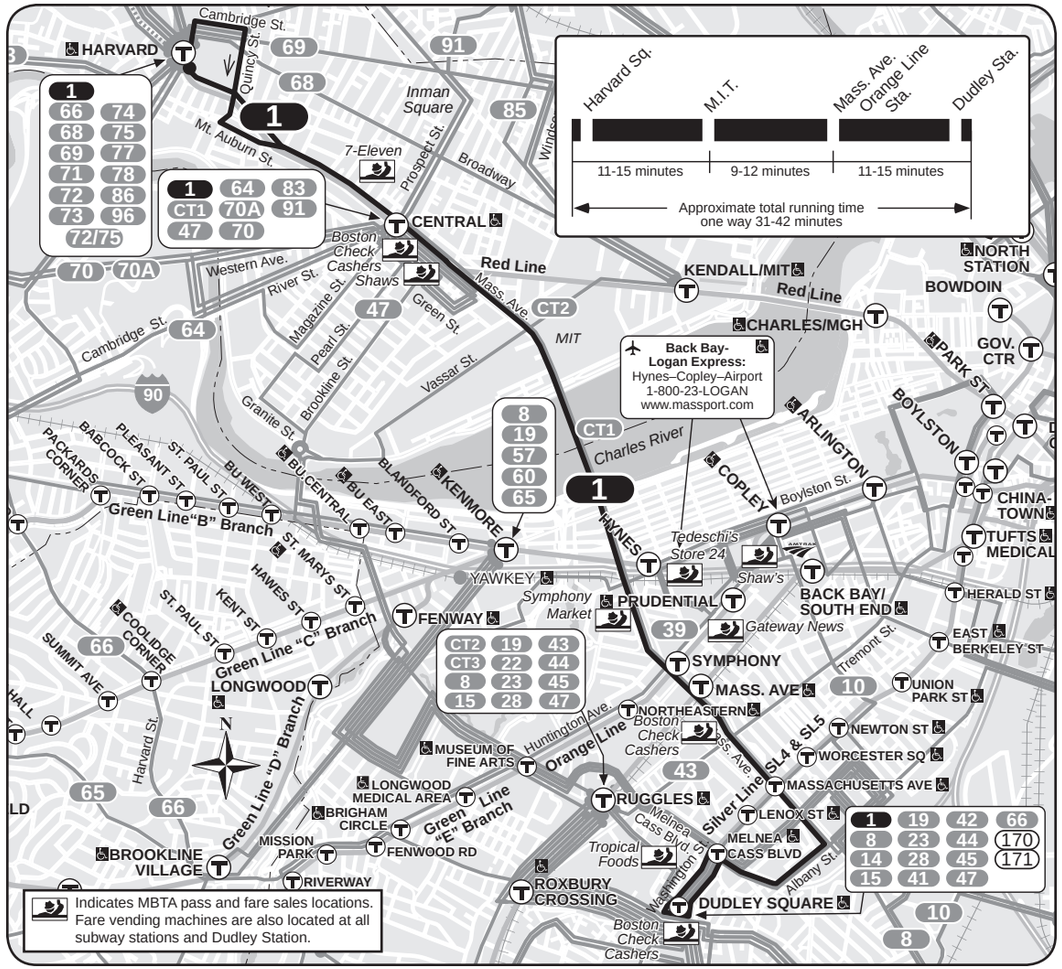
Other Buses

Fleet ID		Active Buses	Builder	Model	Propulsion	Year Built	Function
0119		1	TMC	RTS T80206	Diesel	1994	MBTA Police
0215. 0267, 0291		3	Nova Bus	RTS T80206	Diesel	1995	North Cambridge ice-cutter work buses
1000		1	Neoplan	AN 460 LF	CNG	2003	Stored Training bus
2600		1	GMC	TDH 4512	Diesel	1957	Historic Bus
5000, 5001		2	Orion	06.601 Hybrid	Diesel Hybridrive	1999	Stored experimental hybridrive buses. Lo-floor, seats 31, 40'X102".
6019		1	Chevrolet	Shuttle Van	Diesel	2007	
8545		1	GMC	RTS T80604	Diesel	1985	Command Post Bus
9471		1	Flyer	D901	Diesel	1982	Public Safety Support Bus

Bus Assignments by Vehicle Class and Garage December 2013

Garage	2006/2007 New Flyer ECD	2008 New Flyer ECD	1999 New Flyer CNG	2001 New Flyer CNG	2004/2005 Neoplan ECD	2003 Neoplan ETB	2003/2004 NABI CNG	1994/95 RTS 0001-0400	2010 New Flyer Hybrid Diesel artic	2003/2004 Neoplan CNG artic	2004/2005 Neoplan DMA	Total by Assignment
Albany					110							110
Arborway							119					119
Cabot		22	0	3			180					205
Charlestown	155				18			45				218
Fellsway					65							65
Lynn		69										69
North Cambridge						28						28
Southampton			0	12					25	44	32	113
Quincy		64										64
Total Active	155	155	0	15	193	28	299	45	25	44	32	991

Route 1 Harvard/Holyoke Street - Dudley Station



1

Spring March 21, 2015 - June 19, 2015

Harvard/Holyoke Street-Dudley Station

Serving

- Boston Medical Center
- BU Medical Campus
- MIT
- Central Square Cambridge
- Symphony Hall
- Hynes Convention Center
- Red Line
- Orange Line
- Green Line
- Silver Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

1 Weekday

Inbound			Outbound		
Leave Harvard/ Holyoke Street	Arrive Mass. Ave. Station Orange Line	Arrive Dudley Station	Leave Dudley Station	Arrive Mass. Ave. Station Orange Line	Arrive Harvard/ Holyoke Street
5:10A	5:25A	5:33A	4:37A	4:43A	4:54A
5:30	5:45	5:53	4:57	5:03	5:14
5:50	6:05	6:13	5:17	5:23	5:36
6:06	6:21	6:29	5:33	5:41	5:55
6:21	6:39	6:50	5:48	5:56	6:10
6:35	6:55	7:06	6:00	6:08	6:22
6:47	7:07	7:18	*Every*	*10 Mins.*	*or Less*
Every	*10 Mins.*	*or Less*	9:30	9:42	10:04
9:48	10:15	10:28	9:41	9:53	10:15
9:59	10:26	10:39	9:56	10:08	10:31
10:11	10:38	10:51	10:08	10:20	10:43
10:24	10:51	11:04	10:22	10:34	10:57
10:39	11:06	11:19	*Every*	*15 Mins.*	*Until*
10:52	11:19	11:32	11:52	**12:05P**	**12:28P**
Every	*15 Mins.*	*Until*			
11:52	**12:19P**	**12:32P**	**12:07P**	**12:20P**	**12:43P**
			Every	***15 Mins.***	***Until***
12:07P	**12:34P**	**12:47P**	**1:52**	**2:05**	**2:28**
Every	***15 Mins.***	***Until***	**2:05**	**2:18**	**2:41**
1:37	**2:05**	**2:22**	**2:18**	**2:31**	**2:54**
1:51	**2:21**	**2:38**	**2:30**	**2:43**	**3:06**
2:04	**2:34**	**2:51**	**2:42**	**2:55**	**3:18**
2:16	**2:46**	**3:03**	**2:53**	**3:06**	**3:29**
2:28	**2:58**	**3:15**	**3:04**	**3:17**	**3:40**
2:40	**3:10**	**3:27**	**3:15**	**3:28**	**3:51**
2:52	**3:22**	**3:39**	**3:25**	**3:38**	**4:01**
3:04	**3:34**	**3:51**	**3:33**	**3:46**	**4:09**
3:16	**3:46**	**4:03**	**3:40**	**3:53**	**4:16**
3:28	**3:58**	**4:15**	**3:48**	**4:01**	**4:24**
3:39	**4:09**	**4:26**	**3:55**	**4:08**	**4:31**
3:50	**4:20**	**4:37**	***Every***	***8 Mins.***	***Until***
3:59	**4:29**	**4:46**	**6:11**	**6:21**	**6:47**
Every	***8 Mins.***	***Until***	**6:18**	**6:28**	**6:54**
7:03	**7:29**	**7:39**	**6:26**	**6:36**	**7:02**
7:10	**7:36**	**7:46**	**6:33**	**6:43**	**7:09**
7:18	**7:44**	**7:54**	**6:41**	**6:51**	**7:17**
7:25	**7:51**	**8:01**	**6:48**	**6:58**	**7:24**
7:33	**7:59**	**8:09**	**6:55**	**7:05**	**7:30**
7:44	**8:10**	**8:20**	**7:03**	**7:13**	**7:37**
7:52	**8:18**	**8:28**	**7:10**	**7:20**	**7:42**
8:00	**8:26**	**8:36**	**7:18**	**7:28**	**7:50**
8:10	**8:36**	**8:46**	**7:25**	**7:34**	**7:56**
8:21	**8:47**	**8:57**	**7:33**	**7:41**	**8:03**
8:32	**8:58**	**9:07**	**7:40**	**7:48**	**8:10**
8:43	**9:08**	**9:17**	**7:48**	**7:56**	**8:18**
8:54	**9:17**	**9:26**	**7:56**	**8:04**	**8:26**
9:06	**9:29**	**9:38**	**8:04**	**8:12**	**8:34**
9:18	**9:41**	**9:50**	***Every***	***11 Mins.***	***Until***
9:30	**9:53**	**10:02**	**8:48**	**8:56**	**9:18**
9:42	**10:05**	**10:14**	**9:00**	**9:08**	**9:30**
9:54	**10:17**	**10:26**	***Every***	***12 Mins.***	***Until***
Every	***13 Mins.***	***Until***	**9:48**	**9:55**	**10:13**
12:56A	1:09A	1:13A	***Every***	***13 Mins.***	***Until***
w 1:10	1:23	1:27	12:38A	12:44A	12:58A
x 1:35	1:48	1:52	w 1:03	1:09	1:23
x 2:00	2:13	2:17	x 1:25	1:31	1:45
x 2:20	2:33	2:37	x 1:50	1:56	2:10
xz 2:40	2:53	2:57	x 2:10	2:16	2:30
			x 2:30	2:36	2:50
			xz 2:50	2:56	3:10

1 Saturday

Inbound			Outbound		
Leave Harvard/ Holyoke Street	Arrive Mass. Ave. Station Orange Line	Arrive Dudley Station	Leave Dudley Station	Arrive Mass. Ave. Station Orange Line	Arrive Harvard/ Holyoke Street
5:10A	5:23A	5:30A	4:40A	4:45A	4:56A
5:30	5:43	5:50	5:00	5:05	5:16
5:50	6:03	6:10	5:20	5:25	5:36
6:10	6:23	6:31	5:34	5:39	5:50
Every	*12 Mins.*	*Until*	*Every*	*12 Mins.*	*Until*
10:46	11:09	11:20	9:34	9:44	10:04
10:56	11:19	11:30	9:45	9:55	10:15
11:06	11:29	11:42	***Every***	***10 Mins.***	***Until***
11:16	11:40	11:53	11:55	**12:05P**	**12:30P**
11:26	11:52	**12:05P**			
11:35	**12:02P**	**12:15**	**12:05P**	**12:15P**	**12:40P**
11:45	**12:12**	**12:25**	***Every***	***10 Mins.***	***Until***
11:55	**12:22**	**12:35**	**4:05**	**4:15**	**4:40**
			4:15	**4:25**	**4:50**
12:05P	**12:32P**	**12:45P**	**4:24**	**4:34**	**4:59**
Every	***10 Mins.***	***Until***	**4:33**	**4:43**	**5:08**
4:05	**4:33**	**4:46**	**4:42**	**4:52**	**5:17**
4:15	**4:43**	**4:56**	**4:51**	**5:01**	**5:26**
4:25	**4:53**	**5:06**	**5:00**	**5:10**	**5:35**
4:35	**5:03**	**5:16**	**5:09**	**5:19**	**5:45**
4:45	**5:13**	**5:26**	**5:18**	**5:28**	**5:57**
4:54	**5:22**	**5:35**	**5:27**	**5:36**	**6:05**
5:03	**5:31**	**5:44**	**5:36**	**5:45**	**6:14**
5:12	**5:40**	**5:53**	**5:45**	**5:54**	**6:23**
5:21	**5:49**	**6:02**	***Every***	***10 Mins.***	***Until***
5:30	**5:57**	**6:10**	**7:25**	**7:33**	**7:58**
5:39	**6:06**	**6:19**	**7:40**	**7:48**	**8:13**
5:48	**6:15**	**6:28**	**7:55**	**8:03**	**8:28**
5:57	**6:24**	**6:37**	**8:10**	**8:18**	**8:43**
6:06	**6:33**	**6:46**	**8:25**	**8:33**	**8:58**
Every	***10 Mins.***	***Until***	**8:40**	**8:48**	**9:13**
7:06	**7:33**	**7:46**	**8:55**	**9:03**	**9:28**
7:16	**7:43**	**7:56**	**9:10**	**9:18**	**9:43**
7:30	**7:57**	**8:08**	***Every***	***15 Mins.***	***Until***
Every	***15 Mins.***	***Until***	**10:25**	**10:32**	**10:55**
10:30	**10:53**	**11:03**	**10:40**	**10:47**	**11:10**
10:45	**11:06**	**11:16**	**10:55**	**11:02**	**11:25**
11:00	**11:20**	**11:30**	**11:13**	**11:20**	**11:43**
11:15	**11:35**	**11:45**	**11:31**	**11:38**	12:00M
11:33	**11:53**	12:03A	**11:49**	**11:56**	12:16A
11:55	12:15A	12:25	12:09A	12:16A	12:35
12:20A	12:40	12:50	12:35	12:42	1:01
12:45	1:05	1:15	1:01	1:08	1:27
1:10	1:30	1:40	x 1:25	1:32	1:51
x 1:35	1:55	2:05	x 1:50	1:57	2:16
x 2:00	2:20	2:30	x 2:10	2:17	2:36
x 2:20	2:40	2:50	x 2:30	2:37	2:56
xz 2:40	3:00	3:10	xz 2:50	2:57	3:16

w - Waits for last Red Line or Silver Line vehicle to arrive at station. Sunday throughThursday only. Friday & Saturday leaves at scheduled time.

x - Late night service operates Friday & Saturday only.

z - Waits for last Red Line or Silver Line vehicle to arrive at station on Friday & Saturday only.

All buses are accessible to persons with disabilities

1 Sunday

Inbound			Outbound		
Leave Harvard/ Holyoke Street	Arrive Mass. Ave. Station Orange Line	Arrive Dudley Station	Leave Dudley Station	Arrive Mass. Ave. Station Orange Line	Arrive Harvard/ Holyoke Street
6:10A	6:25A	6:35A	6:00A	6:06A	6:22A
Every	*20 Mins.*	*Until*	6:25	6:31	6:47
10:10	10:35	10:48	*Every*	*20 Mins.*	*Until*
10:26	10:54	11:07	11:25	11:36	**12:05P**
10:42	11:11	11:24	11:45	11:56	**12:26**
10:58	11:27	11:40			
11:14	11:43	11:56	**12:05P**	**12:16P**	**12:46P**
11:30	11:59	**12:12P**	***Every***	***15 Mins.***	***Until***
11:46	**12:15P**	**12:28**	**7:05**	**7:13**	**7:37**
			7:20	**7:28**	**7:52**
12:02P	**12:31P**	**12:44**	**7:35**	**7:43**	**8:07**
Every	***16 Mins.***	***Until***	**7:50**	**7:58**	**8:22**
8:02	**8:27**	**8:39**	**8:05**	**8:13**	**8:36**
8:18	**8:43**	**8:55**	**8:20**	**8:28**	**8:48**
8:34	**8:59**	**9:11**	**8:35**	**8:43**	**9:03**
8:50	**9:15**	**9:27**	**8:50**	**8:58**	**9:18**
9:07	**9:32**	**9:44**	**9:07**	**9:15**	**9:35**
9:25	**9:50**	**10:02**	**9:25**	**9:33**	**9:53**
9:43	**10:08**	**10:20**	**9:43**	**9:51**	**10:11**
10:01	**10:26**	**10:37**	**10:01**	**10:09**	**10:29**
10:19	**10:40**	**10:50**	**10:20**	**10:28**	**10:48**
10:37	**10:56**	**11:06**	**10:40**	**10:48**	**11:08**
10:55	**11:14**	**11:24**	**11:00**	**11:07**	**11:25**
11:13	**11:32**	**11:41**	**11:20**	**11:27**	**11:45**
11:32	**11:49**	**11:58**	**11:40**	**11:47**	12:05A
11:50	12:07A	12:16A	12:00M	12:07A	12:25
12:10A	12:27	12:36	12:20A	12:27	12:45
12:30	12:47	12:56	12:40	12:47	1:05
12:50	1:06	1:14	w 1:00	1:07	1:25
w 1:10	1:24	1:32			

Route 1
Harvard/Holyoke Street-Dudley Station

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.

* Requires Student CharlieCard, available to students through participating middle schools and high schools.

** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Spring 2015 Holidays

April 20: see Weekday **May 25: see Sunday**

Massachusetts Bay Transportation Authority
Route 1
Weekday - Outbound
Fall 2012
(Urban Transportation Associates)

Trip (RouteVar) [Observations]

Seq - StopID - Stop Name	08:00 (1 .0) [17] !Fall 2012!			08:08 (1 .0) [4] !Fall 2012!			08:16 (1 .0) [11] !Fall 2012!			08:24 (1 .0) [2] !Fall 2012!			08:32 (1 .0) [19] !Fall 2012!			08:40 (1 .0) [9] !Fall 2012!			08:48 (1 .0) [13] !Fall 2012!			08:58 (1 .0) [17] !Fall 2012!			17:03 (1 .0) [7] !Fall 2012!			17:10 (1 .0) [8] !Fall 2012!			17:18 (1 .0) [10] !Fall 2012!			17:25 (1 .0) [9] !Fall 2012!			17:33 (1 .0) [5] !Fall 2012!			17:40 (1 .0) [11] !Fall 2012!			17:48 (1 .0) [5] !Spring 2012!			17:55 (1 .0) [6] !Fall 2012!		
	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	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 64 - DUDLEY STATION	16.1	0	16.1	17.5	0	17.5	17	0	17	24.5	0	24.5	20.1	0	20.1	17.3	0	17.7	15.3	0	15.3	12.5	0	12.6	10.1	0	10.1	5.3	0	5.3	9.4	0	9.4	7.4	0	7.5	7.5	0	7.8	7.1	0	7.3	7.2	0	7.2	5	0	5
2 - 1 - WASHINGTON ST OPP RUGGLES ST	0.2	0.3	15.9	0.3	0	17.8	0.7	0	17.7	0.5	0	25	0.3	0.1	20.4	0.2	0	17.9	0.2	0	15.5	0.4	0	13.1	2	2.3	11	0	0	5.3	0.3	0	9.7	0.4	0	7.9	0.2	0	8	0.2	0.3	7.2	0.2	0	7.4	0	0	5
3 - 2 - WASHINGTON ST @ MELNEA CASS B	0.2	0.3	15.8	0.3	0	18	0.4	0.3	17.8	0.5	1	24.5	0.6	0.1	20.8	0.2	0.3	17.8	0.4	0.1	15.8	0.5	0.1	13.5	0.9	0.3	11.6	1.8	0.5	6.8	0.7	0.5	9.9	0.6	0.1	9.9	0.8	0	10.4	0.3	0.3	7.2	0	0	7.4	0	0.2	4.8
4 - 6 - MELNEA CASS BLVD @ HARRISON A	0.1	0.4	15.6	0	0	18	0.1	0.3	17.6	0	2	22.5	0.1	0.1	20.9	0	0.2	17.6	0.1	0.4	15.5	0.3	0.2	13.5	0.3	0.1	11.7	0.5	0	7.3	0.5	0.1	10.3	0.2	0.1	10	0.4	0.2	10.6	0.3	0.1	7.4	0	0	7.4	0.5	0.8	4.5
5 - 10003 - ALBANY ST OPP RANDALL ST	0.1	0.1	15.6	0.5	0	18.5	0.5	0.1	18.1	1.5	0.5	23.5	0.3	0	21.2	0.1	0	17.7	0	0.3	18	0.3	0.2	13.6	0	0.3	12.8	0.9	0	8.9	0.9	0	12	0.2	0	10.2	0	0	10.6	2.2	0	10.2	0	0.2	7.2	1.2	0	6.6
6 - 10004 - ALBANY ST OPP NORTHAMPTON ST	0.5	1.6	14.5	0.3	1.8	17	0.3	0.8	17.5	0	1.5	22	0.1	2.3	19	0	0.4	17.2	0.1	1.6	16.5	0.2	0.8	12.9	3	0.5	15.3	2	0.9	10	1	1.2	11.8	0.6	0.6	10.2	2.6	0.4	12.8	0.8	0.9	10.1	0.4	0	7.6	0.8	0.8	6.6
7 - 57 - MASSACHUSETTS AVE @ ALBANY ST	1.2	3.9	11.8	1.3	5.8	12.5	2	6.8	12.7	1	10	13	1.6	7.3	13.3	2.4	6	13.7	2.5	5.5	13.5	2.1	3.5	11.5	11	0.3	26	9.7	2.1	17.6	4.8	2	14.6	5.9	1.2	14.9	6.6	2.2	17.2	4.2	1.1	13.2	3.4	0.8	10.2	6.4	0.2	12.8
8 - 58 - MASACHUSETTSS AVE @ HARRISON	2.6	3.1	11.4	4.8	4.8	12.5	5.4	2.8	15.3	12	5.5	19.5	4.2	4.2	13.3	2.4	3.8	12.3	3.3	4.2	12.5	3.6	2.6	12.6	13.2	0.5	38.7	14.6	0.6	31.6	8.9	1.4	22	13.2	1.1	27	17.4	1.6	33	8.5	0.5	21.2	7.2	0.2	17.2	5.8	0.6	18
9 - 10590 - MASSACHUSETTS AVE @ WASHINGTO	2.7	0.7	13.4	4.3	0	16.8	6.7	1.7	20.3	4.5	0	24	4.7	0.6	17.4	3.3	0.6	15.1	2.4	0.5	12.5	2.1	0.1	14.5	3	0.7	35.9	3.9	0	31.8	1.5	0.1	21.5	2.8	0.3	29.4	2.4	0.2	35.2	3.8	0.2	23	2.2	0.8	18.6	1.7	0	16.7
10 - 86 - MASSACHUSETTS AVE @ SHAWMUT A	1.2	0	14.6	1	0	17.8	1.8	0	22.1	1.5	0	25.5	1.9	0	19.3	1.6	0.6	16.1	1.1	0.2	13.4	0.9	0.2	15.3	0.3	0	36.1	1.1	0	32.9	0.3	0.5	21.3	0.9	0	30.3	0.6	0.4	35.4	1.1	0	24.1	1.4	0.2	19.8	0.7	0	17.3
11 - 87 - MASSACHUSETTS AVE @ TREMONT S	2.1	0.5	16.2	2	0.3	19.5	2.7	0.2	24.6	6.5	0	32	1.9	0.3	20.9	2.4	0.2	18.3	2.2	0.3	15.2	1.1	0.2	16.2	0.4	0.9	35.7	1.1	0.1	33.9	0.7	0.4	21.6	0.7	0.2	30.8	1	0.8	35.6	2.2	0.5	25.8	1.2	0	21	1	0.2	18.2
12 - 88 - MASSACHUSETTS AVE @ COLUMBUS	1.9	0.2	17.9	1.5	0.8	20.3	0.9	0.8	24.7	0	0	32	1.3	0.6	21.5	2.6	1.1	19.8	0.8	0.7	15.3	0.5	0.6	16.2	1.3	0	37	1.3	0.6	34.5	0.3	0.1	21.8	0.6	0.3	31	0.8	0.2	36.2	0.3	0.5	25.5	0.6	0.2	21.4	0.7	0	18.8
13 - 188 - MASSACHUSETTS AVE @ MASSACHUS	5.3	2.6	20.6	7.3	5.5	22	5.9	5.5	25.2	3.5	0.5	35	6.3	4.8	23	4	3	20.8	4.2	2.8	16.7	2.7	2.6	16.2	2	8.4	30.6	3.5	12.4	25.6	2.4	7.1	17.1	2.4	10	23.4	2.8	11.6	27.4	2.6	4.4	23.8	4.6	6.6	19.4	1.3	4.7	15.5
14 - 89 - MASSACHUSETTS AVE @ ST BOTOLP	2.3	0.2	22.7	2	1	23	2.9	0.7	27.4	3.5	1	37.5	3.2	1.1	25.1	2	0.2	22.6	2.5	1.7	17.5	1.6	1.4	16.5	2	1.1	31.4	3.1	1.3	27.5	1.9	0.9	18.1	2.8	2.4	23.8	3.2	1.6	29	2.1	2.7	23.2	1.4	0.6	20.2	1.7	0.3	16.8
15 - 90 - MASSACHUSETTS AVE @ WESTLAND	2.9	0.5	25.1	3	0.8	25.3	2.5	0.7	29.2	2	3	36.5	3.9	0.9	28.1	3	0.6	25	2.2	0.8	19	1.2	1	16.6	3.3	1.6	33.1	2.9	3	27.4	4.2	0.4	21.9	3.9	0.9	26.8	3.4	2.2	30.2	4	2.2	25	4.6	0.8	24	4.7	0.3	21.2
16 - 91 - MASSACHUSETTS AVE @ CLEARWAY	1.9	0.6	26.4	0.8	1	25	2.1	1.8	29.5	0	1.5	35	1.7	2	27.8	2.2	1.6	25.7	1.8	0.6	20.2	2	0.8	17.8	2.6	2.9	32.9	3.1	1.3	29.3	1.7	1.5	22.1	2.1	2	26.9	2.2	1.6	30.8	2.3	1.8	25.5	3	0.4	26.6	2.7	0.7	23.2
17 - 93 - MASSACHUSETTS AVE @ NEWBURY S	12.2	3.7	34.9	4.8	4	25.8	10.8	4.5	35.7	13.5	8.5	40	12.7	3.6	36.9	10.9	2.3	34.2	9.8	2.3	27.6	5.9	2.7	21.1	10.4	5.3	38	12	7.8	33.5	11	3.9	29.2	12.9	5.3	34.4	19.6	7.6	42.8	11.4	5.5	31.4	15.8	6.8	35.6	14.2	5.8	31.5
18 - 94 - MASSACHUSETTS AVE @ COMMONWEA	1.5	0.1	36.2	1	0.5	26.3	2.5	0.3	37.9	0.5	0.5	40	1.2	0.1	38.1	1.6	0.1	35.7	1.2	0.1	28.7	0.8	0.1	21.8	0.9	0	38.9	1.6	0.6	34.5	0.4	0.2	29.4	0.6	0.1	34.9	1.2	0	44	0.3	0.1	31.5	1.8	0.2	37.2	3.2	0.3	34.3
19 - 95 - MASSACHUSETTS AVE @ BEACON ST	2.8	0.1	38.9	7.3	0	33.5	4.6	0.2	42.4	10	0	50	4.5	0.1	42.5	5.2	0.2	40.7	4.3	0.2	32.8	3.2	0.1	24.9	1.6	0	40.4	2.8	0.6	36.6	0.7	0.3	29.8	1.2	0.2	35.9	0.8	0.4	44.4	0.8	0.1	32.3	3.8	0	41	2.7	0.7	36.3
20 - 96 - MASSACHUSETTS AVE @ MEMORIAL	0.2	0.9	38.3	0	0	33.5	0.6	1.4	41.6	0	2.5	47.5	0.1	1.3	41.2	0.2	1.3	39.6	0.2	1.8	31.2	0	0.8	24.1	0	0.9	39.6	0.4	0.3	36.8	0.3	0.5	29.6	0.3	0.9	35.3	0	0.2	44.2	0.1	0.3	32.1	0.2	1.4	39.8	0.7	0.2	36.8
21 - 97 - 77 MASSACHUSETTS AVE	0.4	5.6	33.1	0.3	5	28.8	2.2	5.2	38.6	0.5	10.5	37.5	1.6	10.5	32.3	1.1	8.6	32.1	1	7.6	24.6	0.6	4.3	20.4	2.3	2.1	39.7	3.1	0.8	39.1	1.7	0.6	30.7	2.9	1.8	36.4	4	2.6	45.6	4.1	1.4	34.8	5.2	1	44	1.8	1.2	37.5
22 - 99 - MASSACHUSETTS AVE @ ALBANY ST	0.5	6	27.6	0	4.8	24	0.5	4.6	34.5	0.5	3	35	0.4	3.5	29.2	0.9	4.7	28.3	0.4	3.1	21.9	0.4	2.5	18.2	0.7	1	39.4	0.8	1.1	38.8	0.7	1.2	30.2	1.3	0.6	37.2	2.2	1.2	46.6	2.7	0.3	37.3	1.6	1.2	44.4	1.7	1.3	37.8
23 - 100 - MASSACHUSETTS AVE @ FRONT ST	0.2	2.2	25.6	0	1.5	22.5	0	2.2	32.3	0	2.5	32.5	0.2	2.4	26.9	0.3	2.9	25.8	0.2	1.4	20.7	0.2	1.2	17.2	0.6	2	38	0.3	1.1	37.9	0.2	1.6	28.8	0.7	0.8	37.1	0.4	1.2	45.8	0.5	0.7	37.1	0.2	0.8	43.8	0.3	0.3	37.8
24 - 101 - MASSACHUSETTS AVE @ SIDNEY ST	0.5	2.5	23.5	0.3	3.5	19.3	3	1.9	33.4	1	2.5	31	1.2	3.1	25	0.2	2.3	23.7	0.8	2.2	19.3	0.1	2.4	15	1.7	3.9	35.9	1.3	2.4	36.8	0.4	2.3	26.9	0.3	2	35.4	0.2	2.6	43.4	2	1.7	37.4	2	3	42.8	0.8	2.8	35.8
25 - 102 - MASSACHUSETTS AVE @ PROSPECT	2.1	4.8	20.8	0.8	3	17	2.9	5.8	30.5	3	7.5	26.5	3.3	4.8	23.5	2	5.6	20.1	3.5	5.1	17.7	1.6	4	12.6	3.7	12.4	27.1	4	9.9	30.9	2.4	7.2	22.1	4.7	11.1	29	5.4	11.6	37.2	7.4	12.3	32.5	6.6	17	32.4	2.8	16.8	21.8
26 - 104 - MASSACHUSETTS AVE @ BIGELOW S	0.9	1.6	20.1	1.5	1.3	17.3	1	0.5	30.9	0	1.5	25	1.4	0.7	24.1	0	1.2	18.9	1	0.6	18.1	0.6	0.2	13.1	1	0.4	27.7	1.5	0.8	31.6	0.4	1	21.5	0.6	0.8	28.8	0.8	0.8	37.2	0.8	0.3	33	0.2	1.4	31.2	0.3	0.8	21.3
27 - 105 - MASSACHUSETTS AVE @ CLINTON S	0	0.2	19.9	0	1	16.3	0.2	0.3	30.8	0	0	25	0.3	0	24.4	0.7	0.2	19.3	0.1	0.2	18	0.3	0.3	13.1	0	0.6	27.1	0.3	1.3	30.6	0	1.3	20.2	0.1	0.6	28.3	0	0.6	36.6	0	0.5	32.5	0	0.6	30.6	0	0.3	21
28 - 106 - MASSACHUSETTS AVE @ HANCOCK S	1	0.5	20.4	0.8	0	17	0.6	1.7	29.7	1	2	24	1.2	1.7	23.8	0.2	0.7	18.9	0.3	0.6	17.7	0.2	0.4	12.9	0.3	2.7	24.7	0.3	1.6	29.3	0.2	2.5	17.9	0.6	1.4	27.4	0	1.6	35	0.3	2.8	30	0	4.2	26.4	0.2	1.3	19.8
29 - 107 - MASSACHUSETTS AVE @ DANA ST	0.3	1.1	19.6	1	2.8	15.3	0.5	2.5	27.7	0.5	3.5	21	0.4	2.5	21.7	0	1.6	17.3	0	2.7	15	0	0.7	12.2	0.4	2.9	22.3	1.1	4.9	25.5	0.5	3.1	15.3	0.4	2.8	25.1	0.8	5.4	30.4	0.5	4.2	26.4	2	5.8	22.6	0	2.5	17.3
30 - 108 - MASSACHUSETTS AVE @ TROWBRIDG	0.5	1.9	18.2	0.3	2	13.5	0.6	3.8	25.1	0	6.5	14.5	0.2	2.9	19	0.1	2.2	15.2	0.3	3.3	12	0.1	1.7	10.6	0.7	4.3	18.7	0.5	2.3	23.8	0.1	1.8	13.6	0.9	3	23	0.2	1.6	29	0	4.2	22.2	0	5.4	17.2	0	2.3	15
31 - 109 - MASSACHUSETTS AVE @ QUINCY ST	0	3.1	15.1	0	1.5	12	0.3	5.9	19.5	0	1	13.5	0.2	2.5	16.7	0	1.4	13.8	0	1.9	10.1	0	1.5	9.1	0	1.1	17.6	0	1.9	21.9	0	2.2	11.4	0.1	2.3	20.8	0	2.2	26.8	0	2.3	19.9	0	2.2	15	0.3	3.2	12.2
32 - 110 - MASSACHUSETTS AVE @ HOLYOKE S	0	15	0.1	0	12	0	0	18.9	0.5	0	12	1.5	0	15.1	1.6	0	13.8	0	0	9.9	0.2	0	9.1	0	0	15.7	1.9	0	21.6	0.3	0	10.8	0.6	0	18.9	1.9	0	24.4	2.4	0	19.2	0.7	0	14.8	0.2	0	11.5	0.7
Maximum			38.9			33.5			42.4			50			42.5			40.7			32.8			24.9			40.4			39.1			30.7			37.2			46.6			37.4			44.4			37.8
Total	64.3	64.3		64.3	64.3		82.3	82.3		92	90.5		80.7	79.1		67.3	67.7		61.8	62.6		46.2	46.3		79.6	75.2		84.4	81.4		58.5	56.8		72.1	71.9		87.5	87		72.8	71		76.8	76.6		63	60.3	

on	off	load enter
8	57	297

on	off	load enter
25	12	294

Massachusetts Bay Transportation Authority
Route 1
Weekday - Inbound
Fall 2012
(Urban Transportation Associates)

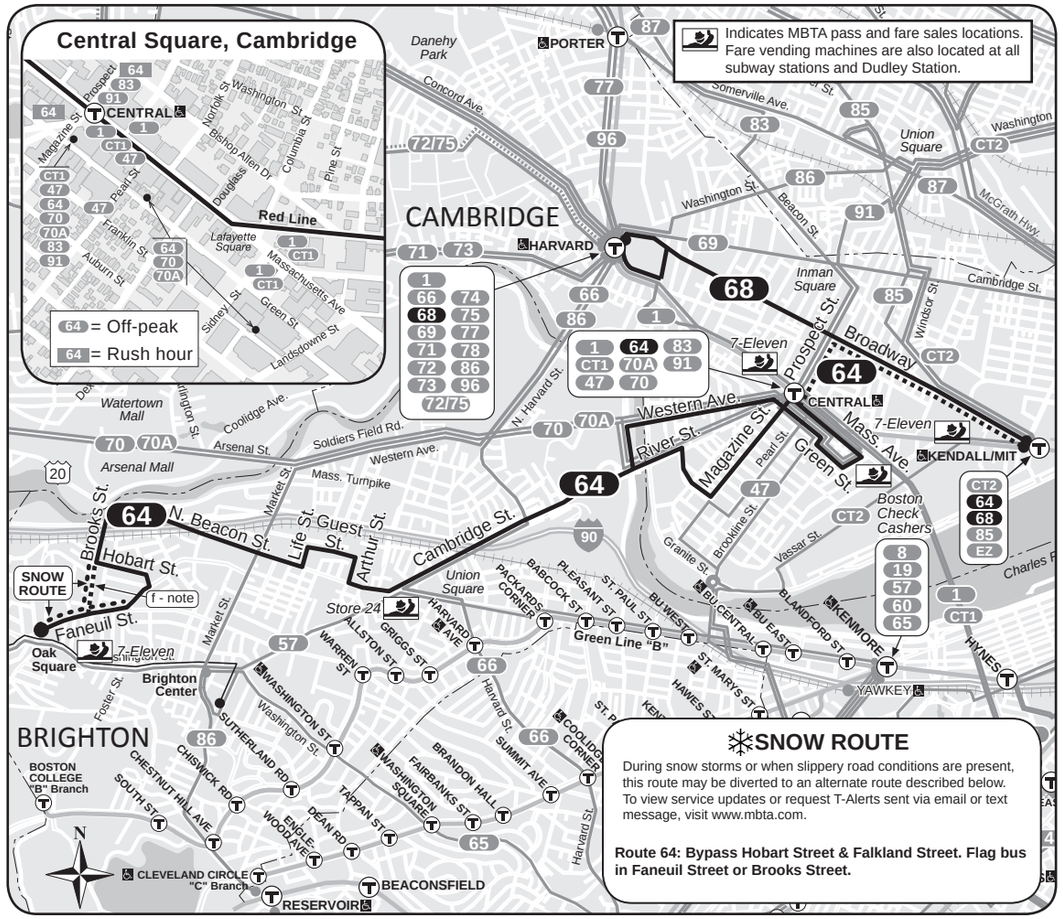
Trip (RouteVar) [Observations]

Seq - StopID - Stop Name	08:02 (1 ,0) [10] !Fall 2012!			08:11 (1 ,0) [18] !Fall 2012!			08:20 (1 ,0) [5] !Fall 2012!			08:29 (1 ,0) [14] !Fall 2012!			08:38 (1 ,0) [3] !Fall 2012!			08:47 (1 ,0) [16] !Fall 2012!			08:55 (1 ,0) [4] !Fall 2012!			17:03 (1 ,0) [4] !Fall 2012!			17:10 (1 ,0) [17] !Fall 2012!			17:18 (1 ,0) [2] !Fall 2012!			17:25 (1 ,0) [9] !Fall 2012!			17:33 (1 ,0) [8] !Fall 2012!			17:40 (1 ,0) [8] !Fall 2012!			17:48 (1 ,0) [4] !Fall 2012!			17:55 (1 ,0) [7] !Fall 2012!		
	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	Off	Load	On	Off	Load	On	Off	Load
1 - 110 - MASSACHUSETTS AVE @ HOLYOKE S	3.5	0	3.9	7.4	0	7.9	6.4	0	6.4	6.5	0	6.5	2	0	2	6.3	0	6.3	7.5	0	7.5	6.3	0	6.3	6.8	0	7.5	6.5	0	8	9.5	0	11.5	6.1	0	6.5	6.1	0	7	7.8	0	8.8	4.7	0	5.4
2 - 2168 - MASSACHUSETTS AVE @ JOHNSTON	4.1	0	8.3	3	0	10.9	5.2	0	11.6	6.5	0.1	12.9	15	5	16.5	4.4	0	10.7	4	0	11.5	2.8	0	9	2.8	0.2	10.1	3.5	0	11.5	3.9	0	14.3	3.3	0	9.8	2.1	0.1	9	2.3	0.3	10.8	3	0.3	9
3 - 2166 - QUINCY ST @ BROADWAY OPP FOGG	2.8	0.5	11.1	2.2	0	13.1	3.2	0	14.8	2.6	0.1	15.4	2.5	0	19	1.2	0.1	11.8	1.5	0	13	1.3	0.3	10	1.8	0.2	11.7	2	0.5	13	2.8	0.3	16.5	1.9	0.3	11.4	0.8	0	9.8	0.5	0.5	10.8	1.2	0.2	10
4 - 2167 - QUINCY ST @ HARVARD ST	0.6	0	11.8	0.2	0	13.2	0	0	14.8	0.6	0	15.9	0	0	19	1	0	12.8	0.3	0.3	13	1	0	11	0.8	0.1	12.5	3.5	0	16.5	1.6	0.1	18	1.9	0	13.3	0.5	0	10.3	1	0	11.8	1	0.2	10.8
5 - 66 - MT AUBURN ST @ DEWOLFE ST	1.4	0	13.1	1.6	0.1	14.7	0.8	0	15.6	1.4	0	17.4	1.5	0	20.5	1.3	0	14.1	1	0	14	3.8	0	14.8	1.8	0.2	14.1	1	0	17.5	1.3	0.3	19	2.3	0	15.5	0.6	0.1	10.8	0.5	0	12.3	0.2	0	11
6 - 67 - MT AUBURN ST @ PUTNAM AVE	2.9	0.4	13.5	2.7	0.4	16.9	5.4	0.2	20.8	5.4	0.4	22.4	7.3	0	22	3.9	0.5	17.4	4	0.8	17.3	3.3	2.3	15.8	4.6	0.2	18.4	1	0	18.5	2	0.2	21	4.9	0.1	20.3	1.4	0.3	11.9	2.3	0	14.5	1	0	10.4
7 - 68 - MASSACHUSETTS AVE @ BAY ST	4.5	0.1	17.9	3.9	0.4	20.4	5	0.6	25.2	5.4	0.2	27.6	6.7	0	28.7	3.9	0.5	20.9	4.3	0.8	20.8	3.3	0.5	18.5	2.7	0.1	21.1	3	0.5	21	1.4	0.2	22.2	2.1	0.5	21.9	1.6	0.4	13.1	3.5	1	17	1.6	0.4	11.6
8 - 69 - MASSACHUSETTS AVE @ HANCOCK S	3	0	20.9	3.8	0.1	24.2	5.4	0.6	30	4.8	0	32.4	3.3	0	32	3.9	0.4	24.4	2	0	22.8	1.8	0.3	20	0.8	0.4	21.5	0.5	0	21.5	1.3	0.3	23.2	1.3	0.6	22.5	0.5	0.1	13.5	0.3	0	17.3	0.9	0.4	12
9 - 70 - MASSACHUSETTS AVE @ SELLERS S	2	0.2	22.7	1.8	0	25.9	1.2	0	31.2	1.8	0.1	34.1	3.7	0.3	35.3	1.6	0	26	0	0.5	22.3	0.5	0.5	20	0.4	0.1	21.8	0	1	20.5	0.2	0.3	23.1	0.9	0.5	22.9	0.3	0	13.8	0	0.3	17	0.3	0.3	12
10 - 71 - MASSACHUSETTS AVE @ PLEASANT	1	0.2	23.5	2.2	0.3	27.9	1.2	0	32.4	2.8	0.5	36.4	4.3	0.7	39	1.7	0.3	27.4	2	0	24.3	1.5	1	20.5	1.7	0.6	22.8	1.5	0	22	0.9	1.2	22.8	1.6	1	23.5	0.8	0	14.5	2	0.8	18.3	1.1	0.4	12.7
11 - 72 - MASSACHUSETTS AVE @ PEARL ST	14.9	4.2	34.2	11.6	3.4	36.1	9.6	5.2	36.8	15.7	3.9	48.1	11.3	2.7	47.7	16.1	3.9	39.6	14	4.3	34	9.5	2.8	27.3	7.5	4.1	26.2	14	3	33	8.9	1.9	29.8	10.6	5.3	28.9	8	0.4	22.1	15.3	2.5	31	9.4	2.6	19.6
12 - 73 - MASSACHUSETTS AVE @ SIDNEY ST	2.6	0.2	36.6	3.8	1.1	38.8	4.4	0.8	40.4	2.5	0.2	50.4	0.7	0	48.3	2.3	0.3	41.5	3.5	0.5	37	7.5	2.3	32.5	4.1	0.8	29.4	3	0	36	3.2	0.6	32.4	3.9	1.6	31.1	4.8	1.1	25.8	8.3	0.3	39	2.7	0.3	22
13 - 731 - MASSACHUSETTS AVE @ LANDSDOWN	0.8	0.3	37.1	0.9	0.6	39.2	1	1.2	40.2	0.5	1.1	49.9	0	0.7	47.7	0.5	1.1	40.9	0.3	0.8	36.5	2.3	0	34.8	2.8	0.2	32.1	5	0	41	2.2	0.2	34.4	1.1	0.4	31.9	2.1	0.1	27.8	0.5	0.8	38.8	1.3	0	23.3
14 - 74 - MASSACHUSETTS AVE @ ALBANY ST	1.2	0.5	37.8	1	0.9	39.3	1	1	40.2	1	0.9	50	0.3	0	48	0.8	0.6	41.1	0	2	34.5	3.8	0	38.5	4.1	0.3	35.8	4.5	0	45.5	3.2	0.2	37.4	1.5	0	33.4	2.6	0.1	30.3	3	1	40.8	3.9	1.1	26
15 - 75 - 84 MASSACHUSETTS AVE	1	2.1	36.7	1.2	1.5	38.9	1.8	2	40	2.2	1.6	50.6	0.3	4	44.3	0.9	4.3	37.8	0.5	4	31	9.5	0.5	47.5	7.1	0.8	42.1	7.5	1	52	6.8	1.3	42.9	4.8	1.4	36.8	7.5	0.6	37.1	5.8	0.5	46	7.3	0.4	32.9
16 - 76 - MASSACHUSETTS AVE @ MEMORIAL	0.6	0	37.3	0.1	0.1	38.9	0.2	0.2	40	0.4	0.2	50.8	0.3	0	44.7	0.1	0	37.9	0.3	0	31.3	0.8	0	48.3	0.8	0.2	42.7	0.5	0.5	52	0.9	0.1	43.7	0.8	0	37.5	0.8	0	37.9	0.5	0	46.5	1.7	0.7	33.9
17 - 77 - MASSACHUSETTS AVE @ BEACON ST	0.7	2.7	35.3	0.3	1.3	37.9	0.6	2.6	38	0.5	2.4	48.9	0	1.7	43	0.2	1.5	36.6	0	1.8	29.5	0.8	2.5	46.5	0.7	5.2	38.2	1	3	50	0.4	4.2	39.9	0.4	3.4	34.5	0.4	2.4	35.9	0.3	3.3	43.5	0	3.6	30.3
18 - 78 - MASSACHUSETTS AVE @ COMMONWEA	0.3	0.2	35.4	0.7	0.6	38.1	0	0.6	37.4	0.1	0.8	48.3	0.3	0	43.3	0.6	0.8	36.4	0.8	0.8	29.5	0.5	4	43	0.6	2.9	35.9	0.5	4	46.5	0.2	3.2	36.9	0.5	2.4	32.6	1	4	32.9	0.5	6.5	37.5	0.6	2.7	28.1
19 - 79 - MASSACHUSETTS AVE @ NEWBURY S	3.8	11	28.2	3.9	12.7	29.2	4.8	9.2	33	5.3	16.9	36.6	5.3	15	33.7	2.6	10.3	28.6	4.3	7.3	26.5	6.5	13	36.5	5.1	8.1	33	4.5	14	37	3.3	9.4	30.8	3.9	9.1	27.4	4	11.1	25.8	1.8	12.8	26.5	1.4	8	21.6
20 - 80 - 183 MASSACHUSETTS AVE OPP CHR	0.3	0.4	28.1	0.3	0.7	28.8	0.8	2.4	31.4	0.9	0.9	36.6	0	1.3	32.3	0.7	1.8	27.6	0	1.3	25.3	0.8	3.8	33.5	0.4	1.2	32.2	0.5	3	34.5	1	2.7	29.1	0.5	1.1	26.8	1.3	1.1	25.9	0.3	2.3	24.5	1.7	3.9	19.4
21 - 81 - MASSACHUSETTS AVE @ WESTLAND	1.9	4.4	25.6	1.4	4.4	25.8	1.8	2.8	30.4	2.2	6.4	32.5	1.7	1.3	32.7	1.6	4.3	24.9	1.5	5.8	21	1.3	2	32.8	1.8	3.9	30.1	2.5	6	31	2	3.8	27.3	3.1	5	24.9	2.4	3.6	24.6	1	1	24.5	0.7	2.9	17.3
22 - 82 - MASSACHUSETTS AVE @ HUNTINGTO	2.1	1.4	26.3	2.2	1.2	26.8	4	0.4	34	3.3	1.5	34.3	2	2	32.7	2.2	2.8	24.3	2	1.3	21.8	2.8	2.3	33.3	2.1	2.1	30.1	0.5	0.5	31	0.7	2.6	25.4	1.4	0.9	25.4	1.6	1.1	25.1	0.5	3.3	21.8	1.3	2.3	16.3
23 - 187 - MASSACHUSETTS AVE @ MASSACHUS	9.5	2	33.8	9.1	2.4	33.5	8.2	1.2	41	14.9	2.4	46.9	14.3	2	45	6.6	1.9	28.9	7.5	2.5	26.8	4.8	5	33	3.7	5.3	28.5	3.5	6.5	28	1.8	5.3	21.9	4.4	2.5	27.3	5	3.3	26.9	3.5	5.5	19.8	3.7	4.7	15.3
24 - 83 - MASSACHUSETTS AVE @ COLUMBUS	0.3	0.1	34	0.2	0.1	33.6	0.2	0.4	40.8	0.3	0.1	47	0.7	0	45.7	2.1	0.3	30.6	0.5	0	27.3	0.3	0	33.3	0.6	1.2	27.9	0.5	3	25.5	0	0.8	21.1	0.6	0	27.9	0.5	0.3	27.1	0	0	19.8	0	0	15.3
25 - 84 - MASSACHUSETTS AVE @ TREMONT S	0.5	0.7	33.8	0.4	0.3	33.8	0.8	0.4	41.2	0.3	0.2	47.1	0	0	45.7	0.2	0.6	30.2	0	1.5	25.8	0.8	1.5	32.5	0.4	1.9	26.4	0.5	1.5	24.5	0.2	2	19.3	0.3	3.1	25	0.1	2.4	24.9	0	1.8	18	0.4	0.7	15
26 - 85 - MASSACHUSETTS AVE @ SHAWMUT A	0.1	1.4	32.5	0.2	0.7	33.3	0.6	0.6	41.2	0.1	0.6	46.6	0	1.3	44.3	0.1	1	29.3	0.5	1	25.3	0	2.3	30.3	0.2	3.3	23.3	1	3.5	22	0.2	2.8	16.8	0	2	23	0.1	2.4	22.6	0	1.5	16.5	0.1	2	13.1
27 - 59 - MASSACHUSETTS AVE @ WASHINGTO	0.3	0.7	32.1	0.2	0.6	32.9	0	1.6	39.6	0.1	1.9	44.8	0	0.7	43.7	0.1	0.6	28.8	0	1.3	24	0.5	3.3	27.5	0.6	1.8	22.1	0	4.5	17.5	0	1.3	15.4	0.1	2.5	20.6	0.1	2.5	20.3	0.8	2	15.3	0.3	0.7	12.7
28 - 854 - MASSACHUSETTS AVE @ HARRISON	0.7	18.9	13.9	1.1	14.6	19.4	0.2	19	20.8	2.4	19.9	27.3	3	19.7	27	2.4	13.1	18.1	3	10.8	16.3	3.3	8	22.8	2.8	5.1	19.8	2.5	5	15	2.3	2.3	15.4	0.8	3	18.4	4.3	3.5	21	3.8	3.8	15.3	0.6	3.9	9.4
29 - 856 - MASSACHUSETTS AVE @ ALBANY ST	1.2	7.4	7.7	0.7	6.7	13.4	0.2	9	12	2.2	12.1	17.4	4.7	9.7	22	1.4	5.7	13.9	1.5	2.5	15.3	2.8	1	24.5	1.5	3.5	17.9	1.5	3	13.5	3	1.8	16.7	1.3	2.4	17.3	2.3	1.8	21.5	1.3	1.5	15	0.9	0.9	9.4
30 - 10099 - ALBANY ST @ NORTHAMPTON ST	0	1.3	6.4	0.2	1.7	11.8	0	0.8	11.2	0.2	1.2	16.4	0	0	22	0.7	3.3	11.3	0	0	15.3	0	1.5	23	0.1	0.9	17.1	0	0	13.5	0	0.4	16.2	0.1	1.5	15.9	0	0.4	21.1	0	0	15	0	0.4	9
31 - 10100 - ALBANY ST @ MELNEA CASS BLVD	0	0.7	5.7	0.1	0.7	11.2	0	0.8	10.4	0.1	1.9	14.6	0	0.7	21.3	0.1	0.8	10.6	0	0.3	15	0	1	22	0	0.8	16.2	0	1	12.5	0.1	0.7	15.7	0	1.3	14.6	0.1	0.6	20.6	0	0.3	14.8	0	0.3	8.7
32 - 10101 - MELNEA CASS BLVD @ HARRISON A	0	0	5.7	0	0.1	11.1	0	0.2	10.2	0	1	13.6	0	0.7	20.7	0.1	0.4	10.3	0	0	15	0	0	22	0	0.6	15.6	0	0	12.5	0	0	15.7	0	0	14.6	0	0.4	20.3	0	0	14.8	0	0	8.7
32.5 - 61 - WASHINGTON ST @ MELNEA CASS B																																													
33 - 62 - WASHINGTON ST @ WILLIAMS ST	0	0.5	5.2	0	1.3	9.8	0.4	1	9.6	0	1.9	11.6	0.3	2	19	0.1	0.6	9.8	0	1.5	13.5	0.3	0	22.3	0.6	2	14.2	0	0	12.5	0	1.2	14.4	0.1	1	13.8	0.1	1.4	19	0.8	1.3	14.3	0	0.3	8.4
34 - 63 - WASHINGTON ST @ RUGGLES ST	0	0.2	5	0.1	0.7	9.2	0	0	9.6	0.1	2.6	9.1	0	1	18	0	0.6	9.3	0	2	11.5	0	0.5	21.8	0	0.6	13.6	0	1.5	11	0.1	0.4	14.1	0.1	0.5	13.4	0	1.1	17.9	0	0	14.3	0	0.7	7.7
35 - 64 - DUDLEY STATION	0	5	0	0	9.1	0.1	0	9.6	0	0	9.1	0	0	14.3	3.7	0	9.3	0	0	11.5	0	0	21.8	0	0	13.4	0.2	0	11	0	0	14.1	0	0	13.1	0.3	0	17.9	0	0	14.3	0	0	7.7	0
Maximum			37.8			39.3			41.2			50.8			48.3			41.5			37			48.3			42.7			52			43.7			37.5			37.9			46.5			33.9
Total	68.6	67.7		68.4	68.7		74.4	74.4		93.1	93.1		91.7	86.7		71.4	71.4		66.5	66.5		83.5	83.5		71.9	72.4		76	77.5		65.6	66.4		66.3	66.4		63.6	64.5		67.5	68.5		52.9	53	

on	off	load	enter
8	20		291

on	off	load	enter
56		7	288

Route 64 Oak Square - University Park or Kendall/MIT
Route 68 Harvard Square - Kendall/MIT

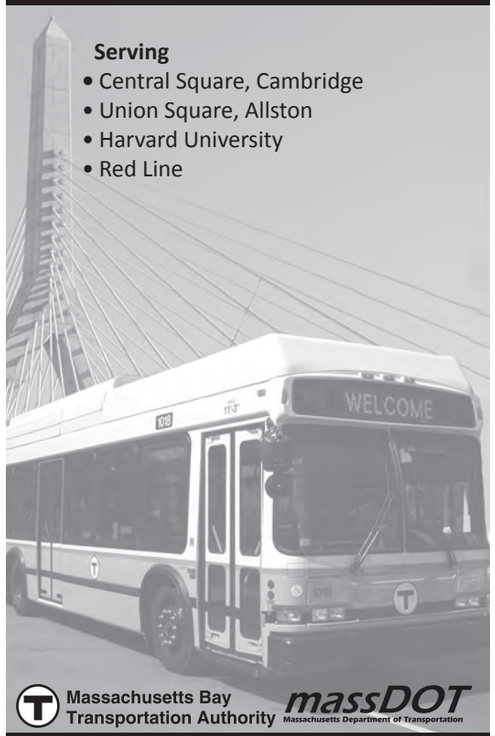


schedule change

64•68

Spring March 21, 2015 - June 19, 2015

64 Oak Square-University Park or Kendall/MIT
68 Harvard Square-Kendall/MIT



Serving
- Central Square, Cambridge
- Union Square, Allston
- Harvard University
- Red Line

Massachusetts Bay Transportation Authority
massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

64 Weekday

Inbound				Outbound			
Leave Oak Square	Arrive Union Square	Arrive Kendall/ MIT	Arrive University Park	Leave University Park	Leave Kendall/ MIT	Arrive Union Square	Arrive Oak Square
5:31A	5:40A	.....	5:56A	6:00A	.....	6:08A	6:22A
5:54	6:03	.....	6:19	6:23	.....	6:32	6:46
6:17	6:27	6:53A	.....	.....	6:42A	7:02	7:12
6:40	6:50	7:16	.....	.....	7:05	7:24	7:34
7:03	7:13	7:41	.....	.....	7:28	7:47	7:57
7:20	7:30	7:58	.....	.....	7:51	8:10	8:20
7:35	7:48	8:16	.....	.....	8:14	8:33	8:43
7:50	8:03	8:31	.....	.....	8:37	8:56	9:08
8:12	8:25	8:53	.....	.....	8:59	9:22	9:35
8:35	8:48	9:15	.....	.....	9:20	9:43	9:56
8:55	9:07	9:33	.....	9:50	.....	10:04	10:21
9:15	9:25	.....	9:44	10:25	.....	10:39	10:56
9:40	9:50	.....	10:07	11:00	.....	11:13	11:27
10:05	10:14	.....	10:30	11:35	.....	11:48	**12:02P**
10:30	10:39	.....	10:55				
11:05	11:14	.....	11:30				
11:40	11:49	.....	**12:05P**				
				12:10P	**.....**	**12:23P**	**12:37P**
12:15P	**12:24P**	**.....**	**12:40P**	**12:45**	**.....**	**12:58**	**1:12**
12:50	**12:59**	**.....**	**1:15**	**1:20**	**.....**	**1:33**	**1:47**
1:25	**1:34**	**.....**	**1:50**	**1:55**	**.....**	**2:07**	**2:20**
2:00	**2:09**	**.....**	**2:21**	**2:30**	**.....**	**2:42**	**2:55**
2:35	**2:44**	**.....**	**2:56**	**3:05**	**.....**	**3:17**	**3:30**
3:10	**3:19**	**.....**	**3:31**	**3:40**	**.....**	**3:52**	**4:05**
3:45	**4:00**	**4:25**	**.....**	**.....**	**4:05**	**4:26**	**4:46**
4:15	**4:30**	**4:55**	**.....**	**.....**	**4:35**	**4:56**	**5:16**
4:35	**4:50**	**5:16**	**.....**	**.....**	**5:00**	**5:21**	**5:41**
5:05	**5:20**	**5:46**	**.....**	**.....**	**5:30**	**5:51**	**6:11**
5:35	**5:50**	**6:16**	**.....**	**.....**	**6:00**	**6:21**	**6:41**
6:05	**6:20**	**6:46**	**.....**	**.....**	**6:30**	**6:51**	**7:10**
6:30	**6:39**	**.....**	**6:51**	**.....**	**6:55**	**7:16**	**7:34**
7:40	**7:49**	**.....**	**8:01**	**8:10**	**.....**	**8:21**	**8:34**
8:40	**8:49**	**.....**	**9:01**	**9:10**	**.....**	**9:21**	**9:34**
9:40	**9:49**	**.....**	**10:01**	**10:10**	**.....**	**10:21**	**10:34**
10:40	**10:49**	**.....**	**11:01**	**11:10**	**.....**	**11:21**	**11:34**
11:40	**11:49**	**.....**	12:01A	12:05	.....	12:16	12:29
12:32A	12:41A	.....	12:53	fw 1:00	.....	1:13	.....

f - From Central Square to Faneuil Square. Does NOT serve Stop & Shop.
w - Waits for last train to arrive at Central Square Station. Monday through Thursday only. Friday & Saturday leaves at scheduled time.

ROUTE 64 NOTE: Running time from Kendall/MIT Station to Central Square is approximately 7 minutes. Running time from University Park to Central Square is approximately 2 minutes.

64 Saturday

Inbound			Outbound		
Leave Oak Square	Arrive Union Square	Arrive University Park	Leave University Park	Arrive Union Square	Arrive Oak Square
5:50A	5:58A	6:13A	5:20A	5:27A	5:40A
6:50	6:58	7:13	6:20	6:27	6:40
7:50	7:58	8:13	7:20	7:27	7:40
8:50	8:58	9:16	8:20	8:27	8:40
9:50	9:59	10:18	9:20	9:29	9:44
10:50	10:59	11:18	10:20	10:29	10:44
11:50	11:59	**12:18P**	11:20	11:29	11:45
12:50P	**12:59P**	**1:19P**	**12:20P**	**12:29P**	**12:46P**
1:50	**1:59**	**2:19**	**1:20**	**1:30**	**1:47**
2:50	**2:59**	**3:19**	**2:20**	**2:30**	**2:47**
3:50	**3:59**	**4:19**	**3:20**	**3:29**	**3:46**
4:50	**4:59**	**5:18**	**4:20**	**4:29**	**4:46**
5:50	**5:58**	**6:17**	**5:20**	**5:29**	**5:46**
6:50	**6:58**	**7:17**	**6:20**	**6:29**	**6:46**
7:50	**7:57**	**8:15**	**7:20**	**7:30**	**7:45**
8:50	**8:57**	**9:15**	**8:20**	**8:30**	**8:44**
9:50	**9:57**	**10:15**	**9:20**	**9:29**	**9:43**
10:50	**10:57**	**11:13**	**10:20**	**10:29**	**10:43**
11:50	**11:55**	12:11A	**11:20**	**11:29**	**11:43**
12:40A	12:44A	12:58	12:15A	12:23A	12:37A
			f 1:05	1:15	.....

64 Sunday

Inbound			Outbound		
Leave Oak Square	Arrive Union Square	Arrive University Park	Leave University Park	Arrive Union Square	Arrive Oak Square
9:35A	9:46A	10:00A	9:05A	9:18A	9:28A
10:35	10:46	11:00	10:05	10:18	10:28
11:35	11:47	**12:03P**	11:05	11:18	11:28
12:35P	**12:47P**	**1:03P**	**12:05P**	**12:20P**	**12:31P**
1:35	**1:47**	**2:03**	**1:05**	**1:20**	**1:31**
2:35	**2:47**	**3:03**	**2:05**	**2:20**	**2:31**
3:35	**3:47**	**4:03**	**3:05**	**3:20**	**3:31**
4:35	**4:47**	**5:03**	**4:05**	**4:20**	**4:31**
5:35	**5:47**	**6:03**	**5:05**	**5:20**	**5:31**
6:35	**6:45**	**6:57**	**6:05**	**6:19**	**6:28**

All buses are accessible to persons with disabilities

Route 64
Oak Square-University Park, Cambridge or Kendall/MIT Station

68 Weekday

Inbound		Outbound	
Leave Harvard Square	Arrive Kendall/ MIT	Leave Kendall/ MIT	Arrive Harvard Square
6:35A	6:46A	6:50A	7:03A
7:05	7:16	7:20	7:34
7:35	7:46	7:50	8:04
8:05	8:20	8:25	8:39
8:40	8:55	9:00	9:14
9:15	9:29	9:30	9:44
9:45	9:59	10:00	10:12
10:15	10:29	10:30	10:42
10:45	10:59	11:00	11:12
11:15	11:27	11:30	11:42
11:45	11:57		
		12:00N	**12:13P**
12:15P	**12:27P**	**12:30P**	**12:43**
12:45	**12:57**	**1:00**	**1:13**
1:15	**1:27**	**1:30**	**1:43**
1:45	**1:57**	**2:00**	**2:13**
2:15	**2:27**	**2:30**	**2:43**
2:45	**2:57**	**3:00**	**3:17**
3:15	**3:28**	**3:30**	**3:47**
3:45	**3:58**	**4:00**	**4:17**
4:20	**4:33**	**4:40**	**4:57**
5:00	**5:13**	**5:20**	**5:37**
5:40	**5:53**	**6:00**	**6:13**
6:25	**6:37**	**6:40**	**6:53**

Route 68
Harvard/Holyoke Street-Kendall/MIT

No service on weekends.

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Spring 2015 Holidays
April 20: see Weekday May 25: see Sunday

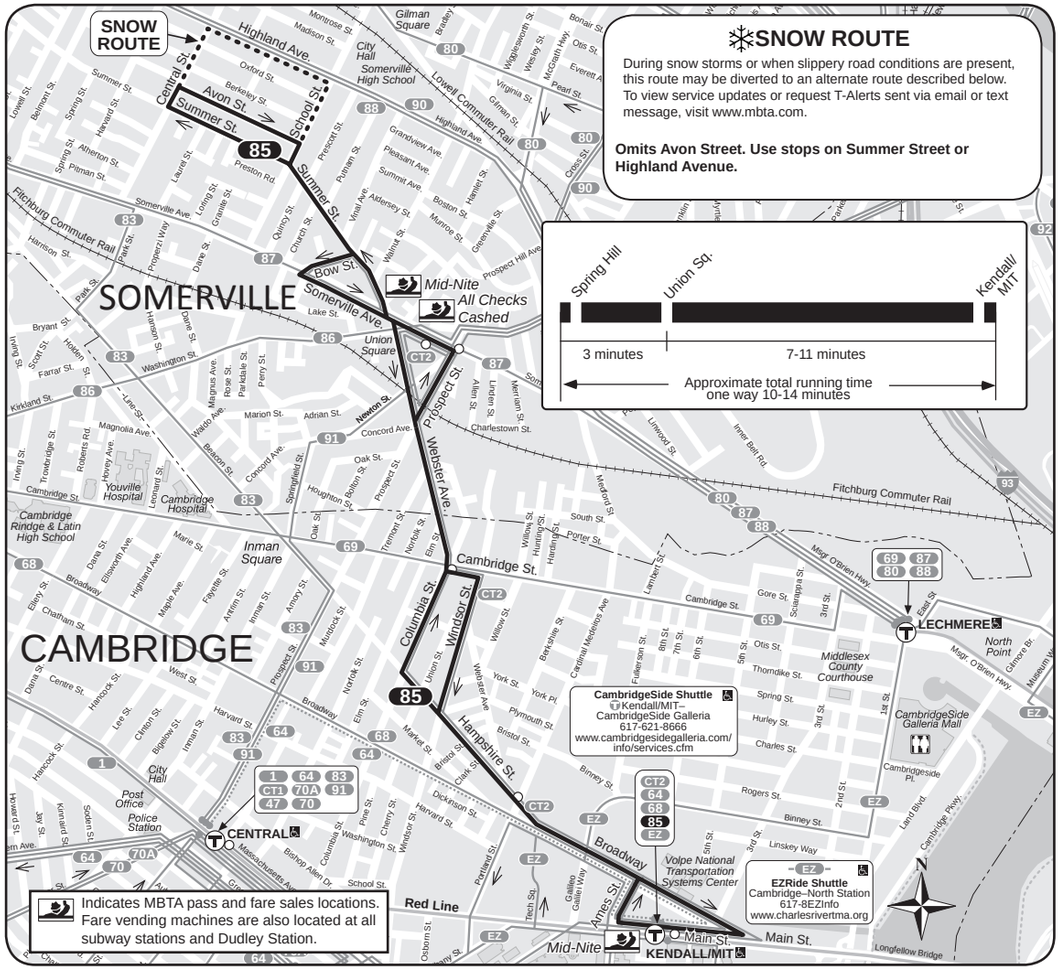
Massachusetts Bay Transportation Authority
Route 68
Weekday - Inbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]											
	08:05 (68 .0) [3] !Fall 2012!			08:40 (68 .0) [3] !Fall 2012!			17:00 (68 .0) [4] !Fall			17:40 (68 .0) [4] !Fall		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 110 - MASSACHUSETTS AVE @ HOLYOKE S	0.5	0	1.5	1	0	2.3	6.5	0	6.5	2	0	2
2 - 2168 - MASSACHUSETTS AVE @ JOHNSTON	1.3	0.7	2.3	3.7	0	5	5.3	1.3	10.5	3	0.3	5.3
3 - 2217 - 454 BROADWAY	1.7	0	4	4	0	9	0.8	0.8	10.5	0.3	0.3	5.3
4 - 2218 - BROADWAY @ ELLERY ST	2	0.3	5.7	3.7	0.3	12.3	2	0.3	12.3	0.8	0.5	5.5
5 - 2220 - BROADWAY @ CRAWFORD ST	6.7	0	12.3	5	0	17.3	0.5	1	11.8	0	0	5.5
6 - 2221 - BROADWAY @ LEE ST	1.3	0	13.7	1.3	1.7	17	0	0.3	11.5	0	0.5	5
7 - 2222 - BROADWAY @ INMAN ST	0.3	0	14	1	0.7	17.3	0	0	11.5	0	0.5	4.5
8 - 24481 - BROADWAY @ PROSPECT ST	0.7	0	14.7	0.7	0	18	0	0.3	11.3	0	0.5	4
9 - 24482 - BROADWAY @ NORFOLK ST	0.3	0	15	0.3	0	18.3	0	0	11.3	0	0.3	3.8
10 - 24483 - BROADWAY @ COLUMBIA ST	1	0	16	0.7	0	19	0.5	3	8.8	0	0.3	3.5
11 - 24484 - BROADWAY @ WINDSOR ST	1.3	0.3	17	0.3	1	18.3	0.8	2	7.5	0.8	2.5	1.8
12 - 24485 - BROADWAY OPP HAMPSHIRE ST	0	3.3	13.7	0	8	10.3	2.8	2.3	8	0	0.8	1
13 - 2228 - BROADWAY @ GALILEO WAY	0	1.3	12.3	0	0	10.3	0	0	8	0	0	1
14 - 2231 - MAIN ST @ KENDALL STATION - R	0	11.7	0.7	0	10.3	0	0	8	0	0	1	0
Maximum			17			19			12.3			5.5
Total	17.2	17.7		21.7	22		19	19		6.8	7.3	
	0	22	22.6				0	9	9			
	on	off	load entering									
# of Busses												
persons	10.3	22										

Massachusetts Bay Transportation Authority
Route 68
Weekday - Outbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]											
	08:25 (68 .0) [3] !Fall 2012!			09:00 (68 .0) [3] !Fall 2012!			17:20 (68 .0) [4] !Fall 2012!			18:00 (68 .0) [4] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 2231 - MAIN ST @ KENDALL STATION - R	4	0	4	3	0	3	12.8	0	12.8	9.8	0	9.8
2 - 24486 - BROADWAY @ HAMPSHIRE ST	1	1.3	3.7	0.3	1.3	2	3.8	1.8	14.8	3.3	0.3	12.8
3 - 24487 - BROADWAY @ WINDSOR ST	4.3	0.3	7.7	1.3	0	3.3	0.8	2.3	13.3	0.8	1	12.5
4 - 24488 - BROADWAY @ COLUMBIA ST	0.3	0	8	0.7	0	4	0.5	1.5	12.3	0	0.8	11.8
5 - 24489 - BROADWAY @ NORFOLK ST	0.7	0	8.7	0	0	4	0	0	12.3	0	0	11.8
6 - 24490 - BROADWAY @ PROSPECT ST	0.3	0	9	0.7	0.3	4.3	0	1	11.3	0	1	10.8
7 - 2223 - BROADWAY @ INMAN ST	0	0	9	1.3	0	5.7	0.3	1	10.5	0.8	1	10.5
8 - 2224 - BROADWAY @ FAYETTE ST	0	0.3	8.7	0.7	0	6.3	1	0	11.5	1	0.8	10.8
9 - 2225 - BROADWAY @ HIGHLAND AVE	0	0	8.7	0.3	1.7	5	0.3	1.5	10.3	0.3	3.3	7.8
10 - 2226 - BROADWAY @ ELLERY ST	1	0	9.7	0	0.7	4.3	0.3	2	8.5	0	3.3	4.5
11 - 2227 - BROADWAY OPP TROWBRIDGE ST	0	0	9.7	0	0	4.3	0	0	8.5	0	0	4.5
12 - 1431 - BROADWAY @ FELTON ST	0	0.3	9.3	0.3	1	3.7	0.3	2.5	6.3	0	0.8	3.8
13 - 2166 - QUINCY ST @ BROADWAY OPP FOGG	0	0.7	8.7	0	1	2.7	0	0.8	5.5	0	0.3	3.5
14 - 2167 - QUINCY ST @ HARVARD ST	0	0.3	8.3	0	0	2.7	0	0.3	5.3	0	0.3	3.3
15 - 110 - MASSACHUSETTS AVE @ HOLYOKE S	0	8.3	0	0	2.7	0	0	5.3	0	0	3.3	0
Maximum			9.7			6.3			14.8			12.8
Total	11.7	11.7		8.7	8.7		19.8	19.8		15.8	15.8	
	7	0					22.6	0	0			
	20.4	20.4					on	off	starting station load			
# of buses	3											
persons							9.8					

Route 85 Spring Hill- Kendall/MIT Station



SNOW ROUTE

During snow storms or when slippery road conditions are present, this route may be diverted to an alternate route described below. To view service updates or request T-Alerts sent via email or text message, visit www.mbta.com.

Omits Avon Street. Use stops on Summer Street or Highland Avenue.

85

Spring March 21, 2015 - June 19, 2015

Spring Hill- Kendall/MIT Station

Serving

- Summer Street, Somerville
- Somerville High School
- Union Square, Somerville
- One Kendall Square
- Cambridge Marriott
- Red Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

85 Weekday

Inbound			Outbound		
Leave Spring Hill	Arrive Union Sqiare	Arrive Kendall/ MIT Sta.	Leave Kendall/ MIT Sta.	Arrive Union Sqiare	Arrive Spring Hill
5:45A	5:49A	5:58A	6:00A	6:08A	6:12A
6:15	6:19	6:29	6:30	6:38	6:42
6:45	6:49	6:59	7:00	7:07	7:14
7:20	7:24	7:34	7:40	7:47	7:54
7:55	7:59	8:12	8:20	8:27	8:34
8:20	8:26	8:39	9:05	9:12	9:19
8:45	8:51	9:03	9:45	9:52	9:59
9:25	9:29	9:40	10:20	10:26	10:33
10:00	10:04	10:15	11:00	11:06	11:13
10:40	10:44	10:55	11:40	11:46	11:53
11:20	11:24	11:35			
			12:20P	**12:26P**	**12:33P**
12:00N	**12:04P**	**12:14P**	**1:00**	**1:06**	**1:13**
12:40	**12:44**	**12:54**	**1:40**	**1:46**	**1:53**
1:20	**1:24**	**1:34**	**2:20**	**2:26**	**2:33**
2:00	**2:04**	**2:14**	**3:00**	**3:07**	**3:14**
2:40	**2:44**	**2:54**	**3:40**	**3:47**	**3:54**
3:20	**3:24**	**3:34**	**4:20**	**4:27**	**4:35**
4:00	**4:04**	**4:16**	**5:00**	**5:09**	**5:20**
4:40	**4:44**	**4:56**	**5:40**	**5:49**	**6:00**
5:20	**5:24**	**5:36**	**6:20**	**6:28**	**6:36**
6:00	**6:04**	**6:14**	**7:00**	**7:06**	**7:13**
6:40	**6:44**	**6:54**	**7:40**	**7:46**	**7:53**
7:20	**7:24**	**7:34**			

No service on weekends.

Route 85
Spring Hill-Kendall/MIT Station

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Spring 2015 Holidays
April 20: see Weekday May 25: see Sunday

Massachusetts Bay Transportation Authority
Route 85
Weekday - Inbound
Fall 2012
(Urban Transportation Associates)

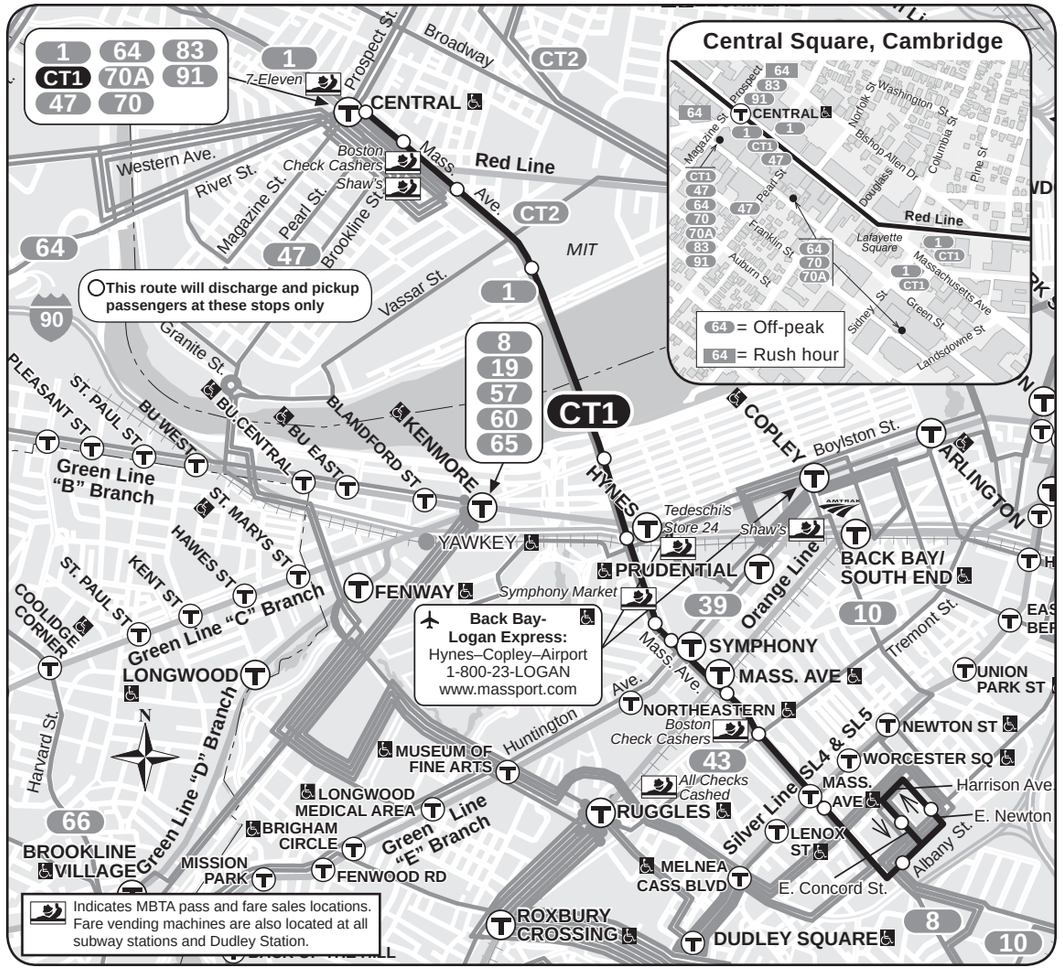
	Trip (RouteVar) [Observations]											
	08:00 (85 .0) [6] !Fall 2012!			08:40 (85 .0) [6] !Fall 2012!			17:20 (85 .0) [2] !Fall 2012!			18:00 (85 .0) [2] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 2519 - AVON ST @ CENTRAL ST	21.3	0	21.3	16.5	0	16.5	2	0	2	0.5	0	0.5
2 - 2520 - AVON ST @ SCHOOL ST	2.8	0	24.2	5.5	0	22	0	0	2	0	0	0.5
3 - 2507 - SUMMER ST @ SCHOOL ST	6.7	0	30.8	5.3	0.3	27	2	0	4	0.5	0	1
4 - 2508 - SUMMER ST @ VINAL AVE	3.3	0	34.2	6	0.2	32.8	0	0	4	0	0	1
5 - 2574 - 51 BOW ST	1.8	0.3	35.7	1.5	0.3	34	0.5	0	4.5	0	0	1
6 - 2510 - SOMERVILLE AVE @ UNION SQUARE	1.3	0	37	1.2	0.2	35	0.5	0	5	0	0	1
7 - 2511 - WEBSTER AVE @ WASHINGTON ST	2.7	0.2	39.5	1.8	0.2	36.7	0.5	0	5.5	0	0	1
8 - 2512 - 25 WEBSTER AVE @ NEWTON ST	4.3	0	43.8	2.7	0.2	39.2	0	0	5.5	0	0	1
9 - 2513 - WEBSTER AVE @ NORFOLK ST	1.3	0	45.2	0.8	0.5	39.5	0	0	5.5	0	0	1
10 - 2514 - WEBSTER AVE @ CAMBRIDGE ST	2.8	0	48	2.2	0.3	41.3	0.5	0.5	5.5	0	0	1
11 - 2515 - WINDSOR ST @ LINCOLN ST	0.2	0	48.2	0.5	0.7	41.2	0	0	5.5	0	0	1
12 - 2516 - WINDSOR ST @ HAMPSHIRE ST	0.8	0.2	48.8	1.5	0	42.7	0	0	5.5	0	0	1
13 - 2517 - HAMPSHIRE ST @ CLARK ST	0	0.2	48.7	0	0.3	42.3	0	0	5.5	0	0	1
14 - 2518 - HAMPSHIRE ST @ PORTLAND ST	1	3.3	46.3	1	8.3	35	1.5	1.5	5.5	0.5	0	1.5
15 - 2228 - BROADWAY @ GALILEO WAY	0.3	0.3	46.3	0.2	5.5	29.7	0	0	5.5	0	0	1.5
16 - 2231 - MAIN ST @ KENDALL STATION - R	0	46.3	0	0	29.7	0	0	5.5	0	0	1.5	0
Maximum			48.8			42.7			5.5			1.5
Total	50.8	50.8		46.7	46.7		7.5	7.5		1.5	1.5	

0	76	76	0	7	7
on	off	load	on	off	load

Massachusetts Bay Transportation Authority
Route 85
Weekday - Outbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]								
	08:20 (85 .0) [6] !Fall 2012!			17:00 (85 .0) [2] !Fall 2012!			17:40 (85 .0) [2] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load
1 - 2231 - MAIN ST @ KENDALL STATION - R	3.5	0	3.5	26	0	26	40	0	40
2 - 2521 - HAMPSHIRE ST @ CARDINAL MEDEI	0.2	1.7	2	6.5	1	31.5	6.5	1.5	45
3 - 2522 - HAMPSHIRE ST @ WEBSTER AVE	0	0.8	1.2	1	0	32.5	0.5	0	45.5
4 - 2523 - HAMPSHIRE ST @ WINDSOR ST	0	0	1.2	0	1	31.5	1	1	45.5
5 - 2524 - HAMPSHIRE ST @ COLUMBIA ST	0	0	1.2	0	1	30.5	0	0.5	45
6 - 2525 - COLUMBIA ST @ CAMBRIDGE ST	0	0.3	0.8	0	0.5	30	1	0.5	45.5
7 - 2527 - WEBSTER AVE @ COLUMBIA ST	0	0	0.8	0	0	30	0	0.5	45
8 - 2528 - WEBSTER AVE @ PROSPECT ST	0	0	0.8	0	0.5	29.5	0	2	43
9 - 2612 - SOMERVILLE AVE @ STONE AVE	0	0.2	0.7	1.5	2	29	1	3.5	40.5
10 - 26131 - BOW ST @ WARREN AVE	0.2	0.2	0.8	0	1	28	0	2	38.5
11 - 2614 - SUMMER ST @ WESLEY PARK	0	0	0.8	0	4	24	0	3	35.5
12 - 2533 - SUMMER ST @ SCHOOL ST	0	0	0.8	0	7	17	0	11.5	24
13 - 2532 - 117 SUMMER ST	0.3	0.2	1	0	2	15	0	2.5	21.5
15 - 2519 - AVON ST @ CENTRAL ST	0	0.8	0.2	0	15	0	0	21.5	0
Maximum			3.5			32.5			45.5
Total	4.2	4.2		35	35		50	50	
	3.5	0	0	66	0	0			
	in	out	load	in	out	load			

Route CT1 Central Square, Cambridge - BU Medical Campus/BMC



Crosstown Transit CT1

Spring March 21, 2015 - June 19, 2015

Central Square Cambridge- BU Medical Campus/ Boston Medical Center

Serving

- MIT
- Hynes
- Symphony Station
- Massachusetts Avenue Station
- Red Line
- Orange Line
- Green Line
- Silver Line

Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

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(TTY) 617-222-5146 • www.mbta.com

CT1 Weekday Inbound

Leave Central Square, Camb.	Arrive University Park	Arrive MIT	Arrive Beacon St. & Mass. Ave.	Arrive Hynes Station	Arrive Symphony/ Westland Avenue	Arrive Mass. Ave. Station Orange Line	Arrive Tremont Street	Arrive Washington Street	Arrive Harrison Avenue	Arrive BU Med Campus & BMC
6:30A	6:32A	6:34A	6:36A	6:38A	6:40A	6:42A	6:43A	6:44A	6:45A	6:49A
6:50	6:52	6:54	6:56	6:58	7:00	7:02	7:03	7:04	7:05	7:09
7:10	7:12	7:14	7:16	7:18	7:20	7:22	7:23	7:24	7:25	7:29
7:30	7:33	7:35	7:38	7:39	7:41	7:44	7:45	7:47	7:49	7:53
7:50	7:53	7:55	7:58	7:59	8:01	8:05	8:06	8:08	8:10	8:15
8:10	8:13	8:15	8:18	8:21	8:23	8:27	8:28	8:30	8:32	8:35
8:30	8:32	8:35	8:37	8:40	8:42	8:44	8:46	8:47	8:49	8:52
8:50	8:52	8:55	8:57	9:00	9:02	9:04	9:06	9:07	9:09	9:12
9:10	9:12	9:15	9:17	9:20	9:22	9:24	9:26	9:27	9:29	9:32
9:30	9:32	9:35	9:37	9:40	9:42	9:44	9:46	9:47	9:49	9:52
10:00	10:02	10:05	10:06	10:09	10:11	10:13	10:15	10:17	10:18	10:22
10:30	10:32	10:35	10:36	10:39	10:41	10:43	10:45	10:47	10:48	10:52
11:00	11:03	11:05	11:07	11:10	11:13	11:15	11:17	11:20	11:21	11:24
11:30	11:33	11:35	11:37	11:40	11:43	11:45	11:47	11:50	11:51	11:54
12:00N	**12:03P**	**12:05P**	**12:07P**	**12:10P**	**12:13P**	**12:15P**	**12:17P**	**12:20P**	**12:21P**	**12:24P**
12:35P	**12:38**	**12:40**	**12:42**	**12:45**	**12:48**	**12:51**	**12:53**	**12:55**	**12:57**	**1:00**
1:10	**1:13**	**1:15**	**1:17**	**1:20**	**1:23**	**1:26**	**1:28**	**1:30**	**1:32**	**1:35**
1:45	**1:48**	**1:50**	**1:52**	**1:55**	**1:58**	**2:01**	**2:03**	**2:05**	**2:07**	**2:10**
2:20	**2:23**	**2:25**	**2:27**	**2:30**	**2:33**	**2:36**	**2:38**	**2:40**	**2:42**	**2:45**
2:55	**2:58**	**3:00**	**3:02**	**3:05**	**3:08**	**3:11**	**3:13**	**3:15**	**3:17**	**3:20**
3:20	**3:23**	**3:25**	**3:27**	**3:30**	**3:34**	**3:37**	**3:39**	**3:41**	**3:42**	**3:47**
3:40	**3:42**	**3:45**	**3:48**	**3:51**	**3:55**	**3:58**	**4:00**	**4:02**	**4:03**	**4:08**
4:00	**4:02**	**4:05**	**4:08**	**4:11**	**4:15**	**4:18**	**4:20**	**4:22**	**4:23**	**4:28**
4:20	**4:22**	**4:25**	**4:28**	**4:31**	**4:35**	**4:38**	**4:40**	**4:42**	**4:43**	**4:48**
4:40	**4:42**	**4:45**	**4:48**	**4:51**	**4:55**	**4:58**	**5:00**	**5:02**	**5:03**	**5:08**
5:02	**5:04**	**5:07**	**5:10**	**5:13**	**5:17**	**5:20**	**5:22**	**5:24**	**5:25**	**5:30**
5:25	**5:27**	**5:30**	**5:33**	**5:36**	**5:40**	**5:43**	**5:45**	**5:47**	**5:48**	**5:53**
5:48	**5:50**	**5:53**	**5:56**	**5:59**	**6:02**	**6:04**	**6:06**	**6:08**	**6:09**	**6:14**
6:11	**6:14**	**6:16**	**6:19**	**6:22**	**6:25**	**6:27**	**6:29**	**6:31**	**6:32**	**6:37**
b 6:34	**6:37**	**6:39**	**6:42**	**6:45**	**6:48**	**6:50**	**6:52**	**6:54**	**6:55**	**.....**
b 6:57	**7:00**	**7:02**	**7:05**	**7:08**	**7:10**	**7:13**	**7:15**	**7:17**	**7:18**	**.....**
b 7:20	**7:23**	**7:25**	**7:28**	**7:31**	**7:33**	**7:36**	**7:38**	**7:40**	**7:41**	**.....**

CT1 Weekday Outbound

Leave BU Med Campus & BMC	Arrive Harrison Avenue	Arrive Washington Street	Arrive Tremont Street	Arrive Mass. Ave. Station Orange Line	Arrive Symphony/ Westland Avenue	Arrive Hynes Station	Arrive Beacon St. & Mass. Ave.	Arrive MIT	Arrive University Park	Arrive Central Square, Camb.
6:00A	6:03A	6:04A	6:05A	6:06A	6:07A	6:10A	6:11A	6:13A	6:15A	6:20A
6:20	6:23	6:24	6:25	6:26	6:27	6:30	6:31	6:33	6:35	6:40
6:40	6:43	6:44	6:45	6:46	6:47	6:50	6:51	6:53	6:55	7:00
7:00	7:03	7:04	7:05	7:08	7:10	7:13	7:15	7:17	7:20	7:25
7:20	7:23	7:24	7:25	7:28	7:30	7:33	7:35	7:37	7:40	7:45
7:40	7:43	7:44	7:45	7:48	7:50	7:53	7:55	7:57	8:00	8:05
8:00	8:03	8:04	8:05	8:08	8:10	8:13	8:15	8:17	8:20	8:25
8:20	8:23	8:24	8:25	8:28	8:30	8:33	8:35	8:37	8:40	8:45
8:40	8:43	8:44	8:45	8:48	8:50	8:53	8:55	8:57	9:00	9:05
9:00	9:03	9:04	9:05	9:08	9:10	9:13	9:15	9:17	9:20	9:25
9:20	9:23	9:24	9:25	9:28	9:30	9:33	9:35	9:37	9:40	9:45
9:40	9:43	9:44	9:45	9:48	9:50	9:53	9:55	9:57	10:00	10:05
10:00	10:03	10:04	10:05	10:08	10:10	10:13	10:15	10:17	10:20	10:25
10:30	10:33	10:34	10:35	10:38	10:40	10:43	10:45	10:47	10:50	10:55
11:00	11:05	11:06	11:08	11:10	11:12	11:14	11:16	11:18	11:21	11:24
11:30	11:35	11:36	11:38	11:40	11:42	11:44	11:46	11:48	11:51	11:54
12:00N	**12:05P**	**12:07P**	**12:09P**	**12:10P**	**12:13P**	**12:16P**	**12:17P**	**12:20P**	**12:22P**	**12:27P**
12:35P	**12:40**	**12:42**	**12:44**	**12:45**	**12:48**	**12:51**	**12:52**	**12:55**	**12:57**	**1:02**
1:10	**1:15**	**1:17**	**1:19**	**1:20**	**1:23**	**1:26**	**1:27**	**1:30**	**1:32**	**1:37**
1:45	**1:50**	**1:52**	**1:54**	**1:55**	**1:58**	**2:01**	**2:02**	**2:05**	**2:07**	**2:12**
2:20	**2:25**	**2:27**	**2:29**	**2:30**	**2:33**	**2:36**	**2:37**	**2:40**	**2:42**	**2:47**
2:50	**2:55**	**2:57**	**2:59**	**3:00**	**3:03**	**3:06**	**3:07**	**3:10**	**3:12**	**3:17**
3:10	**3:15**	**3:17**	**3:19**	**3:20**	**3:23**	**3:26**	**3:27**	**3:30**	**3:32**	**3:37**
3:30	**3:35**	**3:37**	**3:39**	**3:40**	**3:43**	**3:46**	**3:47**	**3:50**	**3:52**	**3:57**
3:50	**3:55**	**3:57**	**3:59**	**4:00**	**4:03**	**4:06**	**4:07**	**4:10**	**4:12**	**4:17**
4:10	**4:15**	**4:17**	**4:19**	**4:20**	**4:23**	**4:26**	**4:27**	**4:30**	**4:33**	**4:39**
4:32	**4:36**	**4:37**	**4:39**	**4:42**	**4:43**	**4:48**	**4:49**	**4:51**	**4:54**	**5:00**
4:55	**4:59**	**5:00**	**5:02**	**5:05**	**5:06**	**5:11**	**5:12**	**5:14**	**5:17**	**5:23**
5:18	**5:22**	**5:23**	**5:25**	**5:28**	**5:29**	**5:34**	**5:35**	**5:37**	**5:40**	**5:46**
5:41	**5:45**	**5:46**	**5:48**	**5:51**	**5:52**	**5:57**	**5:58**	**6:00**	**6:03**	**6:09**
6:04	**6:07**	**6:08**	**6:10**	**6:12**	**6:14**	**6:17**	**6:18**	**6:20**	**6:23**	**6:29**
6:27	**6:30**	**6:31**	**6:33**	**6:35**	**6:37**	**6:40**	**6:41**	**6:43**	**6:46**	**6:52**
6:50	**6:53**	**6:54**	**6:56**	**6:58**	**7:00**	**7:01**	**7:03**	**7:05**	**7:08**	**7:13**

b - Bypasses East Newton Street.

Stops listed are the ONLY ones this route will serve.

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Route CT1
Central Square, Cambridge-BU Medical Campus/Boston Medical Center

No service on weekends and most Holidays.

Spring 2015
Holidays without service:
May 25 - Memorial Day

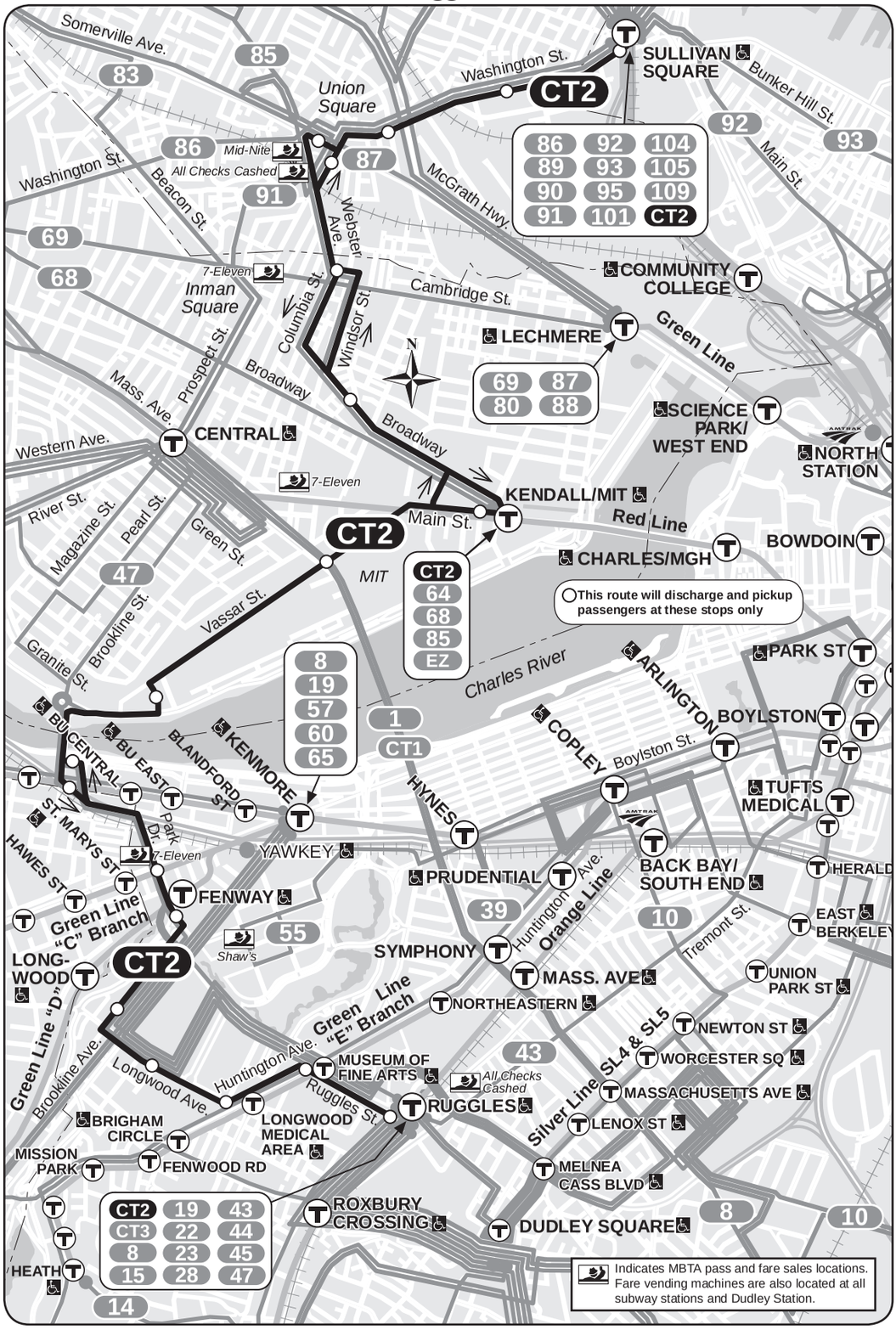
Massachusetts Bay Transportation Authority
Route 701
Weekday - Inbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]																	
	08:10 (701.0) [3] !Fall 2012!			08:30 (701.0) [4] !Fall 2012!			08:50 (701.0) [3] !Fall 2012!			17:02 (701.0) [7] !Fall 2012!			17:25 (701.0) [8] !Fall 2012!			17:48 (701.0) [6] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
400 - 1060 - MAGAZINE ST @ GREEN ST	23	0	23	16.5	0	16.5	8	0	8	1	0	1	0.8	0	1.4	0.7	0	0.8
800 - 72 - MASSACHUSETTS AVE @ PEARL ST	12.7	0	35.7	11	0	27.5	25	0.3	32.7	9.1	0	10.1	7.4	0.3	8.5	8.2	0	9
1200 - 73 - MASSACHUSETTS AVE @ SIDNEY ST	5.3	0	41	6.8	0.3	34	7	0.7	39	11.4	0.3	21.3	3.9	0.5	11.9	4.5	0	13.5
1600 - 75 - 84 MASSACHUSETTS AVE	2.7	1.7	42	0	0.8	33.3	1.3	3	37.3	18.6	0.3	39.6	6	1	16.9	6.8	1	19.3
2000 - 77 - MASSACHUSETTS AVE @ BEACON ST	0.7	1.7	41	0.3	1.5	32	0.3	2.3	35.3	1.4	4.4	36.6	0.1	3.6	13.4	0	2.3	17
2400 - 79 - MASSACHUSETTS AVE @ NEWBURY S	9.3	9.7	40.7	1.8	10.3	23.5	4	14	25.3	7	15.6	28	2	4.6	10.8	0.7	4.2	13.5
2800 - 81 - MASSACHUSETTS AVE @ WESTLAND	1.7	2.7	39.7	1.5	5.3	19.8	1.3	5	21.7	1.9	3.1	26.7	0.4	2	9.1	2.3	1.8	14
3200 - 82 - MASSACHUSETTS AVE @ HUNTINGTO	5.7	1	44.3	3	0.8	22	1.3	2	21	3.4	1	29.1	0.4	0.4	9.1	0.8	1	13.8
3600 - 187 - MASSACHUSETTS AVE @ MASSACHUS	11.3	1	54.7	6.5	2.5	26	15.3	3.3	33	7.7	10.4	26.4	2	4.6	6.5	2.3	5	11.2
4000 - 84 - MASSACHUSETTS AVE @ TREMONT S	0	0	54.7	0.3	0.3	26	0	0.3	32.7	0.4	3.1	23.7	0.3	0.8	6	0.2	1.2	10.2
4400 - 59 - MASSACHUSETTS AVE @ WASHINGTO	1	2.3	53.3	0	0.8	25.3	0	0.7	32	0.9	5.7	18.9	0.3	2.1	4.1	0.2	4.7	5.7
4800 - 854 - MASSACHUSETTS AVE @ HARRISON	0.3	32	21.7	0.3	10.8	14.8	0	20.7	11.3	0.3	12.6	6.6	0	2.8	1.4	0	3.3	2.3
5200 - 10014 - ALBANY ST OPP BOSTON MEDICAL	0	8.3	13.3	0	5.5	9.3	0	4.7	6.7	0.1	2.9	3.9	0	0.3	0.9	0	1.2	1.2
5600 - 5090 - 88 E NEWTON ST	0	13.3	0	0	9.3	0	0	6.7	0	0	3	0.9	0	0.9	0	0	1.2	0
Maximum			54.7			34			39			39.6			16.9			19.3
Total	73.7	73.7		47.8	47.8		63.7	63.7		63.3	62.4		23.4	23.8		26.7	26.8	
	4	5.5	114							31.4	2.3	46.7						
	on	off	load							on	off	load						

Massachusetts Bay Transportation Authority
Route 701
Weekday - Outbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]																	
	08:00 (701.0) [4] !Fall 2012!			08:20 (701.0) [3] !Fall 2012!			08:40 (701.0) [3] !Fall 2012!			09:00 (701.0) [4] !Fall 2012!			17:18 (701.0) [6] !Fall 2012!			17:41 (701.0) [7] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 5090 - 88 E NEWTON ST	2.3	0	2.3	2.7	0	3.3	1	0	1	1.3	0	1.3	14.5	0	14.5	4.1	0	5
2 - 5089 - 91 E CONCORD ST	0	0	2.3	0	0	3.3	0.3	0	1.3	0.3	0	1.5	3	0	17.5	2.6	0	7.6
3 - 58 - MASACHUSETTSS AVE @ HARRISON	0.8	0	3	1.3	0	4.7	1.7	0	3	4.3	0	5.8	12	0.5	29	6.7	0.3	14
4 - 10590 - MASSACHUSETTS AVE @ WASHINGTO	3.5	0	6.5	10.3	0	15	2	0	5	3.8	0	9.5	1.7	0	30.7	1.9	0	15.9
5 - 87 - MASSACHUSETTS AVE @ TREMONT S	2.5	0	9	2	0	17	0.7	0.3	5.3	0.8	0	10.3	1.2	0	31.8	0.6	0	16.4
6 - 188 - MASSACHUSETTS AVE @ MASSACHUS	3.5	1.8	10.8	8.7	4	21.7	4	1.7	7.7	2.3	2.5	10	0.2	11	21	0.6	4.3	12.7
7 - 89 - MASSACHUSETTS AVE @ ST BOTOLP	1.3	0	12	1.7	0.3	23	0	0	7.7	2	0.5	11.5	2.2	1.2	22	1	0.1	13.6
8 - 90 - MASSACHUSETTS AVE @ WESTLAND	1.3	0.3	13	1	0.7	23.3	1.7	0	9.3	2.3	1.3	12.5	3.3	2.3	23	2.9	0.9	15.6
9 - 93 - MASSACHUSETTS AVE @ NEWBURY S	11.5	2	22.5	11.3	6.7	28	20	0.3	29	7.8	1	19.3	6.2	4.8	24.3	12	2.1	25.4
10 - 95 - MASSACHUSETTS AVE @ BEACON ST	2.5	0	25	4.3	0	32.3	6.3	0	35.3	3.5	0	22.8	3.3	0.3	27.3	1.6	0.4	26.6
11 - 97 - 77 MASSACHUSETTS AVE	0.3	13.8	11.5	0	19.3	13	0.3	19.3	16.3	0	11.8	11	2	1	28.3	0.6	2.4	24.7
12 - 101 - MASSACHUSETTS AVE @ SIDNEY ST	0	7	4.5	0	8.3	4.7	0	9.3	7	0	3.3	7.8	0.3	6.7	22	0.1	6.7	18.1
13 - 1060 - MAGAZINE ST @ GREEN ST	0	4.5	0	0	4.7	0	0	6.7	0.3	0	7.8	0	0	21.8	0.2	0	18	0.1
Maximum			25			32.3			35.3			22.8			31.8			26.6
Total	29.3	29.3		43.3	44		38	37.7		28	28		49.8	49.7		34.6	35.3	
	0.6	64.2	115.4										2.6	3.4	53.9			
	on	off	load										on	off	load			

Route CT2 Sullivan Station - Ruggles Station



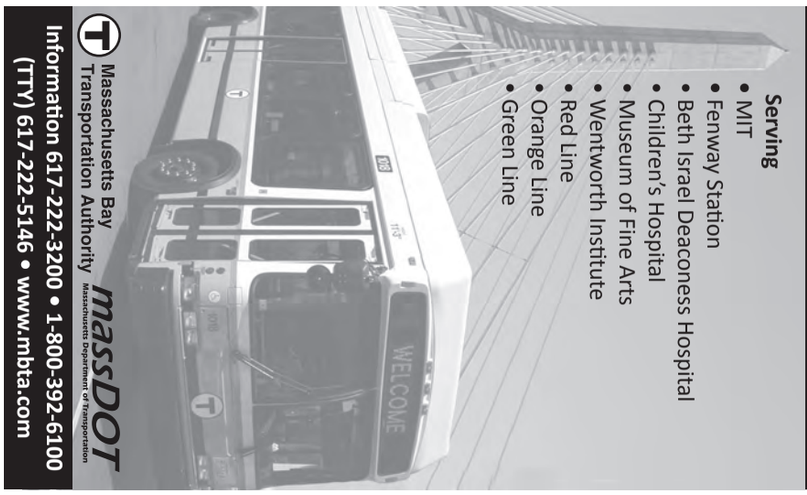
Crosstown Transit CT2

Spring March 21, 2015 - June 19, 2015

Sullivan Station-Ruggles Station

Serving

- MIT
- Fenway Station
- Beth Israel Deaconess Hospital
- Children's Hospital
- Museum of Fine Arts
- Wentworth Institute
- Red Line
- Orange Line
- Green Line



Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100

(TTY) 617-222-5146 • www.mbta.com

CT2 Weekday Inbound

Leave Sullivan Station	Arrive Union Square	Arrive Kendall/ MIT Station	Arrive Vassar/ Mass. Avenue	Arrive Vassar/ Memorial Drive	Arrive Mountfort Street	Arrive Park & Beacon Sts.	Arrive Fenway Station	Arrive Beth Israel Hospital	Arrive Children's Hospital	Arrive Huntington/ Longwood Avenue	Arrive Ruggles/ Huntington Avenue	Arrive Ruggles Station
6:35A	6:40A	6:49A	6:52A	6:54A	6:58A	7:00A	7:01A	7:04A	7:07A	7:09A	7:11A	7:13A
6:50	6:55	7:04	7:07	7:09	7:13	7:15	7:16	7:19	7:22	7:24	7:26	7:28
7:10	7:15	7:24	7:27	7:29	7:34	7:36	7:38	7:41	7:45	7:47	7:49	7:51
7:30	7:36	7:49	7:53	7:55	8:00	8:02	8:04	8:07	8:11	8:13	8:15	8:17
7:50	7:56	8:09	8:13	8:15	8:20	8:22	8:24	8:27	8:31	8:33	8:35	8:37
8:10	8:16	8:29	8:33	8:35	8:40	8:42	8:44	8:47	8:51	8:53	8:55	8:57
8:30	8:36	8:49	8:53	8:55	9:00	9:03	9:04	9:09	9:11	9:13	9:15	9:17
8:50	8:56	9:06	9:12	9:13	9:17	9:20	9:21	9:26	9:28	9:30	9:32	9:34
9:10	9:15	9:24	9:30	9:32	9:35	9:37	9:38	9:40	9:44	9:46	9:48	9:50
9:30	9:35	9:44	9:47	9:49	9:52	9:54	9:55	9:57	10:01	10:03	10:05	10:07
10:00	10:05	10:14	10:17	10:19	10:22	10:24	10:25	10:27	10:31	10:33	10:35	10:37
10:30	10:35	10:44	10:47	10:49	10:52	10:54	10:55	10:57	11:01	11:03	11:05	11:07
11:00	11:05	11:14	11:17	11:19	11:22	11:24	11:25	11:27	11:31	11:33	11:35	11:37
11:35	11:40	11:49	11:52	11:54	11:58	**12:01P**	**12:02P**	**12:04P**	**12:08P**	**12:10P**	**12:12P**	**12:14P**
12:05P	**12:10P**	**12:19P**	**12:22P**	**12:24P**	**12:28P**	**12:31P**	**12:32P**	**12:34P**	**12:38P**	**12:40P**	**12:42P**	**12:44P**
12:35	**12:40**	**12:49**	**12:52**	**12:54**	**12:58**	**1:01**	**1:02**	**1:04**	**1:08**	**1:10**	**1:12**	**1:14**
1:10	**1:15**	**1:24**	**1:27**	**1:29**	**1:33**	**1:36**	**1:37**	**1:39**	**1:43**	**1:45**	**1:47**	**1:49**
1:45	**1:50**	**1:59**	**2:02**	**2:04**	**2:08**	**2:11**	**2:12**	**2:14**	**2:18**	**2:20**	**2:22**	**2:24**
2:15	**2:20**	**2:29**	**2:32**	**2:34**	**2:38**	**2:41**	**2:42**	**2:44**	**2:48**	**2:50**	**2:52**	**2:54**
2:45	**2:50**	**2:59**	**3:02**	**3:04**	**3:08**	**3:11**	**3:12**	**3:14**	**3:18**	**3:20**	**3:22**	**3:24**
3:10	**3:15**	**3:24**	**3:27**	**3:29**	**3:33**	**3:36**	**3:37**	**3:39**	**3:43**	**3:45**	**3:47**	**3:49**
3:35	**3:40**	**3:49**	**3:52**	**3:54**	**3:58**	**4:01**	**4:02**	**4:05**	**4:09**	**4:11**	**4:13**	**4:15**
4:00	**4:07**	**4:16**	**4:20**	**4:23**	**4:28**	**4:31**	**4:32**	**4:35**	**4:39**	**4:41**	**4:43**	**4:45**
4:25	**4:32**	**4:41**	**4:45**	**4:48**	**4:53**	**4:56**	**4:57**	**5:00**	**5:04**	**5:06**	**5:08**	**5:10**
4:50	**4:57**	**5:08**	**5:12**	**5:14**	**5:20**	**5:25**	**5:26**	**5:30**	**5:34**	**5:36**	**5:38**	**5:40**
5:15	**5:23**	**5:34**	**5:38**	**5:40**	**5:46**	**5:51**	**5:52**	**5:56**	**6:00**	**6:01**	**6:03**	**6:06**
5:40	**5:48**	**5:59**	**6:03**	**6:05**	**6:09**	**6:11**	**6:12**	**6:15**	**6:18**	**6:19**	**6:21**	**6:24**
6:05	**6:11**	**6:20**	**6:24**	**6:26**	**6:30**	**6:32**	**6:33**	**6:36**	**6:39**	**6:40**	**6:42**	**6:45**
6:30	**6:36**	**6:45**	**6:49**	**6:51**	**6:55**	**6:57**	**6:58**	**7:00**	**7:02**	**7:03**	**7:06**	**7:08**
7:00	**7:05**	**7:15**	**7:17**	**7:19**	**7:23**	**7:26**	**7:27**	**7:29**	**7:31**	**7:32**	**7:35**	**7:37**

CT2 Weekday Outbound

Leave Ruggles Station	Arrive Ruggles/ Huntington Avenue	Arrive Huntington/ Longwood Avenue	Arrive Children's Hospital	Arrive Beth Israel Hospital	Arrive Fenway Station	Arrive Park & Beacon Sts.	Arrive Comm. Ave. BU Bridge	Arrive Amesbury/ Vassar Streets	Arrive Vassar/ Mass. Avenue	Arrive Kendall/ MIT Station	Arrive Union Square	Arrive Sullivan Station
5:55A	5:56A	5:58A	5:59A	6:00A	6:02A	6:03A	6:04A	6:08A	6:09A	6:12A	6:20a	6:26A
6:25	6:26	6:28	6:29	6:30	6:32	6:33	6:34	6:38	6:39	6:42	6:50	6:56
6:40	6:41	6:43	6:44	6:45	6:47	6:48	6:49	6:53	6:54	6:57	7:07	7:15
7:00	7:02	7:04	7:07	7:08	7:10	7:11	7:12	7:17	7:18	7:22	7:32	7:39
7:20	7:22	7:24	7:27	7:28	7:31	7:32	7:33	7:38	7:42	7:48	7:57	8:04
7:35	7:37	7:39	7:41	7:43	7:46	7:47	7:48	7:53	7:57	8:03	8:12	8:19
7:55	7:57	7:59	8:01	8:03	8:06	8:07	8:08	8:13	8:17	8:23	8:32	8:39
8:10	8:12	8:14	8:16	8:18	8:21	8:22	8:23	8:28	8:32	8:38	8:47	8:54
8:25	8:27	8:29	8:31	8:33	8:36	8:37	8:38	8:43	8:47	8:53	9:02	9:09
8:45	8:47	8:49	8:51	8:53	8:56	8:57	8:58	9:03	9:07	9:13	9:22	9:29
9:10	9:12	9:14	9:16	9:18	9:21	9:22	9:23	9:28	9:31	9:36	9:44	9:51
9:45	9:46	9:49	9:51	9:53	9:55	9:56	9:57	10:02	10:04	10:09	10:17	10:24
10:15	10:16	10:19	10:21	10:23	10:25	10:26	10:27	10:32	10:34	10:39	10:47	10:54
10:50	10:51	10:54	10:56	10:58	11:00	11:01	11:02	11:07	11:09	11:14	11:22	11:29
11:20	11:21	11:24	11:26	11:28	11:30	11:31	11:32	11:37	11:39	11:44	11:52	11:59
11:50	11:51	11:54	11:56	11:58	**12:00N**	**12:01P**	**12:02P**	**12:07P**	**12:09P**	**12:14P**	**12:22P**	**12:29P**
12:25P	**12:26P**	**12:29P**	**12:31P**	**12:33P**	**12:35P**	**12:36P**	**12:37P**	**12:42P**	**12:44P**	**12:49P**	**12:57P**	**1:04P**
12:55	**12:56**	**12:59**	**1:01**	**1:03**	**1:05**	**1:06**	**1:07**	**1:12**	**1:14**	**1:19**	**1:27**	**1:34**
1:25	**1:26**	**1:29**	**1:31**	**1:33**	**1:35**	**1:36**	**1:37**	**1:42**	**1:44**	**1:49**	**1:57**	**2:05**
1:50	**1:51**	**1:54**	**1:56**	**1:58**	**2:01**	**2:02**	**2:03**	**2:08**	**2:10**	**2:15**	**2:25**	**2:33**
2:15	**2:17**	**2:20**	**2:24**	**2:26**	**2:29**	**2:30**	**2:31**	**2:36**	**2:38**	**2:43**	**2:53**	**3:01**
2:40	**2:42**	**2:45**	**2:49**	**2:51**	**2:54**	**2:55**	**2:56**	**3:01**	**3:03**	**3:08**	**3:18**	**3:26**
3:05	**3:07**	**3:10**	**3:14**	**3:16**	**3:19**	**3:20**	**3:21**	**3:26**	**3:28**	**3:33**	**3:43**	**3:51**
3:25	**3:27**	**3:30**	**3:34**	**3:36**	**3:39**	**3:40**	**3:41**	**3:46**	**3:48**	**3:53**	**4:04**	**4:15**
3:45	**3:47**	**3:50**	**3:54**	**3:56**	**3:59**	**4:00**	**4:02**	**4:07**	**4:09**	**4:16**	**4:29**	**4:40**
4:10	**4:12**	**4:15**	**4:19**	**4:21**	**4:25**	**4:26**	**4:28**	**4:33**	**4:35**	**4:42**	**4:55**	**5:06**
4:35	**4:37**	**4:40**	**4:44**	**4:46**	**4:50**	**4:51**	**4:53**	**4:58**	**5:00**	**5:07**	**5:20**	**5:31**
5:00	**5:02**	**5:05**	**5:09**	**5:11**	**5:15**	**5:16**	**5:18**	**5:23**	**5:25**	**5:32**	**5:45**	**5:56**
5:25	**5:27**	**5:30**	**5:34**	**5:36**	**5:40**	**5:41**	**5:43**	**5:48**	**5:50**	**5:57**	**6:10**	**6:18**
5:55	**5:57**	**6:00**	**6:03**	**6:04**	**6:07**	**6:08**	**6:09**	**6:16**	**6:18**	**6:21**	**6:33**	**6:39**
6:20	**6:22**	**6:25**	**6:28**	**6:29**	**6:31**	**6:32**	**6:33**	**6:38**	**6:40**	**6:45**	**6:55**	**7:01**
6:45	**6:47**	**6:49**	**6:51**	**6:54**	**6:56**	**6:57**	**6:58**	**7:03**	**7:05**	**7:10**	**7:20**	**7:26**

No service on weekends and most Holidays.

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharliCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharliCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

All buses are accessible to persons with disabilities

Route CT2
Sullivan Station-Ruggles Station

In addition to the stops listed above, this route also stops in Somerville on Washington St. at Myrtle St. and at McGrath Highway.
In Cambridge this route also stops at Cambridge & Columbia Streets and at One Kendall Square (Hampshire St. at Broadway)

Spring 2015
Holidays without service:
May 25 - Memorial Day

Massachusetts Bay Transportation Authority
Route 747
Weekday - Inbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]														
	08:10 (747.0) [2] !Fall 2012!			08:30 (747.0) [2] !Fall 2012!			08:50 (747.0) [5] !Fall 2012!			17:15 (747.0) [1] !Fall 2012!			17:40 (747.0) [7] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 28741 - SULLIVAN STATION - LOWER BUSW	10.5	0	10.5	18.5	0	18.5	13	0	13	17	0	17	11.1	0	11.1
2 - 12759 - WASHINGTON ST @ MYRTLE ST - C	8	0	18.5	1.5	1	19	3.8	0.4	16.4	0	2	15	0.4	1.9	9.7
3 - 2762 - WASHINGTON ST @ MCGRATH HWY	6	1.5	23	7.5	2	24.5	4.8	0.6	20.6	2	1	16	0.6	1.3	9
4 - 2612 - SOMERVILLE AVE @ STONE AVE	18.5	2.5	39	15	1.5	38	15.6	3.8	32.4	2	8	10	0.7	4.3	5.4
5 - 2514 - WEBSTER AVE @ CAMBRIDGE ST	12	0	51	11	4	45	7.6	2.6	37.4	5	5	10	4.6	1	9
6 - 2518 - HAMPSHIRE ST @ PORTLAND ST	8	6	53	5.5	8	42.5	4.2	4.8	36.8	6	0	16	4.4	0.9	12.6
7 - 2231 - MAIN ST @ KENDALL STATION - R	6.5	15.5	44	9.5	14	38	8.8	12.6	33	16	3	29	15.1	2.9	24.9
8 - 11771 - VASSAR ST @ MASS AVE	0	2	42	2	4.5	35.5	1	3.2	30.8	5	2	32	5.4	1.1	29.1
9 - 22173 - AMESBURY ST @ VASSAR ST	1.5	3	40.5	0	5.5	30	0.2	4	27	1	1	32	0.9	0.6	29.4
10 - 1773 - MOUNTFORT ST @ LENOX ST	1.5	6	36	0	1.5	28.5	0.6	5.4	22.2	0	9	23	0.4	6.1	23.7
11 - 1775 - PARK DR @ BEACON ST	0.5	3	33.5	0.5	2	27	0.4	2	20.6	0	6	17	0.6	5	19.3
12 - 9434 - PARK DR @ FENWAY STA	0.5	5	29	2	5	24	0.6	3.4	17.8	0	10	7	0.7	7.4	12.6
13 - 1778 - BROOKLINE AVE @ SHORT ST	0	5.5	23.5	0.5	11	13.5	0	6.8	11	0	1	6	1.3	1.9	12
14 - 1780 - LONGWOOD AVE @ BLACKFAN ST	0	15.5	8	1	7.5	7	1	7.6	4.4	4	0	10	2	1.6	12.4
15 - 31317 - HUNTINGTON AVE @ LONGWOOD AVE	0	4	4	0	3	4	0.6	1.6	3.4	0	2	8	1.9	3	11.3
16 - 1784 - RUGGLES ST @ HUNTINGTON AVE	0	1	3	0	0	4	0	0	3.4	0	0	8	0	0.4	10.9
17 - 17861 - RUGGLES STA UPPER LEVEL	0	3	0	0	4	0	0	3.4	0	0	8	0	0	10.9	0
Maximum			53			45			37.4			32			29.4
Total	73.5	73.5		74.5	74.5		62.2	62.2		58	58		50.1	50.1	

24.8	42.1	132.3		31.1	5.9	28.6
on	off	load		on	off	load

Massachusetts Bay Transportation Authority
Route 747
Weekday - Outbound
Fall 2012
(Urban Transportation Associates)

	Trip (RouteVar) [Observations]																	
	08:10 (747.0) [3] !Fall 2012!			08:30 (747.0) [4] !Fall 2012!			08:50 (747.0) [6] !Fall 2012!			17:10 (747.0) [2] !Fall 2012!			17:35 (747.0) [3] !Fall 2012!			18:00 (747.0) [11] !Fall 2012!		
Seq - StopID - Stop Name	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load	On	Off	Load
1 - 17863 - RUGGLES STATION - LANE 2	17.7	0	17.7	18.3	0	18.3	17.7	0	17.7	6	0	6	4.7	0	4.7	5.3	0	7.1
2 - 1799 - RUGGLES ST @ HUNTINGTON AVE	0	0	17.7	1.3	0.3	19.3	0.8	0.2	18.3	0	0	6	1.3	0	6	0.3	0	7.4
3 - 91391 - HUNTINGTON AVE @ LONGWOOD AVE	4.3	2.7	19.3	4.3	2.3	21.3	2.3	3.3	17.3	6	0	12	3.3	0.7	8.7	2.5	0	11.2
4 - 11803 - LONGWOOD AVE @ BINNEY ST	0.7	6	14	2	6.5	16.8	1.8	5.7	13.5	28.5	2.5	38	19	0.3	27.3	13.8	1.1	23.9
5 - 1805 - BROOKLINE AVE OPP SHORT ST	0.3	0.7	13.7	0.3	4.3	12.8	1.2	1.8	12.8	6	0	44	4	0.3	31	3.5	0.2	27.5
6 - 1807 - PARK DR @ FENWAY STATION	5.7	1.3	18	12.3	1	24	8.7	2.3	19.2	7.5	0	51.5	4	0.7	34.3	4.6	1	31.1
7 - 1808 - PARK DR @ BEACON ST	4.3	0.7	21.7	6	0.5	29.5	5.8	0.2	24.8	2.5	2.5	51.5	0.7	1.3	33.7	0.8	0.8	31.1
8 - 1809 - PARK DR @ MOUNTFORT ST	0.7	1.3	21	1	0	30.5	0.3	0	25.2	0	0.5	51	1.7	0.3	35	0.9	0.2	31.8
9 - 11809 - MOUNTFORT ST @ CARLTON ST	0.7	0	21.7	0.5	0	31	0.7	0.2	25.7	1	0	52	0.7	0	35.7	1	0.3	32.5
10 - 1810 - COMMONWEALTH AVE @ UNIVERSITY	3.3	1.3	23.7	8.5	1.3	38.3	6	0.5	31.2	6.5	2.5	56	6	3	38.7	5	2	35.5
11 - 21772 - AMESBURY ST @ VASSAR ST	2	3.3	22.3	1.3	4	35.5	0.8	3	29	3	1.5	57.5	1.3	1	39	1.5	0.9	36.2
12 - 21773 - VASSAR ST @ MASS AVE	0.3	2.7	20	0.8	10	26.3	0.3	5.2	24.2	3.5	1.5	59.5	1.7	1	39.7	1.8	3.5	34.5
13 - 2231 - MAIN ST @ KENDALL STATION - R	4	10.7	13.3	3.5	15.3	14.5	0.7	9.5	15.3	4	25	38.5	13.7	18.7	34.7	6.8	11	30.4
14 - 2521 - HAMPSHIRE ST @ CARDINAL MEDEI	0	8.3	5	0.5	6.5	8.5	1	8.8	7.5	4.5	1.5	41.5	4.7	4.7	34.7	2.9	2.7	30.5
15 - 2525 - COLUMBIA ST @ CAMBRIDGE ST	0	2	3	0.8	4.3	5	1.3	3	5.8	0.5	10.5	31.5	1.3	9	27	0.9	5.4	26.1
16 - 2531 - 30 PROSPECT ST	2.3	2.7	2.7	1.3	0.5	5.8	0.7	0.8	5.7	1.5	14	19	0.7	14	13.7	1	8.4	18.7
17 - 2774 - WASHINGTON ST @ MCGRATH HWY	1.7	0.3	4	1.8	0	7.5	0.5	0.3	5.8	0	2.5	16.5	1	1.3	13.3	1.3	2.5	17.5
18 - 2775 - WASHINGTON ST @ JOY ST	0	0	4	0	0	7.5	0	0	5.8	0	0	16.5	0	1.3	12	0	0	17.5
19 - 2778 - WASHINGTON ST OPP MYRTLE ST	0.7	0	4.7	1	0	8.5	1.3	0	7.2	0.5	3.5	13.5	0	2	10	0.2	2.4	15.4
20 - 2777 - WASHINGTON ST @ INNER BELT RD	0	0	4.7	0.3	0.5	8.3	0	0	7.2	0.5	2.5	11.5	0	0	10	0	0.7	14.6
21 - 2874 - SULLIVAN STATION - UPPER BUSW	0	4.7	0	0	7.8	0.5	0	6.2	1	0	11.5	0	0	10	0	0	13.1	1.5
Maximum			23.7			38.3			31.2			59.5			39.7			36.2
Total	48.7	48.7		65.3	64.8		52	51		82	82		69.7	69.7		54.2	56	

8.2	35.5	71		24.5	54.7	134
on	off	load		on	off	load

EZRide Rerefences

The
Charles River Transportation Management Association

EZRide Phase III Feasibility Study

Prepared by

McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

March 2015

Executive Summary

Charles River Transportation Management Association (CRTMA) provides EZRide shuttle service to CRTMA member employees and the general public as a high frequency circulator between North Station in Boston and the Cambridgeport neighborhood of Cambridge, Mass. The EZRide service has grown from 200 to over 2,400 daily riders since the start of a pilot service program in 2002. CRTMA retained the services of McMahon Associates (McMahon) to evaluate options that will assist in the design of Phase III service, anticipated to begin in mid to late 2016.

A summary of the study process is provided below.

Passenger Survey

An electronic survey from September to October 2014 resulted in 1,873 responses from riders and non-riders. There was a representative sample of regular riders, occasional riders, and non-riders, with each group representing roughly one third of responses. The survey results indicate that close to 70 percent of respondents are employees whose workplace is located along the EZRide route, and more than one-third of respondents are relatively new riders, having started using the service since 2012. More than 40 percent of current riders rate the reliability and frequency of service as "excellent" and "very good." Potential improvements noted in the survey include stop amenities; frequent and express service (existing riders); and routes closer to home (non-riders). In comparing the survey responses for EZRide shuttle stops used versus the addresses of origins and destinations, it is clear that some respondents walk to a stop further from their origin/destination in order to have a shorter overall trip time.

Existing Ridership Evaluation

An existing service profile was developed from EZRide drivers' log data for March and September 2014 and NextBus Automated Passenger Count (APC) data for September 2014. The two data sources were compared to validate the APC data, which was ultimately used for analytical purposes.

- The average daily ridership for the AM and PM peak periods is about 2,000.
- Buses carry their highest volumes outbound from North Station in the morning, and experience their maximum passenger load point between North Station and First Street stops.
- Ridership volumes are higher during the morning service than the evening service. This indicates riders may take alternative modes to EZRide on their return trip.

Ridership Data

An EZRide service profile was developed based on available morning and evening ridership data (see Attachment 2). The service profile provides a summary of the key characteristics of the service observed from the EZRide drivers' log data for March and September 2014 and NextBus Automated Passenger Count (APC) data for September 2014. The two data sources were compared to validate the APC data, which was ultimately used for analytical purposes. The data analysis is presented in Table 3, and key findings are provided below. The average daily ridership for the AM and PM peak periods is about 2,000.

- The peak ridership direction is outbound from North Station during the morning service.
- Buses carry their highest volumes outbound from North Station in the morning, and experience their maximum passenger load point between the North Station and First Street stops.
- The highest passenger loads are carried between North Station and First Street (five stops) during the outbound morning peak period; and between Sixth Street and Lechmere (four stops) during the inbound afternoon peak period.
- Ridership volumes are higher during the morning service than the evening service. This indicates riders may take alternative modes to EZRide on their return trip. Survey respondents predominately reported morning boarding times as their most recent trip, with 24 percent using EZRide roundtrip, 16 percent using it more in the morning, and 17 percent indicated they tend to use EZRide in the afternoon.
- Ridership volumes in the morning inbound service are highest in the Cambridgeport area, between the stops at Pacific/Landsdowne and Vassar/Mass Ave. Passengers alight between Vassar/Mass Ave and Amherst/Sloan resulting in minimal passengers on the remainder of the route to Museum Way.

Table 3: Ridership Data Analysis

BUS STOPS SORTED BY RIDERSHIP

Source: Next Bus Data - September 2014

AM IB ONS		
Pacific/Landsdowne	185	40%
Pacific/Albany	148	32%
Cambridgeport	39	8%
Kendall Square	32	7%
Fort Washington	12	3%
NorthPoint	10	2%
Albany/Edgerton	8	2%
Vassar/Mass Av	7	2%
Museum Way	7	2%
Broadway/Galileo	4	1%
Lechmere	3	1%
Vassar/Main/Stata	2	0%
Amherst St/Sloan	2	0%
Sixth Street	2	0%
Third Street	1	0%
First Street	1	0%
Ames St./Media Lab	0	0%
North Station	0	0%
Total	**463**	**1**

AM IB OFFS		
Vassar/Main/Stata	128	28%
Kendall Square	100	22%
Amherst St/Sloan	94	20%
Vassar/Mass Av	61	13%
North Station	36	8%
First Street	25	5%
NorthPoint	4	1%
Lechmere	3	1%
Museum Way	3	1%
Sixth Street	2	0%
Cambridgeport	1	0%
Pacific/Landsdowne	1	0%
Pacific/Albany	1	0%
Albany/Edgerton	1	0%
Broadway/Galileo	1	0%
Fort Washington	0	0%
Ames St./Media Lab	0	0%
Third Street	0	0%
Total	**461**	**1**

AM OB ONS		
North Station	510	78%
Lechmere	37	6%
Kendall Square	34	5%
NorthPoint	21	3%
Museum Way	19	3%
First Street	18	3%
Third Street	5	1%
Sixth Street	4	1%
Broadway/Galileo	1	0%
Portland St/Tech Sq	1	0%
Mass Av/Landsdowne	1	0%
Pacific/Landsdowne	1	0%
Univ Pk./Landsdowne	0	0%
Broadway/Hampshire	0	0%
Albany/Portland	0	0%
Total	**652**	**1**

AM OB OFFS		
Broadway/Galileo	227	35%
Sixth Street	115	18%
Kendall Square	72	11%
Third Street	47	7%
Mass Av/Landsdowne	45	7%
First Street	43	7%
Univ Pk./Landsdowne	32	5%
Albany/Portland	24	4%
Portland St/Tech Sq	15	2%
Pacific/Landsdowne	8	1%
Lechmere	7	1%
Broadway/Hampshire	4	1%
Museum Way	2	0%
NorthPoint	0	0%
North Station	0	0%
Total	**642**	**1**

PM IB ONS		
Broadway/Galileo	135	23%
Kendall Square	107	18%
Sixth Street	81	14%
Massachusetts Ave.	48	8%
Univ. Pk/Landsdowne	40	7%
Pacific/Landsdowne	32	5%
200 Tech Sq	26	4%
First Street	22	4%
Albany/Portland	20	3%
555 Tech/Broadway	20	3%
Third Street	16	3%
Fort Washington	15	3%
Cambridgeport	8	1%
North Station	6	1%
Lechmere	5	1%
Museum Way	2	0%
NorthPoint	0	0%
Total	**583**	**1**

PM IB OFFS		
North Station	348	60%
Kendall Square	59	10%
Lechmere	42	7%
Fort Washington	37	6%
First Street	28	5%
NorthPoint	24	4%
Museum Way	15	3%
200 Tech Sq	8	1%
Cambridgeport	6	1%
Albany/Portland	5	1%
555 Tech/Broadway	4	1%
Broadway/Galileo	3	1%
Massachusetts Ave.	2	0%
Sixth Street	2	0%
Pacific/Landsdowne	1	0%
Univ. Pk/Landsdowne	0	0%
Third Street	0	0%
Total	**584**	**1**

PM OB ONS		
Amherst St/Sloan	110	39%
Kendall Square	59	21%
77 Mass Ave	41	15%
First Street	36	13%
North Station	12	4%
Museum Way	4	1%
Broadway/Galileo	4	1%
Lechmere	3	1%
Sixth Street	3	1%
NorthPoint	2	1%
Albany/Pacific	2	1%
Pacific/Landsdowne	2	1%
Third Street	1	0%
Albany St/Edgerton	1	0%
Erie St	0	0%
Total	**280**	**1**

PM OB OFFS		
Pacific/Landsdowne	82	31%
Albany/Pacific	69	26%
Kendall Square	35	13%
77 Mass Ave	35	13%
First Street	14	5%
Albany St/Edgerton	8	3%
Museum Way	6	2%
NorthPoint	5	2%
Lechmere	3	1%
Sixth Street	3	1%
Broadway/Galileo	3	1%
Amherst St/Sloan	3	1%
Third Street	1	0%
Erie St	1	0%
North Station	0	0%
Total	**268**	**1**

Note: Cells highlighted in pink have on/off volumes less than 10.

Other highlighted stops are pairs of stops, recorded as ons in one direction in a certain time period, and recorded as offs in the other direction and time period.

Vehicle Passenger Loads

The current vehicle capacity of an EZRide shuttle is 38-40 passengers. This allows most passengers to be seated with a few standees, and is referred to as the "functional capacity." The "crush capacity," the point at which no additional passengers can fit on the bus, is about 45 passengers. For a premium service like EZRide, passenger comfort is important, and so service levels that deviate from the industry standards may be more desirable. This higher quality of service, however, comes with corresponding higher capital and operating investments.

The highest load point (based on the average ridership and peak trip) occurred at the Lechmere stop during the 8:09 morning outbound trip from North Station, with 44 passengers. Figure 13 provides the trip profile for that trip. The passenger loads for this analysis are based on ridership averaged over a period in September 2014, and therefore, certain trips are likely to have experienced higher loads than the average depicted in this example.

Service Delivery Policy
The MBTA Service Delivery Policy allows for more crowded buses during peak periods than a premium service like EZRide, which is focused on high quality customer service.

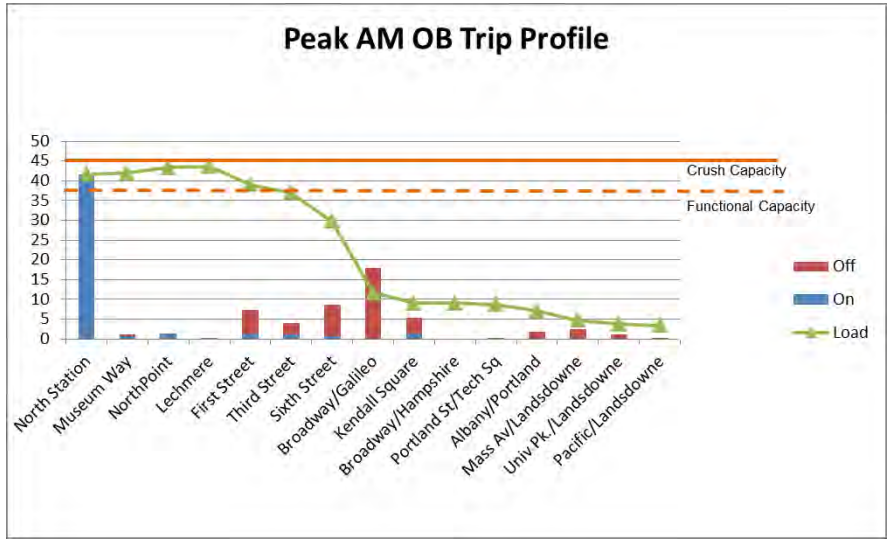


Figure 13: Peak AM OB Trip Profile

Quality of Service
Quality of service is the overall perceived performance of a transit service from the passenger's point of view. It includes both qualitative and quantitative measures, but ultimately measures how successful a transit operator is in providing service to its customers. There is both a ridership implication of balancing a high quality service experience for passengers, and the operating cost associated with providing the transit capacity and frequency to accommodate demand for that service.

Enter days w/ no midday --> 0 DOS: Total: 21 Midday: 21 No Service 0

Enter Month Here ----------> 9

			9-1	9-2	9-3	9-4	9-5	9-8	9-9	9-10	9-11	9-12	9-15	9-16	9-17	9-18	9-19	9-22	9-23	9-24	9-25	9-26	9-29	9-30	Total MONTHLY PEAK HOUR	LOAD entering station	ONs Per Peak Hour	OFFs Per Day % (from APC)*	OFFs calculated from Peak Hour ON and APC % off (assume Total ON = Total OFF)		
AM Outbound	North Station	AQ4		265	251	286	244	250	277	266	268	235	261	271	288	283	233	262	265	269	261	228	282	294	5539	0	264	0%	0	North Station	AM Outbound
	Museum Way	AQ5		12	10	14	22	14	15	15	12	11	12	9	12	12	12	12	14	9	12	10	7	14	260	264	12	0%	0	Museum Way	
	NorthPoint	AQ6		16	12	14	10	11	10	12	14	10	13	10	18	12	9	5	13	17	7	9	9	14	245	276	12	0%	0	NorthPoint	
	Lechmere	AQ7		9	11	14	13	18	15	4	12	11	13	10	9	16	9	14	12	13	12	11	10	8	244	288	12	1%	3	Lechmere	
	First Street	AQ8		9	5	7	12	4	7	5	7	6	1	7	8	14	0	3	4	2	8	4	5	5	123	296	6	7%	23	First Street	
	Third Street	AQ9		0	0	0	0	0	0	2	1	1	2	1	0	1	0	0	0	1	0	0	2	0	11	279	1	7%	23	Third Street	
	Sixth Street	AQ10		2	0	1	0	1	1	0	2	0	0	1	1	0	1	0	0	0	0	0	0	1	11	257	1	18%	59	Sixth Street	
	Broadway/Galileo	AQ11		0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	3	199	0	36%	117	Broadway/Galileo	
	Kendall Square	AQ12		16	17	21	22	23	18	21	17	14	16	16	17	13	20	17	19	18	25	17	20	16	383	82	18	11%	36	Kendall Square	
	Broadway/Hampshire	AQ13		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	64	0	1%	3	Broadway/Hampshire	
	Portland St/Tech Sq	AQ14		0	1	0	0	0	0	0	0	0	0	0	1	0	1	5	0	0	0	0	0	0	8	61	0	2%	7	Portland St/Tech Sq	
	Albany/Portland	AQ15		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0	4%	13	Albany/Portland	
	Mass Ave/Landsdowne	AQ16		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	42	0	7%	23	Mass Ave/Landsdowne	
	Univ Pk./Landsdowne	AQ17		2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	5	19	0	5%	16	Univ Pk./Landsdowne	
	Pacific/Landsdowne	AQ18		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	1%	3	Pacific/Landsdowne	
																											326				
AM Inbound	Fort Washington	AQ24		4	5	5	4	4	6	7	7	4	3	9	5	4	9	5	3	5	4	8	6	4	111	0	5		0	Fort Washington	AM Inbound
	Cambridgeport	AQ25		18	27	24	20	24	20	22	22	27	14	14	18	22	14	21	26	18	26	20	27	21	445	5	21		0	Cambridgeport	
	Pacific/Landsdowne	AQ26		74	81	100	101	99	92	101	137	103	91	104	103	111	83	96	87	82	122	88	105	109	2069	26	99		0	Pacific/Landsdowne	
	Pacific/Albany	AQ27		42	60	69	53	79	72	67	88	67	65	50	67	73	35	71	66	77	70	46	73	78	1368	125	65		0	Pacific/Albany	
	Albany/Edgerton	AQ28		1	4	5	3	8	16	6	7	3	5	5	8	4	1	6	17	19	3	3	7	5	136	190	6		0	Albany/Edgerton	
	Vassar/Mass Av	AQ29		1	1	1	0	0	1	4	1	1	1	0	0	0	0	1	1	1	2	0	0	3	19	197	1	13%	29	Vassar/Mass Av	
	Vassar/Main/Stata	AQ30		0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	168	0	29%	65	Vassar/Main/Stata	
	Kendall Square	AQ31		15	12	10	16	15	14	22	19	14	20	21	18	17	11	17	21	16	18	14	10	17	337	103	16	22%	49	Kendall Square	
	Amherst St/Sloan	AQ32		1	0	0	0	0	0	0	2	0	1	1	0	0	5	0	0	1	1	0	0	0	12	70	1	20%	45	Amherst St/Sloan	
	Ames St./Media Lan	AQ33		0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	26	0		0	Ames St./Media Lan	
	Broadway/Galileo	AQ34		0	0	0	0	2	0	0	2	0	0	0	2	0	10	0	1	0	0	1	5	0	23	26	1		0	Broadway/Galileo	
	Sixth Street	AQ35		2	1	0	1	1	1	2	0	0	0	0	2	0	3	1	1	0	2	0	0	0	17	27	1		0	Sixth Street	
	Third Street	AQ36		0	1	0	1	0	0	0	1	0	0	2	1	0	0	2	0	2	1	1	0	1	13	28	1		0	Third Street	
	First Street	AQ37		0	0	2	0	1	2	0	1	2	0	0	0	2	0	0	2	0	0	0	0	0	12	28	1	5%	11	First Street	
	Lechmere	AQ38		0	0	1	3	1	0	0	0	0	2	1	1	0	2	2	1	0	1	1	0	1	17	18	1	1%	2	Lechmere	
	NorthPoint	AQ39		3	2	1	1	5	0	2	6	4	2	5	1	0	4	3	4	2	2	1	5	2	55	16	3	1%	2	NorthPoint	
	Museum Way	AQ40		9	6	2	7	3	3	2	6	5	2	4	5	3	3	3	5	5	3	0	2	1	79	16	4	9%	20	Museum Way	
																											225				
PM Inbound	Fort Washington	AQ47		5	2	4	5	5	4	3	6	5	2	8	4	1	2	5	1	8	3	0	2	5	80	0	4	0%	0	Fort Washington	PM Inbound
	Cambridgeport	AQ48		0	3	3	1	0	2	1	1	2	0	1	0	2	1	1	4	1	1	3	0	2	29	4	1	1%	2	Cambridgeport	
	Pacific/Landsdowne	AQ49		30	6	12	18	12	13	12	14	6	16	13	15	14	8	16	12	7	14	12	9	11	270	4	13	0%	0	Pacific/Landsdowne	
	Univ. Pk/Landsdowne	AQ50		16	15	15	7	8	18	8	11	3	15	13	9	19	7	11	14	12	15	10	15	14	255	16	12	0%	0	Univ. Pk/Landsdowne	
	Massachusetts Ave.	AQ51		16	10	11	9	15	17	20	18	11	20	10	9	10	5	18	10	13	8	6	19	10	265	29	13	0%	0	Massachusetts Ave.	
	Albany/Portland	AQ52		8	8	4	2	4	7	7	9	0	7	4	5	1	1	5	2	3	6	6	8	2	99	41	5	1%	2	Albany/Portland	
	200 Tech Sq	AQ53		10	5	9	6	6	7	7	13	4	11	6	7	9	4	2	9	11	7	7	12	14	166	44	8	1%	2	200 Tech Sq	
	555 Tech/Broadway	AQ54		7	5	8	2	8	10	5	4	1	4	3	2	2	6	5	9	4	4	1	6	8	104	51	5	1%	2	555 Tech/Broadway	
	Broadway/Galileo	AQ55		0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	54	0	1%	2	Broadway/Galileo	
	Kendall Square	AQ56		29	29	22	24	29	33	33	32	26	24	22	24	28	25	37	34	58	43	37	31	21	641	52	31	12%	19	Kendall Square	
	Broadway/Galileo	AQ57		36	40	52	32	38	44	47	37	18	39	49	28	32	16	46	36	30	32	25	46	55	778	64	37	1%	2	Broadway/Galileo	
	Sixth Street	AQ58		26	18	22	15	21	16	25	21	13	19	23	21	17	14	21	19	15	29	20	21	20	416	99	20	0%	0	Sixth Street	
	Third Street	AQ59		6	7	3	5	6	5	5	5	1	2	2	4	3	4	7	7	8	6	1	6	5	98	119	5	0%	0	Third Street	
	First Street	AQ60		5	7	8	3	4	6	6	3	5	7	2	5	4	4	10	7	6	8	7	4	7	118	124	6	5%	8	First Street	
	Lechmere	AQ61		5	4	2	1	2	1	4	1	2	3	2	0	0	2	2	3	3	2	3	1	1	44	121	2	8%	13	Lechmere	
	NorthPoint	AQ62		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	110	0	4%	6	NorthPoint	
	Museum Way	AQ63		0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	104	0	65%	104	Museum Way	
																											161				
PM Outbound	North Station	AQ68		10	8	11	10	5	8	6	9	13	5	11	10	6	12	8	7	6	12	8	12	5	182	0	9	0%	0	North Station	PM Outbound
	Museum Way	AQ69		2	2	5	4	1	2	1	3	2	0	3	3	2	2	2	4	2	1	2	2	1	46	9	2	2%	2	Museum Way	
	NorthPoint	AQ70		1	1	1	0	1	1	0	0	0	1	2	2	0	1	1	0	0	0	0	1	0	13	9	1	2%	2	NorthPoint	
	Lechmere	AQ71		2	1	4	2	0	1	1	2	2	0	2	1	0	2	1	0	3	1	3	1	2	31	8	1	1%	1	Lechmere	
	First Street	AQ72		14	2	11	7	11	5	4	5	4	8	14	9	12	15	8	17	10	10	2	6	10	184	9	9	5%	4	First Street	
	Third Street	AQ73		0	0	0	0	0	1	1	2	0	2	0	0	0	0	0	1	0	0	0	1	0	8	13	0	0%	0	Third Street	
	Sixth Street	AQ74		0	3	1	2	1	0	0	0	0	2	1	0	2	0	0	1	0	1	1	2	0	17	14	1	1%	1	Sixth Street	
	Broadway/Galileo	AQ75		0	3	1	0	0	1	1	0	0	0	1	0	0	0	0	2	0	1	1	2	0	13	14	1	1%	1	Broadway/Galileo	
	Kendall Square	AQ76		16	18	22	19	18	23	18	20	11	17	21	17	19	20	14	23	22	14	9	10	23	374	13	18	13%	11	Kendall Square	
	Amherst St/Sloan	AQ77		33	21	52	17	14	63	15	77	13	29	31	19	49	15	20	19	44	44	28	24	37	664	20	32	1%	1	Amherst St/Sloan	
	77 Mass Ave	AQ78		14	12	16	8	23	10	9	17	9	13	15	8	4	6	7	14	12	16	5	14	14	246	51	12	13%	11	77 Mass Ave	
	Albany St/Edgerton	AQ79		0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	2	0	8	51	0	3%	3	Albany St/Edgerton	
	Albany/Pacific	AQ80		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	49	0	26%	22	Albany/Pacific	
	Pacific/Landsdowne	AQ81		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	32%	27	Pacific/Landsdowne	
																											85				

*APC (automated passenger counts) as reported in Feasibility Study March 2015 Table 3; assume peak period % distribution per station is same for peak hour
assume Total Ons = Total OFFs during peak hour, similar to APC Table 3 resulting sums which show peak period total Ons = Total OFFs

Field Observations

Memorandum

To: Susan Sloan-Rossiter, LEED AP

Date: May 20, 2015

Project #: 11356.00

From: Selma Mandzo-Preldzic, LEED AP, PE

Re: Red Line @ Kendall/MIT Station Observations Plan

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1. Introduction

This document provides a data collection/observation plan for the Kendall Square Red Line Station. The purpose of this data collection is to respond to the City of Cambridge Transportation Impact Study Scoping Determination, dated April 9th 2015, which requests that "VHB conduct a study of actual observed wait times for passengers to board an inbound or outbound Red Line train during the AM and PM peak hours. The observations should record how often the trains are full, and how many people are unable to board a train because it is full and must wait for another train or a train after that one. The study should include observing the inbound and outbound platforms during the AM and PM peak hours, and recording train arrival times and number of people unable to board because the train was full. For inbound trains going to either Braintree or Mattapan, some people will not board a train because the train's destination is not where the people are going. The observers are to use best effort to estimate the number of people trying to get on a train and are unable because the train is full, versus people choosing to wait until a train with a different destination arrives. The study is to talk place on a normal weekday when classes are in session."

VHB conducted the study on Tuesday May 12th and Wednesday May 13th, during the morning peak (7-10am) and evening peak (4pm to 7pm) periods.

1.1 Access Permit

In order to access the platforms and conduct observations, VHB was required to submit an Access Permit Application with Massachusetts Realty Group (MBTA's Real Estate Consultant). The application included a detailed description of the proposed observations, provision of appropriate insurance coverages and a $1,000 Administrative Fee as well as a $1,000 License Fee. The approval process for an Access Permit can take anywhere from 30-45 days. VHB requested an expedited processing of the application, which allowed us to complete survey before classes ended for the semester.

The License was executed on Monday, May 11th, 2015 in time for Tuesday May 12th observations.

Some License terms pertaining directly to VHB's observations include:

- VHB may conduct visual observations, passenger counts and limited photography during peak periods of the day on the premises, during the week of May 11th.
- No investigations of any kind may be performed on the MBTA Right of Way
- VHB personnel must limit the survey group to less than 6 persons

- VHB personnel must not impede customer flow
- License Administrator (Mass Realty Group) to seek concurrence of Edmond Hunter, Assistant GM of Design and Construction, John martin, Director of Power Systems Maintenance, Steven Cult, Deputy Director of Safety Systems, Joseph McNall, Director of Signals and Communications, Raymond Martin, Engineer of System-wide Maintenance and Improvements.
- VHB to coordinate work under the direction of the Red Line Construction Supervisor, Tom Crowley.
- VHB personnel to answer any and all questions when approached by MBTA customers and employees

2. Data Collection Plan

2.1 Personnel Required

The VHB Red Line @ Kendall Station observations required a total of 16 personnel for each of the two peak periods – however the terms of the License limited the survey group to 6 personnel only. The survey was divided over two days, so that at any point in time only 6 persons were present at a platform. The northbound platform was surveyed on Tuesday May 11th, and the southbound platform was surveyed on Wednesday May 13th.

A Data Collection Supervisor and Project Manager were responsible for determining if there were any adverse operating events that would have required rescheduling of the data collection. The six Recorders were responsible for collecting train timings and capacity levels.

Assignment of personnel to specific locations was made based on the level of comfort and experience of the Data Recorder and the anticipated intensity of the data collection at a specific location.

The most operationally challenging locations were cars near the middle of the train, during the 8-9am peak hour and 5-6pm peak hour.

2.2 Data Recording Procedures

Based on the current Red Line schedule, we expected to see approximately 36 trains during the 3-hour morning observation period from 7am to 10am, on both the southbound and the northbound platforms. During the evening peak period (4-7pm), the platforms were expected to see approximately 42 trains on each platform. The peak hour for each period was expected to process approximately 14 trains in each direction at approximately a 4-5min headway.

The Red Line trains are made up of 6 cars with either 3 or 4 doors to each car. The 6 Recorders were each responsible for one car. The Recorder in charge of car #1 will also be responsible for keeping track of timing of the trains.

Capacity:

The Capacity Recorders were expected to observe and record data for one car, unless field conditions warranted a change. The Recorders were asked to identify the trains by lead car #, time of arrival and route. Data on platform and train car capacity was also collected, as outlined on the attached Data Collection Form.

A simplified methodology for capacity rating was developed to minimize subjectivity and errors is the field:

Platform Crowding:
A = Empty / Almost no one on the platform
B = Comfortable Circulation / Some people on platform, moving freely
C = Restricted Circulation / Moderate number of people on platform, movement restricted
D = Crushed / Unable to freely move around the platform, no personal space

Train Car Capacity:

O = Empty
Nobody on the train, train out of service
A = Seats available / Few standees
Plenty of seats available, a few people standing
B = Seats full / Comfortable standing
Most seats are taken and people are standing comfortably, able to hold on to the pole
C = Seats full / comfortably full
All seats are taken, people are comfortably standing and most people can hold on to the pole
D = Train full / Crushed at door
Train is full, uncomfortable standing inside the car, crushed standing near doors
E = Super Crushed
Unacceptable condition, crushed inside the car and near doors, cannot board the train without pushing people in, people left behind on platform

Timing:

The Time Recorder was expected to record all times in Hours: Minutes: Seconds format. The Data Collection Form asked for four times to be recorded for each train:

- Lead Car #
- Wheel stop time,
- Door open time,
- Final door close time,
- Wheel move time

The "Wheel Stop Time" is meant to reflect the final stop at the station. There may have been cases where a train was creeping into a station (because the platform was occupied by a previous train) and stopped several times before finally reaching the desired berthing location and opening the doors. Only the final "Wheel Stop Time" was recorded.

Data Recorders were also asked to note any reason for delay. Some possible delay reasons included:

- C – Crowding
- D – Doors required repeat cycling (unrelated to crowding)
- E – EMS Action
- P – Police Action
- S – Signal at stop
- W – Wheelchair passenger requiring assistance

The "Signal at Stop" means a signal just inside the tunnel, leaving the station.

Existing Data:

A review of 2013 MBTA data showed that there are approximately 33 passengers boarding and 105 passengers alighting each southbound train during the AM peak hour. For the northbound direction the data showed approximately 9 passengers boarding and 128 passengers alighting each train in the AM peak hour.

During the PM peak hour the volumes are higher, showing 118 passengers boarding and 16 passengers alighting on the southbound platform, and 93 passengers boarding and 41 passengers alighting, on the northbound platform.

	AM peak* (8-9am)				PM peak* (5-6pm)			
	Train Load at Entry	Boardings	Alightings	Train Load at Exit	Train Load at Entry	Boardings	Alightings	Train Load at Exit
Southbound Platform (Alewife to Braintree/Ashmont)	9,524	471	1,482	8,514	4,033	1,665	229	5,469
Northbound Platform (Braintree/Ashmont to Alewife)	4,784	129	1,793	3,120	8,094	1,308	581	8,821

**per MBTA schedule approximately 14 trains are running southbound and 14 trains are running northbound during each AM and PM peak hour.*

2.3 Equipment

The following equipment was required for each data recorder:

- Clipboard & Pen
- Pre-printed data collection forms
- Synchronized digital watch with HH:MM:SS display format (Time Recorder only)
- Emergency contact information in case of a safety issue or need for a bathroom/water break
- Copy of permit
- Safety vest (orange or yellow with reflectorized stripes)
- Transit Pass / Charlie Card

All Data Recorders were asked to dress appropriately for the field location, to ensure their safety and comfort.

2.4 Training

The Recorders were asked to attend a brief one-hour training session on May 11th at VHB's Boston office (99 High Street). The training course covered basic terminology, procedures for obtaining relief, safety precautions and other issues. A second on-site tutorial took place on Tuesday May 12th and included a demonstration of capacity observation and data recording.

2.5 Safety and Security

In the event that MBTA operating personnel or police officers challenged the Data Recorder, they were instructed to provide their emergency contact information for verification that they were authorized to collect data on MBTA property. In the event that a Data Recorder was challenged or harassed by a member of the public, they were instructed to contact the Project Manager. If the Data Recorder felt threatened in any way, they were encouraged to call 911 and report the incident o the nearest MBTA employee.

All Data Recorders were asked to remain within public areas. Nobody was permitted to walk on the tracks.

All Data Recorders positioned themselves where they could see train cars, but avoided impeding passenger flow.

If members of the public (not MBTA employees) inquired about the nature of the work, the Data Recorders responded that they were taking a survey for the City of Cambridge with the approval of the MBTA.

2.6 Advisories to MBTA Operators, Inspectors and Dispatchers

A request was made to MBTA Subway Operations to issue an advisory to MBTA Red Line Operators, Inspectors and Dispatchers informing them of the data collection effort. The advisory was to list the primary and back-up dates and times for the 3-hour morning and 3-hour evening peak period data collection.

2.7 Response to Adverse Operating Conditions

A phone tree was established, using each Data Recorder's cell phone number, in the event that an adverse operating condition (stalled train, derailment, fire, ..etc) existed. Only the Data Collection Supervisor and Project Managers were authorized to cancel data collection in the event of an adverse operating condition. A back-up day for data collection was to be utilized to complete the data collection.

VHB was able to successfully complete the data collection, with no major issues.

FIELD OBSERVATIONS	Estimated Load Entering Station **	Estimated Load Exiting Station **
AM Peak Hour(8-9am)		
Southbound	13300	11300
Northbound	6700	3500
PM Peak Hour(5-6pm)		
Southbound	4900	6800
Northbound	10700	11800

** estimated entering and exiting loads are based on VHB observations from May 2015 (not actual counts)

VHB Capacity Observations (May 13, 2015)

Southbound (Inbound to Ashmont/Braintree)
AM Peak Period

Date: 5/13/2015
Start Time: 7:00 AM
End Time: 10:00 AM

			Car 1					Car 2						Car 3						Car 4						Car 5						Car 6						TRAIN TOTAL					
Line	Lead Car #	Wheel Stop Time	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	*Train Capacity at Arrival*	*Estimated Pax Load at Arrival*		*Train Capacity at Departure*	*Estimated Pax Load at Departure*	*# of Pass Unable to Board*
Ashmont	01502	7:02:38	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*224.5*		A	*224.5*	*0*
Ashmont	01860	7:09:17	C	*134*	C	*134*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	A	*29*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	A	C	*134*	C	*134*	0	C	*644.5*		C	*644.5*	*0*
Braintree	01691	7:13:08	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*275*		A	*275*	*0*
Ashmont	01832	7:17:27	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	*477*		B	*477*	*0*
Braintree	01636	7:21:14	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	A	A	*29*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	B	*426.5*		B	*376*	*0*
Ashmont	01709	7:24:59	A	*29*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	B	*79.5*	A	*29*	0	A	A	*29*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	B	*325.5*		A	*275*	*0*
Ashmont	01501	7:28:43	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	B	*79.5*	0	A	*275*		B	*325.5*	*0*
Braintree	01024	7:36:54	C	*134*	C	*134*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	C	*804*		C	*695*	*0*
Ashmont	01735	7:40:35	C	*134*	B	*79.5*	0	A	D	*218*	C	*134*	0	B	B	*79.5*	B	*79.5*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	C	*833.5*		B	*586*	*0*
Braintree	01806	7:43:16	C	*134*	C	*134*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*481*		B	*380*	*0*
Ashmont	01838	7:47:12	C	*134*	C	*134*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	*586*		B	*531.5*	*0*
Braintree	01614	7:50:07	C	*134*	C	*134*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	B	*79.5*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	B	*430.5*		B	*380*	*0*
Braintree	01634	7:53:47	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*426.5*		B	*376*	*0*
Ashmont	01821	7:57:38	C	*134*	C	*134*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	A	C	*134*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	C	*640.5*		B	*481*	*0*
Braintree	01621	8:03:25	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	C	*134*	D	*218*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	C	*749.5*		C	*779*	*0*
Ashmont	01878	8:05:54	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	B	*477*		B	*426.5*	*0*
Braintree	01644	8:09:51	B	*79.5*	B	*79.5*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	B	*79.5*	A	*29*	0	B	C	*134*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	C	*640.5*		C	*485*	*0*
Ashmont	01631	8:14:55	C	*134*	C	*134*	0	A	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	A	C	*134*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	C	*804*	*2671*	C	*640.5*	*0*
Braintree	01638	8:19:46	D	*218*	C	*134*	0	A	E	*269*	E	*269*	0	B	C	*134*	D	*218*	0	B	D	*218*	D	*218*	0	B	B	*79.5*	B	*79.5*	0	B	C	*134*	C	*134*	0	D	*1052.5*		D	*1052.5*	*0*
Ashmont	01513	8:22:22	B	*79.5*	B	*79.5*	0	A	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	C	*640.5*		B	*531.5*	*0*
Braintree	01822	8:26:58	D	*218*	C	*134*	0	A	E	*269*	E	*269*	0	B	D	*218*	D	*218*	0	B	D	*218*	D	*218*	0	B	D	*218*	D	*218*	0	B	C	*134*	C	*134*	0	D	*1275*	*2968*	D	*1191*	*0*
Ashmont	01719	8:31:30	E	*269*	C	*134*	0	A	E	*269*	E	*269*	0	B	C	*134*	D	*218*	0	B	E	*269*	D	*218*	0	B	D	*218*	C	*134*	0	B	C	*134*	B	*79.5*	0	E	*1293*		D	*1052.5*	*0*
Braintree	01866	8:37:08	E	*269*	D	*218*	0	B	E	*269*	E	*269*	0	B	D	*218*	D	*218*	0	B	E	*269*	D	*218*	0	B	D	*218*	C	*134*	0	B	D	*218*	D	*218*	0	E	*1461*		D	*1275*	*0*
Braintree	01725	8:41:00	D	*218*	C	*134*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	D	*218*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	C	*917.5*	*3671.5*	C	*695*	*0*
Ashmont	01860	8:45:44	C	*134*	B	*79.5*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	D	*218*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	C	*888*		C	*695*	*0*
Braintree	01827	8:49:32	E	*269*	C	*134*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	C	*884.5*		C	*695*	*0*
Ashmont	01723	8:57:04	E	*269*	D	*218*	0	A	E	*269*	E	*269*	0	B	E	*269*	E	*269*	0	B	E	*269*	E	*269*	0	B	D	*218*	C	*134*	0	B	D	*218*	C	*134*	0	E	*1512*		E	*1293*	*0*
Braintree	01820	8:59:39	C	*134*	C	*134*	0	A	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	A	D	*218*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	C	*724.5*	*4009*	B	*481*	*0*
Ashmont	01832	9:05:31	D	*218*	D	*218*	0	B	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	B	C	*134*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	C	*134*	B	*79.5*	0	C	*833.5*		C	*670*	*0*
Braintree	01801	9:08:00	A	*29*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	A	*224.5*		A	*224.5*	*0*
Ashmont	01709	9:10:27	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	B	*79.5*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	B	*376*		A	*325.5*	*0*
Ashmont	01501	9:12:46	A	*29*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	A	*275*		A	*224.5*	*0*
Braintree	01641	9:16:50	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*325.5*		A	*275*	*0*
Ashmont	01735	9:21:41	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*174*		A	*174*	*0*
Braintree	01736	9:25:36	B	*79.5*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	B	*79.5*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*376*		B	*325.5*	*0*
Ashmont	01602	9:29:05	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*275*		A	*275*	*0*
Ashmont	01838	9:31:55	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*325.5*		A	*275*	*0*
Braintree	01624	9:35:15	D	*218*	C	*134*	0	A	C	*134*	B	*79.5*	0	B	C	*134*	C	*134*	0	B	B	*79.5*	B	*79.5*	0	A	C	*134*	A	*29*	0	B	B	*79.5*	B	*79.5*	0	C	*779*		B	*535.5*	*0*
Ashmont	01821	9:37:55	A	*29*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*224.5*		A	*224.5*	*0*
Braintree	01806	9:42:47	C	*134*	C	*134*	0	A	C	*134*	C	*134*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	*384*		B	*384*	*0*
Ashmont	01878	9:45:37	A	*29*	A	*29*	0	A	B	*79.5*	B	*79.5*	0	A	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	A	*29*	A	*29*	0	B	B	*79.5*	A	*29*	0	A	*275*		A	*224.5*	*0*
Braintree	01614	9:52:05	C	*134*	B	*79.5*	0	A	C	*134*	C	*134*	0	B	C	*134*	C	*134*	0	B	B	*79.5*	B	*79.5*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	C	*590*		C	*485*	*0*
Ashmont	01631	9:54:58	A	*29*	A	*29*	0	A	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	A	*224.5*		A	*174*	*0*
Braintree	01634	9:58:54	B	*79.5*	B	*79.5*	0	A	B	*79.5*	B	*79.5*	0	B	A	*29*	A	*29*	0	B	A	*29*	A	*29*	0	B	B	*79.5*	A	*29*	0	B	A	*29*	A	*29*	0	B	*325.5*		A	*275*	*0*

AM Peak Hour 8-9am

21 total braintree trains
23 total ashmont trains

ESTIMATED PEAK HOUR LOAD AT ARRIVAL	13319.5	ESTIMATED PEAK HOUR LOAD AT DEPARTURE	11292.5 11292.5	0
# of Peak Hour Trains	14			
SAY	13300		11300	
PHF	0.83			

Date: 5/12/2015
Start Time: 7:00 AM
End Time: 10:00 AM

			Car 1					Car 2					Car 3					Car 4					Car 5					Car 6					TRAIN TOTAL					
Line	Lead Car Number	Wheel Stop Time	Car 1 Load at Arrival	Estimated Pax Load at Arrival	Car 1 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car 2 Load at Arrival	Estimated Pax Load at Arrival	Car 2 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car 3 Load at Arrival	Estimated Pax Load at Arrival	Car 3 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car 4 Load at Arrival	Estimated Pax Load at Arrival	Car 4 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car 5 Load at Arrival	Estimated Pax Load at Arrival	Car 5 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car 6 Load at Arrival	Estimated Pax Load at Arrival	Car 6 Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Platform Crowding at Arrival	Train Load at Arrival	Estimated Pax Load at Arrival		Train Load at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	
Alewife	01185	7:01:49	B	79.5	B	79.5	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	275		A	224.5	0	
Alewife	01623	7:05:58	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01720	7:07:30	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	224.5		A	174	0	
Alewife	01522	7:09:47	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01823	7:12:15	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01615	7:16:39	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01701	7:22:01	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	B	79.5	0	A	A	224.5		A	224.5	0	
Alewife	01874	7:24:15	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01649	7:28:43	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	B	79.5	B	79.5	0	B	79.5	A	29	0	B	79.5	A	29	0	A	B	376		A	224.5	0	
Alewife	01514	7:33:30	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	A	224.5		A	174	0	
Alewife	01741	7:41:52	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	B	79.5	A	29	0	C	134	B	79.5	0	A	B	531.5		A	275	0	
Alewife	01730	7:43:15	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01825	7:45:31	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01739	7:50:28	B	79.5	A	29	0	B	79.5	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	B	B	426.5		A	224.5	0	
Alewife	01834	7:53:43	C	134	A	29	0	C	134	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	A	B	586		A	224.5	0	
Alewife	01651	7:58:53	B	79.5	A	29	0	C	134	A	29	0	B	79.5	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	A	B	481		A	174	0	
Alewife	01837	8:02:44	B	79.5	A	29	0	C	134	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	B	481		A	174	0	
Alewife	01626	8:11:40	C	134	A	29	0	D	218	A	29	0	C	134	A	29	0	B	79.5	B	79.5	0	C	134	B	79.5	0	C	134	B	79.5	0	A	C	833.5		B	325.5	0	
Alewife	01815	8:14:26	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	A	224.5	1539	A	174	0	
Alewife	01800	8:16:31	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	224.5		A	174	0	
Alewife	01841	8:24:18	C	134	B	79.5	0	D	218	A	29	0	C	134	A	29	0	C	134	B	79.5	0	B	79.5	B	79.5	0	C	134	B	79.5	0	A	C	833.5		B	376	0	
Alewife	01628	8:26:32	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	224.5		A	174	0	
Alewife	01722	8:29:28	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	A	B	376	1658.5	A	174	0	
Alewife	01877	8:32:26	B	79.5	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	A	29	A	29	0	B	79.5	B	79.5	0	A	B	376		A	224.5	0	
Alewife	01843	8:35:40	C	134	B	79.5	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	A	29	0	A	B	481	857	A	275	0	
Alewife	01639	8:46:06	C	134	B	79.5	0	D	218	B	79.5	0	C	134	B	79.5	0	C	134	C	134	0	C	134	B	79.5	0	C	134	B	79.5	0	B	C	888		B	531.5	0	
Alewife	01623	8:49:33	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	C	134	B	79.5	0	A	B	481		A	224.5	0	
Alewife	01881	8:52:09	A	29	A	29	0	C	134	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	B	79.5	A	29	0	B	79.5	A	29	0	A	B	481		A	224.5	0	
Alewife	01522	8:54:57	B	79.5	A	29	0	C	134	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	C	134	B	79.5	0	A	B	586		A	224.5	0	
Alewife	01619	8:57:33	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174	2610	A	174	0	
Alewife	01615	9:00:03	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	A	275		A	174	0	
Alewife	01885	9:03:19	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	224.5		A	174	0	
Alewife	01874	9:06:37	B	79.5	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	275		A	174	0	
Alewife	01720	9:14:19	A	29	A	29	0	C	134	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	A	29	0	C	134	B	79.5	0	A	C	485		A	224.5	0	
Alewife	01514	9:17:28	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01823	9:19:36	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01730	9:21:38	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01701	9:29:48	B	79.5	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	B	376		B	325.5	0	
Alewife	01739	9:32:04	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	174		A	174	0	
Alewife	01649	9:34:08	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	224.5		A	174	0	
Alewife	01651	9:40:30	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	B	B	325.5		A	224.5	0	
Alewife	01741	9:47:37	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	C	134	B	79.5	0	A	B	430.5		A	275	0	
Alewife	01815	9:57:20	B	79.5	A	29	0	C	134	A	29	0	B	79.5	A	29	0	B	79.5	B	79.5	0	B	79.5	A	29	0	C	134	B	79.5	0	A	B	586		A	275	0	
Alewife	01825	9:59:25	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	A	29	0	A	29	A	29	0	A	29	A	29	0	A	A	275		A	174	0	

AM Peak Hour 8-9am

ESTIMATED PEAK HOUR LOAD AT DEPARTURE	6664.5	ESTIMATED PEAK HOUR LOAD AT DEPARTURE	3450 0
			3450
# of Peak Hour Trains	14		
SAY	6700		3500
PHF	0.64		

VHB Capacity Observations (May 13, 2015)

Southbound (Inbound to Ashmont/Braintree)
PM Peak Period

Date: 5/13/2015
Start Time: 4:00 PM
End Time: 7:00 PM

			Car 1					Car 2					Car 3					Car 4					Car 5					Car 6					TRAIN TOTAL						
Line	Lead Car #	Wheel Stop Time	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Car Capacity at Arrival	Estimated Pax Load at Arrival	Car Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	Train Capacity at Arrival	Estimated Pax Load at Arrival		Train Capacity at Departure	Estimated Pax Load at Departure	# of Pass Unable to Board	
Ashmont	01838	4:01:28	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	325.5	0	
Braintree	01806	4:08:18	B	79.5	B	79.5	0	B	79.5	C	134	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	B	79.5	0	B	325.5		B	531.5	0	
Ashmont	01501	4:15:11	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	3	B	79.5	B	79.5	0	A	29	B	79.5	0	B	376		B	477	3	
Ashmont	01621	4:19:50	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	1	A	29	B	79.5	0	A	29	B	79.5	0	B	325.5		B	426.5	1	
Ashmont	01631	4:22:11	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	A	174		A	174	0	
Ashmont	01638	4:35:17	C	134	D	218	0	C	134	E	269	0	A	29	C	134	0	B	79.5	B	79.5	4	A	29	D	218	0	A	29	C	134	0	B	434.5		D	1052.5	4	
Ashmont	01840	4:37:55	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	B	325.5		B	376	0	
Braintree	01853	4:41:02	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	376	0	
Ashmont	01650	4:43:50	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	325.5	0	
Braintree	01725	4:48:29	B	79.5	C	134	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	B	325.5		B	481	0	
Braintree	01723	4:51:31	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	1	A	29	A	29	0	A	29	A	29	0	A	275		B	325.5	1	
Braintree	01644	4:55:30	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	C	134	0	A	29	A	29	0	A	275		B	481	0	
Braintree	01822	5:01:17	C	134	C	134	0	B	79.5	B	79.5	0	A	29	B	79.5	0	C	134	C	134	0	A	29	B	79.5	0	A	29	B	79.5	0	B	434.5	865	B	586	0	PM Peak Hour 5-6pm
Braintree	01860	5:07:52	C	134	E	269	0	B	79.5	C	134	0	B	79.5	B	79.5	0	B	79.5	C	134	2	A	29	D	218	0	A	29	C	134	0	B	430.5		D	968.5	2	
Braintree	01866	5:20:51	D	218	E	269	4	C	134	E	269	0	B	79.5	D	218	0	B	79.5	B	79.5	0	A	29	C	134	0	B	79.5	C	134	0	C	619.5	1808	E	1103.5	4	
Ashmont	01832	5:24:50	D	218	E	269	0	D	218	C	134	0	B	79.5	B	79.5	0	C	134	C	134	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	D	808.5		D	775.5	0	
Braintree	01505	5:29:15	C	134	C	134	0	B	79.5	C	134	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	B	79.5	0	B	380		B	586	0	
Braintree	01821	5:33:37	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	2	A	29	A	29	0	A	29	A	29	0	B	275	774.5	B	325.5	2	
Braintree	01827	5:37:59	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	B	275		B	426.5	0	
Braintree	01801	5:41:49	A	29	A	29	0	A	29	A	29	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	A	224.5		A	224.5	0	
Braintree	01719	5:45:47	C	134	C	134	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	2	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	481	1407	B	531.5	2	
Ashmont	01736	5:49:26	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	2	A	29	B	79.5	0	A	29	B	79.5	0	B	325.5		B	477	2	
Braintree	01709	5:53:43	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	1	A	29	A	29	0	A	29	A	29	0	A	275		B	325.5	1	
Braintree	01624	5:57:29	B	79.5	C	134	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	430.5	0	
Ashmont	01838	6:02:17	A	29	A	29	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	275		B	325.5	0	
Braintree	01629	6:04:59	B	79.5	B	79.5	0	C	134	C	134	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	430.5		B	430.5	0	
Ashmont	01501	6:09:03	B	79.5	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		A	275	0	
Braintree	01835	6:11:21	A	29	A	29	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	A	275		B	325.5	0	
Ashmont	01703	6:14:27	A	29	A	29	0	A	29	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	A	29	0	A	224.5		B	325.5	0	
Ashmont	01634	6:19:39	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	2	A	29	B	79.5	0	A	29	A	29	0	B	325.5		B	376	2	
Ashmont	01631	6:22:48	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	A	275		A	275	0	
Braintree	01806	6:25:39	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	376		B	376	0	
Ashmont	01840	6:28:01	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	A	275		A	275	0	
Braintree	01621	6:33:14	C	134	C	134	0	C	134	C	134	0	B	79.5	C	134	0	B	79.5	B	79.5	0	A	29	B	79.5	0	A	29	B	79.5	0	B	485		C	640.5	0	
Ashmont	01650	6:39:58	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	A	29	0	A	29	A	29	0	B	426.5		B	376	0	
Braintree	01638	6:46:56	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	325.5	0	
Ashmont	01723	6:55:14	B	79.5	B	79.5	0	B	79.5	C	134	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	B	79.5	0	B	426.5		B	531.5	0	
Braintree	01853	7:00:27	B	79.5	B	79.5	0	B	79.5	B	79.5	0	A	29	A	29	0	B	79.5	B	79.5	0	A	29	A	29	0	A	29	A	29	0	B	325.5		B	325.5	0	

ESTIMATED PEAK HOUR LOAD AT ARRIVAL	4854.5		ESTIMATED PEAK HOUR LOAD AT DEPARTURE	6760.5	0
				6761	
# of Peak Hour Trains	12				
SAY	4900			6800	
PHF	0.67				

VHB Capacity Observations (May 12, 2015)

Northbound (Outbound to Alewife)
PM Peak Period

Date: 5/12/2015
Start Time: 4:00 PM
End Time: 7:00 PM

Line	Lead Car Number	Wheel Stop Time	Car 1					Car 2						Car 3						Car 4						Car 5						Car 6						TRAIN TOTAL								
			Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	Platform Crowding at Arrival	Car Capacity at Arrival	*Estimated Pax Load at Arrival*	Car Capacity at Departure	*Estimated Pax Load at Departure*	# of Pass Unable to Board	*Platform Crowding at Arrival*	*Car Capacity at Arrival*	*Estimated Pax Load at Arrival*		*Car Capacity at Departure*	*Estimated Pax Load at Departure*	*# of Pass Unable to Board*		
Alewife	01713	4:04:01	A	29	A	29	0	B	A	29	A	29	0	B	B	79.5	B	79.5	0	B	A	29	A	29	0	B	A	29	A	29	0	B	A	29	A	29	0	B	A	224.5		A	224.5	0		
Alewife	01815	4:07:40	A	29	A	29	0	B	A	29	B	79.5	0	B	B	79.5	B	79.5	0	B	A	29	A	29	0	A	B	79.5	B	79.5	0	A	B	79.5	B	79.5	0	B	B	325.5		B	376	0		
Alewife	01619	4:09:48	A	29	A	29	0	B	A	29	A	29	0	B	B	79.5	B	79.5	0	A	A	29	A	29	0	A	A	29	A	29	0	B	A	29	A	29	0	B	A	224.5		A	224.5	0		
Alewife	01739	4:20:21	B	79.5	D	218	0	C	D	218	E	269	6	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	2	C	D	218	E	269	0	C	D	917.5		E	1158	8		
Alewife	01837	4:22:58	A	29	A	29	0	B	A	29	A	29	0	B	B	79.5	B	79.5	0	A	A	29	A	29	0	A	A	29	A	29	0	B	B	79.5	B	79.5	0	B	A	275		A	275	0		
Alewife	01843	4:29:20	A	29	A	29	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	A	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	426.5		B	426.5	0		
Alewife	01881	4:32:36	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	A	A	29	A	29	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	426.5		B	426.5	0		
Alewife	01841	4:37:36	A	29	A	29	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	C	134	C	134	0	B	B	481		B	481	0		
Alewife	01628	4:41:03	A	29	A	29	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	A	A	29	A	29	0	A	A	29	A	29	0	B	A	29	A	29	0	B	A	275		A	275	0		
Alewife	01651	4:45:12	C	134	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	A	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	531.5		B	477	0		
Alewife	01885	4:47:17	A	29	A	29	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	A	B	79.5	B	79.5	0	B	A	29	A	29	0	B	A	29	A	29	0	B	B	325.5		B	325.5	0		
Alewife	01623	4:49:52	A	29	A	29	0	C	B	79.5	C	134	0	B	B	79.5	B	79.5	0	A	A	29	A	29	0	A	A	29	A	29	0	B	C	134	C	134	0	B	B	380		C	434.5	0		
Alewife	01877	4:55:15	A	29	B	79.5	0	C	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	B	79.5	B	79.5	0	C	B	79.5	B	79.5	0	B	C	590		C	640.5	0		
Alewife	01846	5:01:58	A	29	B	79.5	0	C	D	218	C	134	0	B	B	79.5	B	79.5	0	B	C	134	C	134	0	B	C	134	C	134	0	C	D	218	D	218	0	B	D	812.5		C	779	0	779	PM Peak Hour 5-6pm
Alewife	01850	5:07:10	B	79.5	C	134	0	C	D	218	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	833.5	1646	C	804	0	804	
Alewife	01722	5:15:34	C	134	E	269	14	C	D	218	E	269	11	C	C	134	D	218	0	B	E	269	E	269	1	B	D	218	E	269	6	C	D	218	E	269	5	C	D	1191		E	1563	37	1600	
Alewife	01701	5:23:46	D	218	E	269	17	C	E	269	E	269	20	C	D	218	D	218	0	B	E	269	E	269	11	C	D	218	E	269	20	C	E	269	E	269	7	C	E	1461		E	1563	75	1638	
Alewife	01522	5:29:26	D	218	E	269	13	C	E	269	E	269	20	D	D	218	E	269	0	B	E	269	E	269	17	C	D	218	E	269	14	C	D	218	E	269	7	C	D	1410	4062	E	1614	71	1685	
Alewife	01649	5:32:25	C	134	D	218	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	B	79.5	C	134	1	B	C	134	D	218	0	B	C	749.5		C	972	1	973	
Alewife	01874	5:40:35	E	269	E	269	16	C	D	218	D	218	11	B	D	218	D	218	0	B	E	269	E	269	3	B	E	269	E	269	6	C	E	269	E	269	0	C	E	1512		E	1512	36	1548	
Alewife	01720	5:43:03	B	79.5	C	134	0	B	C	134	D	218	5	B	B	79.5	B	79.5	0	B	C	134	C	134	0	B	C	134	C	134	0	C	C	134	C	134	0	B	C	695	2956.5	C	833.5	5	838.5	
Alewife	01615	5:45:34	A	29	B	79.5	0	B	B	79.5	B	79.5	0	A	B	79.5	B	79.5	0	A	C	134	C	134	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	481		B	531.5	0	531.5	
Alewife	01825	5:53:25	E	269	E	269	2	C	D	218	E	269	0	B	D	218	D	218	0	B	E	269	E	269	4	B	E	269	E	269	3	D	E	269	E	269	8	C	E	1512	1993	E	1563	17	1580	
Alewife	01730	6:00:32	D	218	E	269	14	B	D	218	E	269	7	B	C	134	C	134	0	B	E	269	E	269	3	B	C	134	D	218	5	C	D	218	E	269	5	B	D	1191		E	1428	34		
Alewife	01741	6:04:21	B	79.5	C	134	0	B	C	134	C	134	0	B	B	79.5	B	79.5	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	D	218	0	B	C	695		C	833.5	0		
Alewife	01815	6:12:21	C	134	C	134	0	B	D	218	E	269	10	B	C	134	C	134	0	B	E	269	E	269	1	B	E	269	E	269	6	C	D	218	E	269	0	B	E	1242		E	1344	17		
Alewife	01749	6:22:28	C	134	E	269	5	B	C	134	D	218	5	C	C	134	D	218	0	B	e	269	e	269	12	B	D	218	E	269	9	D	D	218	E	269	4	C	D	1107		E	1512	35		
Alewife	01739	6:26:33	B	79.5	B	79.5	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	D	218	D	218	1	B	C	134	D	218	0	B	C	833.5		C	917.5	1		
Alewife	01713	6:34:44	B	79.5	C	134	0	B	C	134	C	134	2	B	B	79.5	C	134	0	B	C	134	C	134	0	B	C	134	C	134	3	B	C	134	D	218	0	B	C	695		C	888	5		
Alewife	01843	6:38:28	A	29	A	29	0	B	C	134	C	134	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	1	B	B	79.5	B	79.5	0	B	B	481		B	481	1		
Alewife	01619	6:45:41	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	134	D	218	0	B	D	218	D	218	0	B	C	888		C	972	0		
Alewife	01841	6:50:35	B	79.5	B	79.5	0	B	C	134	C	134	0	B	B	79.5	B	79.5	0	B	B	79.5	B	79.5	0	B	C	134	C	134	0	B	B	79.5	B	79.5	0	B	B	586		B	586	0		
Alewife	01837	7:00:40	B	79.5	C	134	0	B	B	79.5	C	134	0	B	C	134	C	134	0	B	B	79.5	C	134	0	B	C	134	C	134	0	B	C	134	C	134	0	B	C	640.5		C	804	0		

ESTIMATED PEAK HOUR LOAD AT ARRIVAL	10657.5	ESTIMATED PEAK HOUR LOAD AT DEPARTURE (incl. left behinds)	11735 17 11752
# of Peak Hour Trains	10		
SAY	10700		11800
PHF	*0.66*		


PM Peak Period Observed Train Arrivals (May 2015, 4-7pm)

Date: 5/13/2015
Start Time: 7:00 AM
End Time: 10:00 AM

Direction: Southbound
Weather: Sunny

	Line	Lead Car #	Wheel Stop Time	Door Open Time	Final Door Close Time	Wheel Move Time	ANALYSIS Wait Time (door close to door open)	Dummy Series for graph AVERAGE combined	Dummy Series for graph MBTA HEADWAY	below or above average COMBO	below or above average
1	Ashmont	01502	7:02:38	7:02:42	7:03:12	7:03:19					
2	Ashmont	01860	7:09:17	7:09:20	7:09:40	7:09:50	0:06:08	0:03:40	0:06:45	3	
	Braintree	01691	7:13:08	7:13:11	7:13:29	7:13:37	0:03:31	0:03:40	0:06:45	1	
	Ashmont	01832	7:17:27	7:17:30	7:17:50	7:17:59	0:04:01	0:03:40	0:06:45	3	
	Braintree	01636	7:21:14	7:21:17	7:21:29	7:21:44	0:03:27	0:03:40	0:06:45	1	
	Ashmont	01709	7:24:59	7:25:03	7:25:16	7:25:21	0:03:34	0:03:40	0:06:45	1	
	Ashmont	01501	7:28:43	7:28:47	7:29:02	7:29:07	0:03:31	0:03:40	0:06:45	1	
	Braintree	01024	7:36:54	7:36:57	7:37:37	7:37:41	0:07:55	0:03:40	0:06:45	3	
	Ashmont	01735	7:40:35	7:40:39	7:41:05	7:41:13	0:03:02	0:03:40	0:06:45	1	
	Braintree	01806	7:43:16	7:43:20	7:43:32	7:43:40	0:02:15	0:03:40	0:06:45	1	
	Ashmont	01838	7:47:12	7:47:14	7:47:30	7:47:33	0:03:42	0:03:40	0:06:45	3	
	Braintree	01614	7:50:07	7:50:10	7:50:22	7:50:28	0:02:40	0:03:40	0:06:45	1	
	Braintree	01634	7:53:47	7:53:50	7:54:10	7:54:16	0:03:28	0:03:40	0:06:45	1	
	Ashmont	01821	7:57:38	7:57:41	7:58:12	7:58:22	0:03:31	0:03:40	0:06:45	1	
	Braintree	01621	8:03:25	8:03:27	8:04:01	8:04:10	0:05:15	0:03:40	0:06:45	3	3
	Ashmont	01878	8:05:54	8:05:58	8:06:10	8:06:17	0:01:57	0:03:40	0:06:45	1	1
	Braintree	01644	8:09:51	8:09:55	8:10:14	8:10:22	0:03:45	0:03:40	0:06:45	3	1
	Ashmont	01631	8:14:55	8:14:58	8:15:21	8:15:33	0:04:44	0:03:40	0:06:45	3	3
	Braintree	01638	8:19:46	8:19:51	8:20:20	8:20:27	0:04:30	0:03:40	0:06:45	3	1
	Ashmont	01513	8:22:22	8:22:25	8:22:55	8:23:01	0:02:05	0:03:40	0:06:45	1	1
	Braintree	01822	8:26:58	8:27:02	8:27:30	8:27:37	0:04:07	0:03:40	0:06:45	3	1
	Ashmont	01719	8:31:30	8:31:35	8:32:14	8:32:22	0:04:05	0:03:40	0:06:45	3	1
	Braintree	01866	8:37:08	8:37:11	8:37:43	8:37:51	0:04:57	0:03:40	0:06:45	3	3
	Braintree	01725	8:41:00	8:41:04	8:41:33	8:41:35	0:03:21	0:03:40	0:06:45	1	1
	Ashmont	01860	8:45:44	8:45:49	8:46:24	8:46:32	0:04:16	0:03:40	0:06:45	3	1
	Braintree	01827	8:49:32	8:49:35	8:50:08	8:50:14	0:03:11	0:03:40	0:06:45	1	1
	Ashmont	01723	8:57:04	8:57:08	8:57:48	8:57:58	0:07:00	0:03:40	0:06:45	3	3
	Braintree	01820	8:59:39	8:59:43	9:00:07	9:01:14	0:01:55	0:03:40	0:06:45	1	1
	Ashmont	01832	9:05:31	9:05:34	9:06:14	9:06:20	0:05:27	0:03:40	0:06:45	3	
	Braintree	01801	9:08:00	9:08:08	9:08:17	9:08:27	0:01:54	0:03:40	0:06:45	1	
	Ashmont	01709	9:10:27	9:10:31	9:10:49	9:10:57	0:02:14	0:03:40	0:06:45	1	
	Ashmont	01501	9:12:46	9:12:49	9:13:07	9:13:15	0:02:00	0:03:40	0:06:45	1	
	Braintree	01641	9:16:50	9:16:55	9:17:23	9:17:33	0:03:48	0:03:40	0:06:45	3	
	Ashmont	01735	9:21:41	9:21:45	9:22:01	9:22:09	0:04:22	0:03:40	0:06:45	3	
	Braintree	01736	9:25:36	9:25:39	9:26:01	9:26:09	0:03:38	0:03:40	0:06:45	1	
	Ashmont	01602	9:29:05	9:29:09	9:29:38	9:29:50	0:03:08	0:03:40	0:06:45	1	
	Ashmont	01838	9:31:55	9:31:58	9:32:19	9:32:27	0:02:20	0:03:40	0:06:45	1	
	Braintree	01624	9:35:15	9:35:22	9:35:55	9:36:07	0:03:03	0:03:40	0:06:45	1	
	Ashmont	01821	9:37:55	9:37:58	9:39:31	9:39:34	0:02:03	0:03:40	0:06:45	1	
	Braintree	01806	9:42:47	9:42:52	9:43:13	9:43:26	0:03:21	0:03:40	0:06:45	1	
	Ashmont	01878	9:45:37	9:45:41	9:45:57	9:46:05	0:02:28	0:03:40	0:06:45	1	
	Braintree	01614	9:52:05	9:52:08	9:52:35	9:52:43	0:06:11	0:03:40	0:06:45	3	
	Ashmont	01631	9:54:58	9:55:01	9:55:26	9:55:38	0:02:26	0:03:40	0:06:45	1	
	Braintree	01634	9:58:54	9:58:58	9:59:19	9:59:33	0:03:32	0:03:40	0:06:45	1	
									SUM	43	14
						AVERAGE	0:03:40				
						MIN	0:01:54			26	10
						MAX	0:07:55			17	4
						SD	0:01:22				

21 total braintree trains
23 total ashmont trains

	AVERAGE	0:03:56	< AVERAGE	60%	< SCHEDULE	71%
	MIN	0:01:55	> AVERAGE	40%	> SCHEDULE	29%
	MAX	0:07:00			DIFF FROM SCHEDULE	
PEAK HOUR	SD	0:01:21				
SCHEDULED		0:04:30				

Date: 5/12/2015
Start Time: 7:00 AM
End Time: 10:00 AM

Direction: Northbound
Weather: Sunny

ANALYSIS

Line	Lead Car Number	Wheel Stop Time	Door Open Time	Final Door Close Time	Wheel Move Time	Wait Time (door close to door open)	Dummy Series for graph AVERAGE	Dummy Series for graph MBTA HEADWAY	below or above average	below or above average
Alewife	01185	7:01:49	7:01:51	7:02:10	7:02:18					
Alewife	01623	7:05:58	7:04:01	7:04:17	7:04:24	0:01:51	0:03:34	0:06:45	1	
Alewife	01720	7:07:30	7:07:33	7:07:51	7:08:00	0:03:16	0:03:34	0:06:45	1	
Alewife	01522	7:09:47	7:09:50	7:10:02	7:10:08	0:01:59	0:03:34	0:06:45	1	
Alewife	01823	7:12:15	7:12:18	7:12:32	7:12:40	0:02:16	0:03:34	0:06:45	1	
Alewife	01615	7:16:39	7:16:43	7:16:59	7:17:07	0:04:11	0:03:34	0:06:45	3	
Alewife	01701	7:22:01	7:22:03	7:22:25	7:22:33	0:05:04	0:03:34	0:06:45	3	
Alewife	01874	7:24:15	7:24:19	7:27:50	7:25:58	0:01:54	0:03:34	0:06:45	1	
Alewife	01649	7:28:43	7:28:48	7:29:32	7:29:43	0:00:58	0:03:34	0:06:45	1	
Alewife	01514	7:33:30	7:33:32	7:33:58	7:34:12	0:04:00	0:03:34	0:06:45	3	
Alewife	01741	7:41:52	7:41:56	7:41:31	7:41:41	0:07:58	0:03:34	0:06:45	3	
Alewife	01730	7:43:15	7:43:18	7:43:39	7:43:47	0:01:47	0:03:34	0:06:45	1	
Alewife	01825	7:45:31	7:45:35	7:45:52	7:46:00	0:01:56	0:03:34	0:06:45	1	
Alewife	01739	7:50:28	7:50:33	7:51:10	7:51:20	0:04:41	0:03:34	0:06:45	3	
Alewife	01834	7:53:43	7:53:45	7:54:13	7:54:19	0:02:35	0:03:34	0:06:45	1	
Alewife	01651	7:58:53	7:58:56	7:59:26	7:59:36	0:04:43	0:03:34	0:06:45	3	
Alewife	01837	8:02:44	8:02:45	8:03:01	8:03:08	0:03:19	0:03:34	0:06:45	1	1
Alewife	01626	8:11:40	8:11:42	8:12:38	8:12:48	0:08:41	0:03:34	0:06:45	3	3
Alewife	01815	8:14:26	8:14:28	8:14:48	8:14:56	0:01:50	0:03:34	0:06:45	1	1
Alewife	01800	8:16:31	8:16:37	8:18:39	8:18:50	0:01:49	0:03:34	0:06:45	1	1
Alewife	01841	8:24:18	8:24:22	8:24:53	8:25:01	0:05:43	0:03:34	0:06:45	3	3
Alewife	01628	8:26:32	8:26:36	8:27:53	8:27:03	0:01:43	0:03:34	0:06:45	1	1
Alewife	01722	8:29:28	8:29:33	8:30:55	8:30:02	0:01:40	0:03:34	0:06:45	1	1
Alewife	01877	8:32:26	8:32:30	8:32:48	8:32:01	0:01:35	0:03:34	0:06:45	1	1
Alewife	01843	8:35:40	8:35:44	8:36:06	8:36:14	0:02:56	0:03:34	0:06:45	1	1
Alewife	01639	8:46:06	8:46:09	8:46:52	8:47:00	0:10:03	0:03:34	0:06:45	3	3
Alewife	01623	8:49:33	8:49:35	8:50:25	8:50:34	0:02:43	0:03:34	0:06:45	1	1
Alewife	01881	8:52:09	8:52:13	8:52:39	8:52:46	0:01:48	0:03:34	0:06:45	1	1
Alewife	01522	8:54:57	8:55:03	8:55:35	8:55:44	0:02:24	0:03:34	0:06:45	1	1
Alewife	01619	8:57:33	8:57:38	8:58:06	8:58:17	0:02:03	0:03:34	0:06:45	1	1
Alewife	01615	9:00:03	9:00:07	9:00:24	9:00:30	0:02:01	0:03:34	0:06:45	1	
Alewife	01885	9:03:19	9:03:22	9:04:27	9:04:36	0:02:58	0:03:34	0:06:45	1	
Alewife	01874	9:06:37	9:06:40	9:07:00	9:07:07	0:02:13	0:03:34	0:06:45	1	
Alewife	01720	9:14:19	9:14:23	9:14:57	9:15:09	0:07:23	0:03:34	0:06:45	3	
Alewife	01514	9:17:28	9:17:31	9:17:58	9:18:11	0:02:34	0:03:34	0:06:45	1	
Alewife	01823	9:19:36	9:19:38	9:19:53	9:20:00	0:01:40	0:03:34	0:06:45	1	
Alewife	01730	9:21:38	9:21:40	9:22:01	9:22:08	0:01:47	0:03:34	0:06:45	1	
Alewife	01701	9:29:48	9:29:51	9:30:15	9:30:24	0:07:50	0:03:34	0:06:45	3	
Alewife	01739	9:32:04	9:32:09	9:32:28	9:32:38	0:01:54	0:03:34	0:06:45	1	
Alewife	01649	9:34:08	9:34:10	9:34:31	9:34:39	0:01:42	0:03:34	0:06:45	1	
Alewife	01651	9:40:30	9:40:33	9:40:56	9:40:04	0:06:02	0:03:34	0:06:45	3	
Alewife	01741	9:47:37	9:47:39	9:48:05	9:48:14	0:06:43	0:03:34	0:06:45	3	
Alewife	01815	9:57:20	9:57:22	9:57:44	9:57:52	0:09:17	0:03:34	0:06:45	3	
Alewife	01825	9:59:25	9:59:28	9:59:43	9:59:55	0:01:44	0:03:34	0:06:45	1	
								SUM	43	14
					AVERAGE	0:03:34				
					MIN	0:00:58			29	11
					MAX	0:10:03			14	3
				OBS PERIOD	SD	0:02:25				
								67%	< AVERAGE	< SCHEDULE 79%
					AVERAGE	0:03:27		33%	> AVERAGE	> SCHEDULE 21%
					MIN	0:01:35				DIFF FROM SCHEDULE
					MAX	0:10:03				
				PEAK HOUR	SD	0:02:38				
				SCHEDULED		0:04:30				

VHB Capacity Observations (May 13, 2015)

Southbound (Inbound to Ashmont/Braintree)
PM Peak Period

Date: 5/13/2015 Direction: Southbound
Start Time: 4:00 PM Weather: Sunny
End Time: 7:00 PM

Line	Lead Car #	Wheel Stop Time	Door Open Time	Final Door Close Time	Wheel Move Time	Wait Time (door close to door open)	Dummy Series for graph AVERAGE	Dummy Series for graph MBTA HEADWAY	below or above average	below or above average
						ANALYSIS				
Ashmont	01838	4:01:28	4:01:31	4:01:55	4:02:03					
Braintree	01806	4:08:18	4:08:21	4:08:43	4:08:51	0:06:26	0:03:59	0:06:45	3	
Ashmont	01501	4:15:11	4:15:16	4:15:36	4:15:43	0:06:33	0:03:59	0:06:45	3	
Ashmont	01621	4:19:50	4:19:54	4:20:15	4:20:23	0:04:18	0:03:59	0:06:45	3	
Ashmont	01631	4:22:11	4:22:15	4:23:34	4:23:40	0:02:00	0:03:59	0:06:45	1	
Ashmont	01638	4:35:17	4:35:20	4:36:13	4:36:20	0:11:46	0:03:59	0:06:45	3	
Ashmont	01840	4:37:55	4:37:58	4:38:13	4:38:18	0:01:45	0:03:59	0:06:45	1	
Braintree	01853	4:41:02	4:41:05	4:41:50	4:41:57	0:02:52	0:03:59	0:06:45	1	
Ashmont	01650	4:43:50	4:43:53	4:44:12	4:44:19	0:02:03	0:03:59	0:06:45	1	
Braintree	01725	4:48:29	4:48:33	4:48:58	4:49:09	0:04:21	0:03:59	0:06:45	3	
Braintree	01723	4:51:31	4:51:34	4:52:00	4:52:08	0:02:36	0:03:59	0:06:45	1	
Braintree	01644	4:55:30	4:55:33	4:57:25	4:57:38	0:03:33	0:03:59	0:06:45	1	
Braintree	01822	5:01:17	5:01:22	5:02:33	5:02:44	0:03:57	0:03:59	0:06:45	1	1
Braintree	01860	5:07:52	5:07:58	5:18:32	5:18:47	0:05:25	0:03:59	0:06:45	3	3
Braintree	01866	5:20:51	5:20:54	5:21:31	5:21:41	0:02:22	0:03:59	0:06:45	1	1
Ashmont	01832	5:24:50	5:25:54	5:25:25	5:25:35	0:04:23	0:03:59	0:06:45	3	1
Braintree	01505	5:29:15	5:29:20	5:29:43	5:29:52	0:03:55	0:03:59	0:06:45	1	1
Braintree	01821	5:33:37	5:33:44	5:34:22	5:34:42	0:04:01	0:03:59	0:06:45	3	1
Braintree	01827	5:37:59	5:38:03	5:39:39	5:39:51	0:03:41	0:03:59	0:06:45	1	1
Braintree	01801	5:41:49	5:41:51	5:42:34	5:42:40	0:02:12	0:03:59	0:06:45	1	1
Braintree	01719	5:45:47	5:45:50	5:46:53	5:47:04	0:03:16	0:03:59	0:06:45	1	1
Ashmont	01736	5:49:26	5:49:29	5:49:52	5:49:59	0:02:36	0:03:59	0:06:45	1	1
Braintree	01709	5:53:43	5:53:49	5:54:07	5:54:15	0:03:57	0:03:59	0:06:45	1	1
Braintree	01624	5:57:29	5:57:33	5:57:58	5:58:07	0:03:26	0:03:59	0:06:45	1	1
Ashmont	01838	6:02:17	6:02:21	6:02:39	6:02:47	0:04:23	0:03:59	0:06:45	3	
Braintree	01629	6:04:59	6:05:03	6:05:36	6:05:42	0:02:24	0:03:59	0:06:45	1	
Ashmont	01501	6:09:03	6:09:06	6:09:23	6:09:32	0:03:30	0:03:59	0:06:45	1	
Braintree	01835	6:11:21	6:11:24	6:11:45	6:11:57	0:02:01	0:03:59	0:06:45	1	
Ashmont	01703	6:14:27	6:14:30	6:15:02	6:15:10	0:02:45	0:03:59	0:06:45	1	
Ashmont	01634	6:19:39	6:19:42	6:20:48	6:20:59	0:04:40	0:03:59	0:06:45	3	
Ashmont	01631	6:22:48	6:22:50	6:23:32	6:23:44	0:02:02	0:03:59	0:06:45	1	
Braintree	01806	6:25:39	6:25:45	6:25:59	6:26:07	0:02:13	0:03:59	0:06:45	1	
Ashmont	01840	6:28:01	6:28:04	6:29:14	6:29:25	0:02:05	0:03:59	0:06:45	1	
Braintree	01621	6:33:14	6:33:18	6:33:41	6:33:50	0:04:04	0:03:59	0:06:45	3	
Ashmont	01650	6:39:58	6:40:02	6:40:21	6:40:26	0:06:21	0:03:59	0:06:45	3	
Braintree	01638	6:46:56	6:46:59	6:47:20	6:47:25	0:06:38	0:03:59	0:06:45	3	
Ashmont	01723	6:55:14	6:55:18	6:55:45	6:55:53	0:07:58	0:03:59	0:06:45	3	
Braintree	01853	7:00:27	7:00:30	7:00:43	7:00:50	0:04:45	0:03:59	0:06:45	3	
								SUM	37	12
					AVERAGE	0:03:59				
					MIN	0:01:45			22	11
					MAX	0:11:46			15	1
					SD	0:02:00				
								59%	< AVERAGE	< SCHEDULE 92%
						0:03:36		41%	> AVERAGE	> SCHEDULE 8%
						0:02:12				DIFF FROM SCHEDULE
						0:05:25				
					PEAK HOUR	0:00:52				
					SCHEDULED	0:04:30				

Date: 5/12/2015
Start Time: 4:00 PM
End Time: 7:00 PM

Direction: Northbound
Weather: Sunny

ANALYSIS

Line	Lead Car Number	Wheel Stop Time	Door Open Time	Final Door Close Time	DOOROPEN DURATION	Wheel Move Time	Wait Time (door close to door open)	Dummy Series for graph AVERAGE	Dummy Series for graph MBTA HEADWAY	below or above average	below or above average
Alewife	01713	4:04:01	4:04:06	4:04:58	0:00:52	4:05:07					
Alewife	01815	4:07:40	4:07:45	4:08:05	0:00:20	4:08:13	0:02:47	0:04:49	0:06:45	1	
Alewife	01619	4:09:48	4:09:52	4:10:08	0:00:16	4:10:13	0:01:47	0:04:49	0:06:45	1	
Alewife	01739	4:20:21	4:20:27	4:21:14	0:00:47	4:21:25	0:10:19	0:04:49	0:06:45	3	
Alewife	01837	4:22:58	4:23:01	4:23:18	0:00:17	4:23:53	0:01:47	0:04:49	0:06:45	1	
Alewife	01843	4:29:20	4:29:24	4:29:40	0:00:16	4:29:45	0:06:06	0:04:49	0:06:45	3	
Alewife	01881	4:32:36	4:32:41	4:32:59	0:00:18	4:33:09	0:03:01	0:04:49	0:06:45	1	
Alewife	01841	4:37:36	4:37:41	4:37:55	0:00:14	4:38:05	0:04:42	0:04:49	0:06:45	1	
Alewife	01628	4:41:03	4:41:08	4:41:31	0:00:23	4:41:40	0:03:13	0:04:49	0:06:45	1	
Alewife	01651	4:45:12	4:45:16	4:45:39	0:00:23	4:45:39	0:03:45	0:04:49	0:06:45	1	
Alewife	01885	4:47:17	4:47:20	4:47:38	0:00:18	4:47:45	0:01:41	0:04:49	0:06:45	1	
Alewife	01623	4:49:52	4:49:57	4:50:16	0:00:19	4:50:25	0:02:19	0:04:49	0:06:45	1	
Alewife	01877	4:55:15	4:55:18	4:57:34	0:02:16	4:57:45	0:05:02	0:04:49	0:06:45	3	
Alewife	01846	5:01:58	5:02:02	5:02:43	0:00:41	5:02:49	0:04:28	0:04:49	0:06:45	1	1
Alewife	01850	5:07:10	5:07:14	5:09:44	0:02:30	5:09:53	0:04:31	0:04:49	0:06:45	1	3
Alewife	01722	5:15:34	5:15:43	5:16:39	0:00:56	5:16:51	0:05:59	0:04:49	0:06:45	3	3
Alewife	01701	5:23:46	5:23:51	5:24:58	0:01:07	5:25:11	0:07:12	0:04:49	0:06:45	3	3
Alewife	01522	5:29:26	5:29:33	5:30:43	0:01:10	5:30:52	0:04:35	0:04:49	0:06:45	1	3
Alewife	01649	5:32:25	5:32:29	5:34:33	0:02:04	5:34:42	0:01:46	0:04:49	0:06:45	1	1
Alewife	01874	5:40:35	5:40:39	5:41:13	0:00:34	5:41:21	0:06:06	0:04:49	0:06:45	3	3
Alewife	01720	5:43:03	5:43:09	5:43:33	0:00:24	5:43:51	0:01:56	0:04:49	0:06:45	1	1
Alewife	01615	5:45:34	5:45:38	5:45:59	0:00:21	5:46:03	0:02:05	0:04:49	0:06:45	1	1
Alewife	01825	5:53:25	5:53:29	5:54:11	0:00:42	5:54:23	0:07:30	0:04:49	0:06:45	3	3
Alewife	01730	6:00:32	6:00:36	6:01:29	0:00:53	6:01:35	0:06:25	0:04:49	0:06:45	3	
Alewife	01741	6:04:21	6:04:28	6:05:00	0:00:32	6:05:06	0:02:59	0:04:49	0:06:45	1	
Alewife	01815	6:12:21	6:12:25	6:12:55	0:00:30	6:13:04	0:07:25	0:04:49	0:06:45	3	
Alewife	01749	6:22:28	6:22:31	6:23:35	0:01:04	6:23:48	0:09:36	0:04:49	0:06:45	3	
Alewife	01739	6:26:33	6:26:37	6:27:05	0:00:28	6:27:15	0:03:02	0:04:49	0:06:45	1	
Alewife	01713	6:34:44	6:34:48	6:35:17	0:00:29	6:35:24	0:07:43	0:04:49	0:06:45	3	
Alewife	01843	6:38:28	6:38:33	6:38:58	0:00:25	6:39:02	0:03:16	0:04:49	0:06:45	1	
Alewife	01619	6:45:41	6:45:48	6:46:18	0:00:30	6:46:32	0:06:50	0:04:49	0:06:45	3	
Alewife	01841	6:50:35	6:50:39	6:51:03	0:00:24	6:51:10	0:04:21	0:04:49	0:06:45	1	
Alewife	01837	7:00:40	7:00:44	7:01:11	0:00:27	7:01:17	0:09:41	0:04:49	0:06:45	3	
					0:00:43				SUM	32	10
						AVERAGE	0:04:49				
						MIN	0:01:41			19	4
						MAX	0:10:19			13	6
						SD	0:02:29				

59%	< AVERAGE	< SCHEDULE	40%
41%	> AVERAGE	> SCHEDULE	60%
		DIFF FROM SCHEDULE	

	0:04:37
	0:01:46
	0:07:30
PEAK HOUR	0:02:01
SCHEDULED	0:04:30

Kendall Square Station Counts

Memorandum

To: Susan Sloan-Rossiter, LEED AP

Date: June 18, 2015

Project #: 11356.00

From: Selma Mandzo-Preldzic, LEED AP, PE

Re: Bikeweek Impact to Red Line Counts

Introduction

This document provides a summary of impacts of "Bike to Work" week, on activity at the Kendall/MIT Station. VHB wait time and capacity observations were conducted during "Bike to Work" week, in May 2015. This could not be avoided due to the timing of MIT students finishing classes for the semester.

VHB contracted a count vendor to conduct pedestrian counts at each Kendall/MIT station headhouse on Tuesday May 5, 2015 and Tuesday May 12, 2015 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The counts served as a benchmark for activity at the station entrances, and to validate the general load observations.

Count reports for both days are enclosed.

Findings

Station entrance counts from May 5th, 2015 (typical day) and May 12th, 2015 ("Bike to Work" Week day) indicate that some directions and some peak hours saw a decrease in transit riders during "Bike to Work" week, while other directions and peak hours saw an increase in transit riders during "Bike to Work" week. Taking into account that VHB conducted an observational study of capacity loads and there was no clear pattern of a decrease in transit ridership during Bikeweek, no adjustment was made to the train load observations to account for Bikeweek activity.

PRECISION DATA INDUSTRIES, LLC
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

Traffic Counts with Precision

Client:	Engineer:	Site Code:	Date:	PDI Job Number:	City, State:
VHB	S. Mandzo-Preldzic	TBA	Tues 5/5 & Tues 5/12/15	154435	Cambridge, MA

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 A
Site Code : TBA
Start Date : 5/5/2015
Page No : 1

Groups Printed- Peds and Bikes

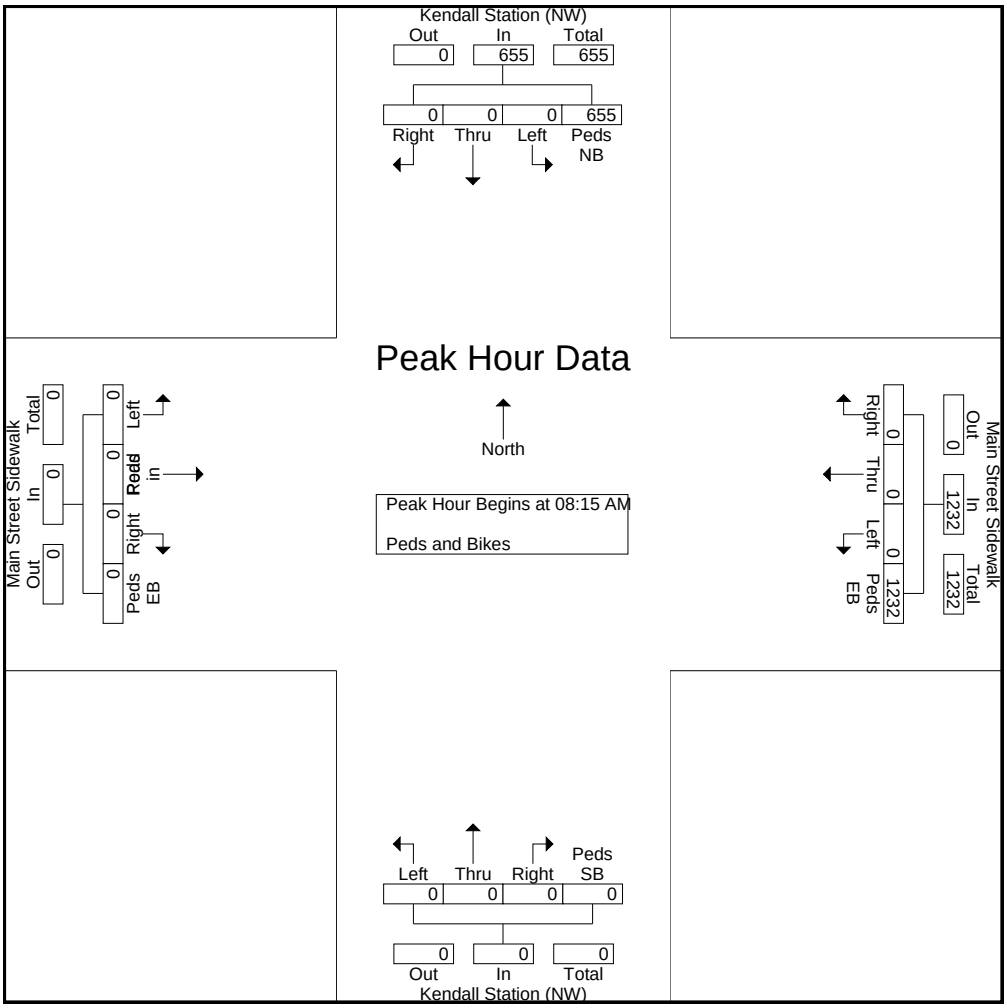
	Kendall Station (NW) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	117	7	0	0	0	0	0	1	204	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	362
07:45 AM	0	0	0	0	0	0	102	12	0	0	0	0	0	0	139	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279
Total	0	0	0	0	0	0	219	19	0	0	0	0	0	1	343	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	641
08:00 AM	0	0	0	0	0	0	149	10	0	0	0	0	1	0	244	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	446
08:15 AM	0	0	0	0	0	0	129	18	0	0	0	0	2	1	216	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	409
08:30 AM	0	0	0	0	0	0	166	6	0	0	0	0	2	1	258	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	470
08:45 AM	0	0	0	0	0	0	176	6	0	0	0	0	0	1	316	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	535
Total	0	0	0	0	0	0	620	40	0	0	0	0	5	3	1034	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1860
09:00 AM	0	0	0	0	0	0	148	6	0	0	0	0	2	1	281	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473
09:15 AM	0	0	0	0	0	0	104	2	0	0	0	0	0	0	192	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	338
Grand Total	0	0	0	0	0	0	1091	67	0	0	0	0	7	5	1850	292	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3312
Apprch %	0	0	0	0	0	0	94.2	5.8	0	0	0	0	0.3	0.2	85.9	13.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	32.9	2	0	0	0	0	0.2	0.2	55.9	8.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (NW) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 08:15 AM																																					
08:15 AM	0	0	0	0	0	0	129	18	147	0	0	0	0	2	1	216	43	262	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	409
08:30 AM							166		172							258	37	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	470
08:45 AM							176		182							316	36	353	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	535
09:00 AM							148		154							281	35	319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473
Total Volume	0	0	0	0	0	0	619	36	655	0	0	0	0	6	4	1071	151	1232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1887
% App. Total							94.5	5.5						0.5	0.3	86.9	12.3																				
PHF	.000	.000	.000	.000	.000	.000	.879	.500	.900	.000	.000	.000	.000	.750	1.000	.847	.878	.873	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.882

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 A
Site Code : TBA
Start Date : 5/5/2015
Page No : 2



N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 AA
Site Code : TBA
Start Date : 5/5/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (NW) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	14	117	0	0	0	0	6	0	74	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	408
04:45 PM	0	0	0	0	0	0	37	121	0	0	0	0	6	2	105	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	448
Total	0	0	0	0	0	0	51	238	0	0	0	0	12	2	179	374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	856
05:00 PM	0	0	0	0	0	0	23	189	0	0	0	0	2	1	110	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	607
05:15 PM	0	0	0	0	0	0	34	145	0	0	0	0	5	0	121	223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	528
05:30 PM	0	0	0	0	0	0	22	172	0	0	0	0	4	0	130	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	550
05:45 PM	0	0	0	0	0	0	37	133	0	0	0	0	6	0	185	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	557
Total	0	0	0	0	0	0	116	639	0	0	0	0	17	1	546	923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2242
06:00 PM	0	0	0	0	0	1	22	166	0	0	0	0	2	0	131	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	530
06:15 PM	0	0	0	0	0	0	25	136	0	0	0	0	2	0	95	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	454
Grand Total	0	0	0	0	0	1	214	1179	0	0	0	0	33	3	951	1701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4082
Apprch %	0	0	0	0	0	0.1	15.4	84.6	0	0	0	0	1.2	0.1	35.4	63.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	5.2	28.9	0	0	0	0	0.8	0.1	23.3	41.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (NW) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																				
Peak Hour for Entire Intersection Begins at 05:00 PM																																				
05:00 PM	0	0	0	0	0	0	23	189	212	0	0	0	0	2	1	110	282	395	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	607
05:15 PM							34	145	179							121	223	349	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	528
05:30 PM							22	172	194							130	222	356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	550
05:45 PM							37	133	170							185	196	387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	557
Total Volume							116	639	755					17		546	923	1487	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2242
% App. Total							15.4	84.6						1.1	0.1	36.7	62.1																			
PHF	.000	.000	.000	.000	.000	.000	.784	.845	.890	.000	.000	.000	.000	.708	.250	.738	.818	.941	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.923

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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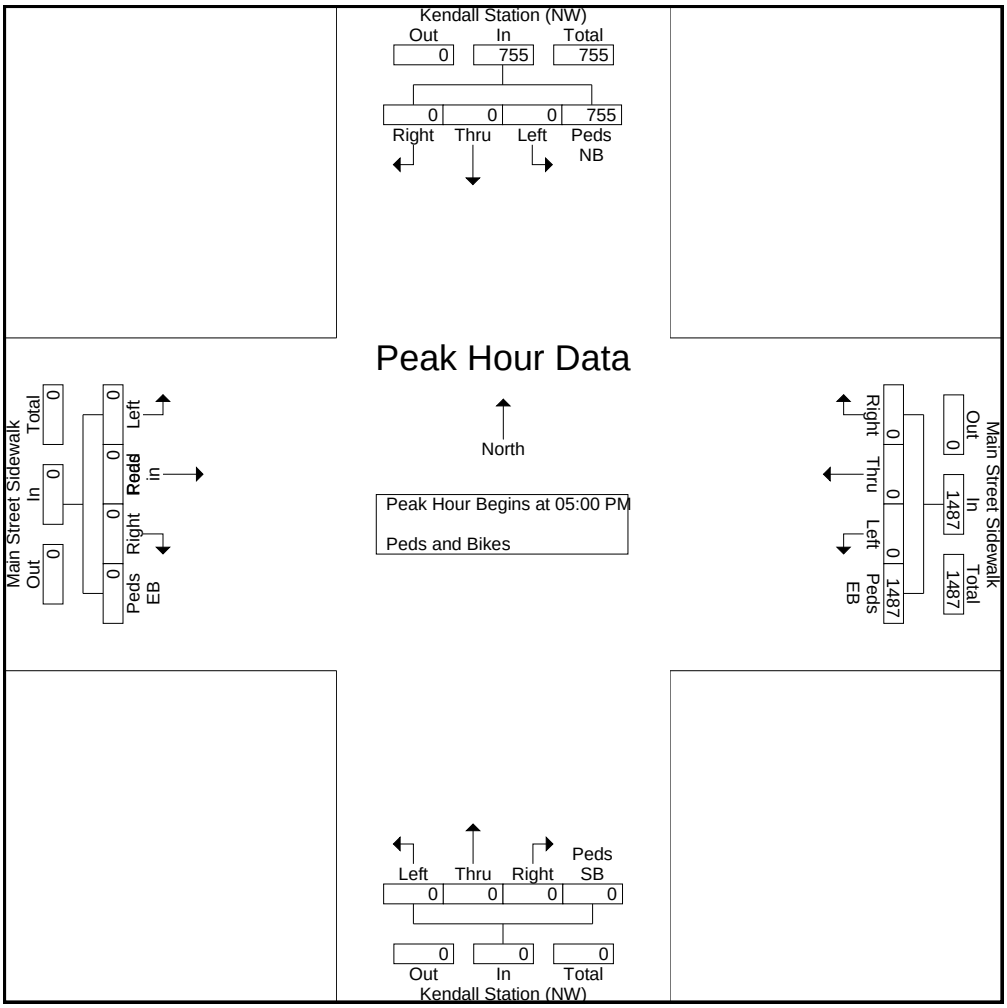

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 B
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Start Date : 5/5/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SW) From North								Main Street Sidewalk From East								Kendall Station (SW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	59	89	0	0	0	0	1	0	14	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
07:45 AM	0	0	0	0	0	0	58	84	0	0	0	0	0	0	21	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
Total	0	0	0	0	0	0	117	173	0	0	0	0	1	0	35	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	357
08:00 AM	0	0	0	0	0	1	76	145	0	0	0	0	0	0	18	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263
08:15 AM	0	0	0	0	0	1	94	148	0	0	0	0	0	0	28	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301
08:30 AM	0	0	0	0	0	0	132	102	0	0	0	0	0	0	18	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	274
08:45 AM	0	0	0	0	1	0	101	143	0	0	0	0	0	0	34	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
Total	0	0	0	0	1	2	403	538	0	0	0	0	0	0	98	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1146
09:00 AM	0	0	0	0	2	0	77	116	0	0	0	0	0	0	20	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247
09:15 AM	0	0	0	0	0	0	75	102	0	0	0	0	0	0	28	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	220
Grand Total	0	0	0	0	3	2	672	929	0	0	0	0	1	0	181	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1970
Apprch %	0	0	0	0	0.2	0.1	41.8	57.8	0	0	0	0	0.3	0	49.7	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0.2	0.1	34.1	47.2	0	0	0	0	0.1	0	9.2	9.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SW) From North									Main Street Sidewalk From East									Kendall Station (SW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	0	0	0	0	0	1	76	145	222	0	0	0	0	0	0	18	23	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	263
08:15 AM							94	148	243							28	30																				301
08:30 AM							132	102	234							18	22																				274
08:45 AM							101	143	245							34	29																				308
Total Volume							403	538	944							98	104	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1146
% App. Total					0.1	0.2	42.7	57								48.5	51.5																				
PHF	.000	.000	.000	.000	.250	.500	.763	.909	.963	.000	.000	.000	.000	.000	.000	.721	.867	.802	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.930

N/S: Kendal Station Doorway (SW)
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City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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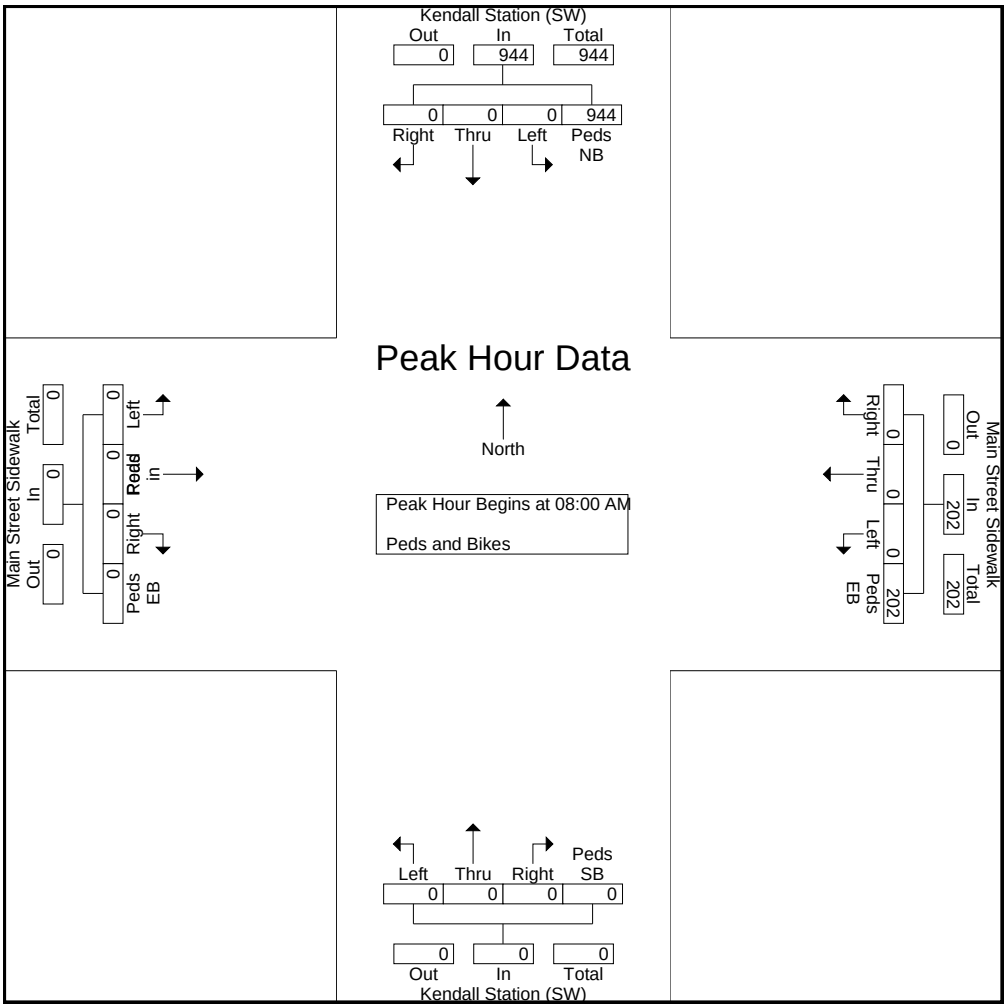

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 BB
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Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SW) From North								Main Street Sidewalk From East								Kendall Station (SW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	307	67	0	0	0	0	0	0	23	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	419
04:45 PM	0	0	0	0	2	0	256	47	0	0	0	0	0	0	46	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	389
Total	0	0	0	0	2	0	563	114	0	0	0	0	0	0	69	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	808
05:00 PM	0	0	0	0	1	1	409	61	0	0	0	0	0	1	35	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	546
05:15 PM	0	0	0	0	2	0	306	56	0	0	0	0	1	0	28	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	435
05:30 PM	0	0	0	0	0	1	283	64	0	0	0	0	1	0	32	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	420
05:45 PM	0	0	0	0	0	2	196	62	0	0	0	0	0	0	51	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	355
Total	0	0	0	0	3	4	1194	243	0	0	0	0	2	1	146	163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1756
06:00 PM	0	0	0	0	0	0	204	57	0	0	0	0	0	0	34	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	324
06:15 PM	0	0	0	0	0	0	161	48	0	0	0	0	0	0	46	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282
Grand Total	0	0	0	0	5	4	2122	462	0	0	0	0	2	1	295	279	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3170
Apprch %	0	0	0	0	0.2	0.2	81.8	17.8	0	0	0	0	0.3	0.2	51.1	48.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0.2	0.1	66.9	14.6	0	0	0	0	0.1	0	9.3	8.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SW) From North									Main Street Sidewalk From East									Kendall Station (SW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 04:45 PM																																					
04:45 PM	0	0	0	0	2	0	256	47	305	0	0	0	0	0	0	46	38	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	389
05:00 PM							409	61	472							35	38																				546
05:15 PM							306	56	364							28	42																				435
05:30 PM							283	64	348							32	39																				420
Total Volume	0	0	0	0	5	2	1254	228	1489	0	0	0	0	2	1	141	157	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1790
% App. Total					0.3	0.1	84.2	15.3						0.7	0.3	46.8	52.2																				
PHF	.000	.000	.000	.000	.625	.500	.767	.891	.789	.000	.000	.000	.000	.500	.250	.766	.935	.896	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.820

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Email: datarequests@pdillc.com

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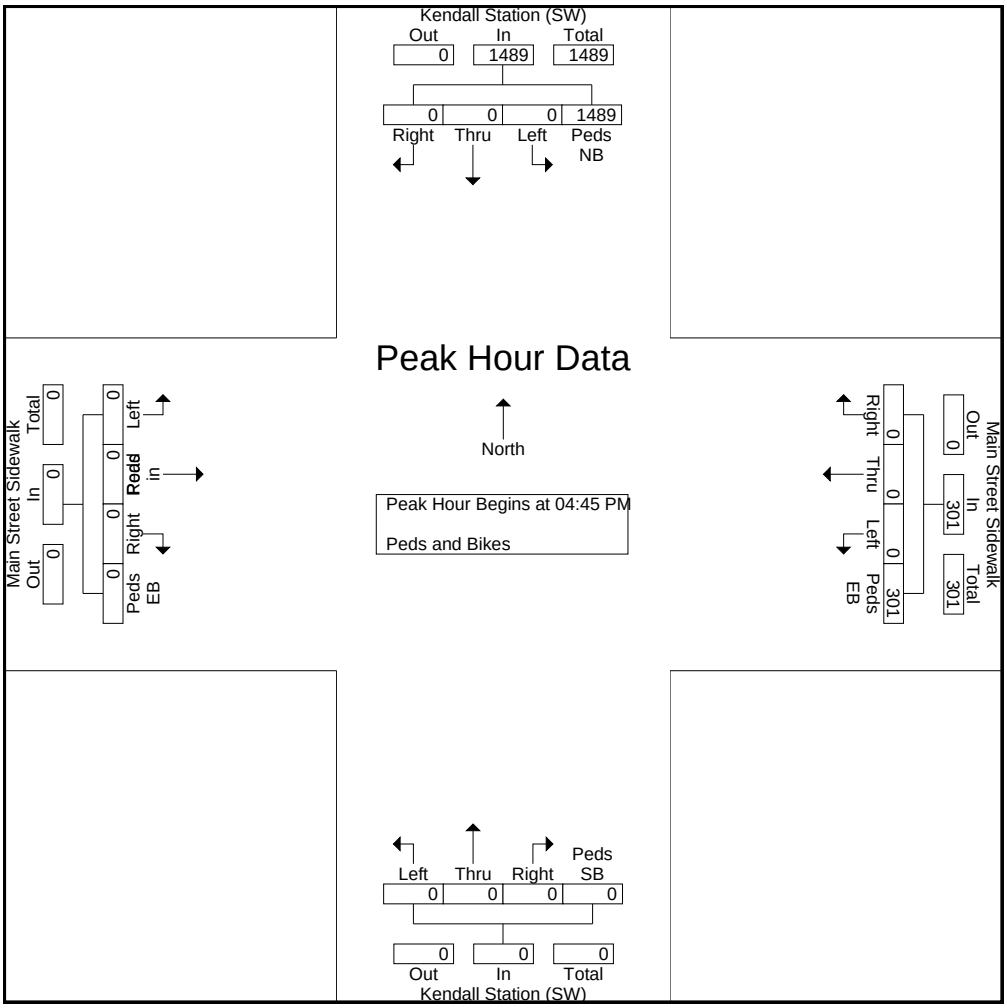

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 C
Site Code : TBA
Start Date : 5/5/2015
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Groups Printed- Peds and Bikes

	Kendal Station Stairway (NE) From North								Main Street Sidewalk From East								Kendal Station Stairway (NE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	9	86	0	0	0	0	2	0	32	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228
07:45 AM	0	0	0	0	0	0	14	88	0	0	0	0	2	0	40	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	259
Total	0	0	0	0	0	0	23	174	0	0	0	0	4	0	72	214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	487
08:00 AM	0	0	0	0	0	0	8	147	0	0	0	0	3	0	27	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	365
08:15 AM	0	0	0	0	0	0	11	162	0	0	0	0	2	1	34	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	405
08:30 AM	0	0	0	0	0	0	16	251	0	0	0	0	1	1	33	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	532
08:45 AM	0	0	0	0	0	2	25	321	0	0	0	0	3	2	40	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	595
Total	0	0	0	0	0	2	60	881	0	0	0	0	9	4	134	807	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1897
09:00 AM	0	0	0	0	0	1	14	246	0	0	0	0	1	1	36	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	459
09:15 AM	0	0	0	0	0	0	13	194	0	0	0	0	0	0	37	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348
Grand Total	0	0	0	0	0	3	110	1495	0	0	0	0	14	5	279	1285	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3191
Apprch %	0	0	0	0	0	0.2	6.8	93	0	0	0	0	0.9	0.3	17.6	81.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0.1	3.4	46.9	0	0	0	0	0.4	0.2	8.7	40.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendal Station Stairway (NE) From North									Main Street Sidewalk From East									Kendal Station Stairway (NE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																				
Peak Hour for Entire Intersection Begins at 08:15 AM																																				
08:15 AM	0	0	0	0	0	0	11	162	173	0	0	0	0	2	1	34	195	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	405
08:30 AM							16	251	267							33	230	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	532
08:45 AM							25	321	348							40	202	247	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	595
09:00 AM							14	246	261							36	160	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	459
Total Volume							66	980	1049							143	787	942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1991
% App. Total						0.3	6.3	93.4						0.7	0.5	15.2	83.5																				
PHF	.000	.000	.000	.000	.000	.375	.660	.763	.754	.000	.000	.000	.000	.583	.625	.894	.855	.889	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.837

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : TBA
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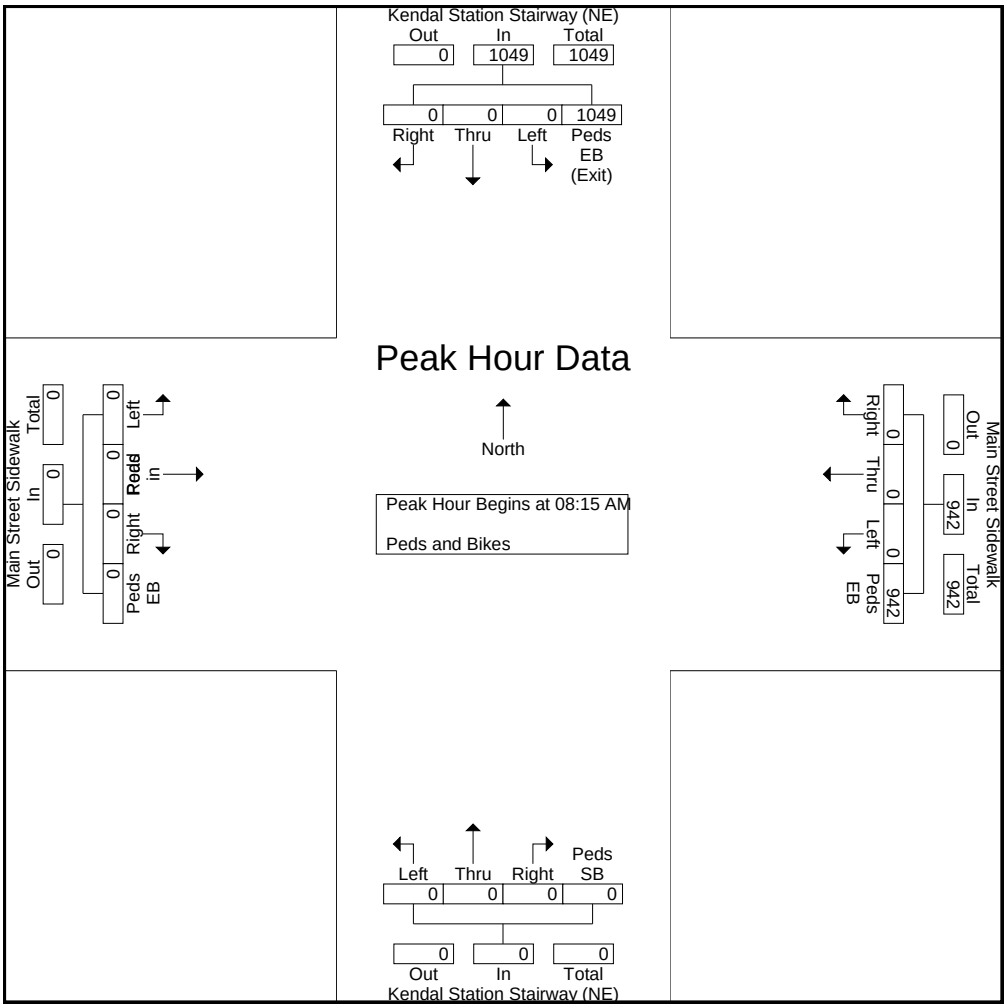
Page No : 2



N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Email: datarequests@pdillc.com

File Name : 154435 CC
Site Code : TBA
Start Date : 5/5/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendal Station Stairway (NE) From North								Main Street Sidewalk From East								Kendal Station Stairway (NE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	111	15	0	0	0	0	2	4	99	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	298
04:45 PM	0	0	0	0	0	0	149	46	0	0	0	0	2	2	152	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	433
Total	0	0	0	0	0	0	260	61	0	0	0	0	4	6	251	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	731
05:00 PM	0	0	0	0	0	0	159	43	0	0	0	0	0	0	162	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	463
05:15 PM	0	0	0	0	1	0	144	73	0	0	0	0	1	3	161	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	501
05:30 PM	0	0	0	0	1	0	181	44	0	0	0	0	1	1	182	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	505
05:45 PM	0	0	0	0	2	0	171	82	0	0	0	0	2	0	171	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	557
Total	0	0	0	0	4	0	655	242	0	0	0	0	4	4	676	441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2026
06:00 PM	0	0	0	0	0	0	145	54	0	0	0	0	0	0	147	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	462
06:15 PM	0	0	0	0	1	0	153	42	0	0	0	0	1	2	154	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	444
Grand Total	0	0	0	0	5	0	1213	399	0	0	0	0	9	12	1228	797	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3663
Apprch %	0	0	0	0	0.3	0	75	24.7	0	0	0	0	0.4	0.6	60	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0.1	0	33.1	10.9	0	0	0	0	0.2	0.3	33.5	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendal Station Stairway (NE) From North									Main Street Sidewalk From East									Kendal Station Stairway (NE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 05:00 PM																																					
05:00 PM	0	0	0	0	0	0	159	43	202	0	0	0	0	0	0	162	99	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	463
05:15 PM							144	73	218							161	118	283	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	501
05:30 PM							181	44	226							182	95	279	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	505
05:45 PM							171	82	255							171	129	302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	557
Total Volume							655	242	901							676	441	1125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2026
% App. Total					0.4		72.7	26.9						0.4	0.4	60.1	39.2																				
PHF	.000	.000	.000	.000	.500	.000	.905	.738	.883	.000	.000	.000	.000	.500	.333	.929	.855	.931	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.909

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 CC
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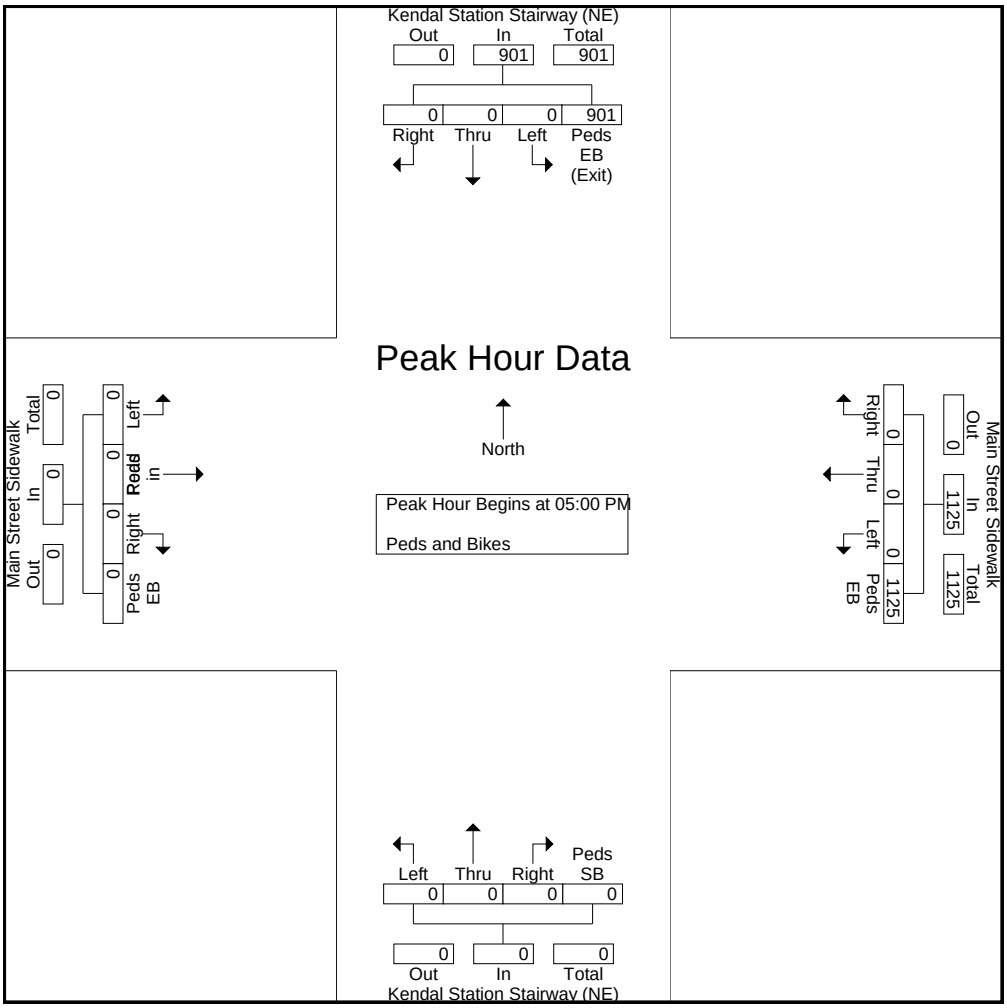

N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SE) From North								Main Street Sidewalk From East								Kendall Station (SE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	19	84	0	0	0	0	0	1	37	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
07:45 AM	0	0	0	0	0	0	35	81	0	0	0	0	0	1	37	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204
Total	0	0	0	0	0	0	54	165	0	0	0	0	0	2	74	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	380
08:00 AM	0	0	0	0	0	0	30	89	0	0	0	0	0	0	44	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221
08:15 AM	0	0	0	0	0	0	38	171	0	0	0	0	0	2	65	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367
08:30 AM	0	0	0	0	0	0	46	138	0	0	0	0	2	0	48	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	324
08:45 AM	0	0	0	0	0	0	37	157	0	0	0	0	2	0	69	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	344
Total	0	0	0	0	0	0	151	555	0	0	0	0	4	2	226	318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1256
09:00 AM	0	0	0	0	0	0	24	129	0	0	0	0	1	0	56	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288
09:15 AM	0	0	0	0	0	0	23	73	0	0	0	0	0	0	72	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
Grand Total	0	0	0	0	0	0	252	922	0	0	0	0	5	4	428	548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2159
Apprch %	0	0	0	0	0	0	21.5	78.5	0	0	0	0	0.5	0.4	43.5	55.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	11.7	42.7	0	0	0	0	0.2	0.2	19.8	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SE) From North									Main Street Sidewalk From East									Kendall Station (SE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 08:15 AM																																					
08:15 AM	0	0	0	0	0	0	38	171	209	0	0	0	0	0	2	65	91	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367
08:30 AM							46	138	184							48	90	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	324
08:45 AM							37	157	194							69	79	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	344
09:00 AM							24	129	153							56	78	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288
Total Volume							145	595	740							238	338	583	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1323
% App. Total							19.6	80.4						0.9	0.3	40.8	58																				
PHF	.000	.000	.000	.000	.000	.000	.788	.870	.885	.000	.000	.000	.000	.625	.250	.862	.929	.922	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.901

N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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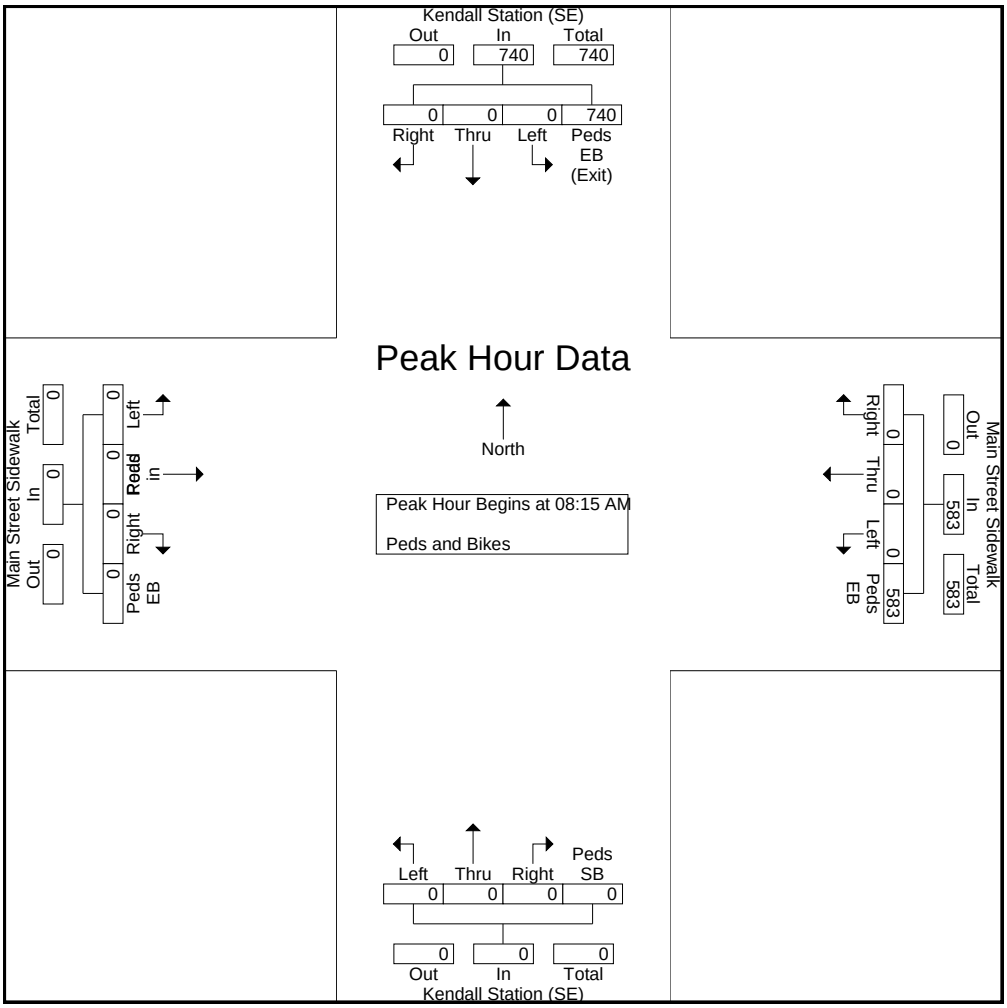

N/S: Kendal Station Doorway (SE)
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File Name : 154435 DD
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Groups Printed- Peds and Bikes

	Kendall Station (SE) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	102	18	0	0	0	0	0	0	49	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
04:45 PM	0	0	0	0	0	0	127	22	0	0	0	0	1	0	64	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290
Total	0	0	0	0	0	0	229	40	0	0	0	0	1	0	113	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	506
05:00 PM	0	0	0	0	0	0	227	24	0	0	0	0	0	0	67	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	413
05:15 PM	0	0	0	0	0	0	144	39	0	0	0	0	0	1	79	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350
05:30 PM	0	0	0	0	0	0	143	32	0	0	0	0	0	0	59	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	306
05:45 PM	0	0	0	0	0	0	110	49	0	0	0	0	0	0	56	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	276
Total	0	0	0	0	0	0	624	144	0	0	0	0	0	1	261	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1345
06:00 PM	0	0	0	0	0	0	142	15	0	0	0	0	0	0	62	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255
06:15 PM	0	0	0	0	0	0	109	54	0	0	0	0	0	0	45	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
Grand Total	0	0	0	0	0	0	1104	253	0	0	0	0	1	1	481	515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2355
Apprch %	0	0	0	0	0	0	81.4	18.6	0	0	0	0	0.1	0.1	48.2	51.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	46.9	10.7	0	0	0	0	0	0	20.4	21.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SE) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 04:45 PM																																					
04:45 PM	0	0	0	0	0	0	127	22	149	0	0	0	0	1	0	64	76	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290
05:00 PM							227	24	251							67	95	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	413
05:15 PM							144	39	183							79	87	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350
05:30 PM							143	32	175							59	72	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	306
Total Volume							641	117	758							269	330	601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1359
% App. Total							84.6	15.4						0.2	0.2	44.8	54.9																				
PHF	.000	.000	.000	.000	.000	.000	.706	.750	.755	.000	.000	.000	.000	.250	.250	.851	.868	.900	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.823

N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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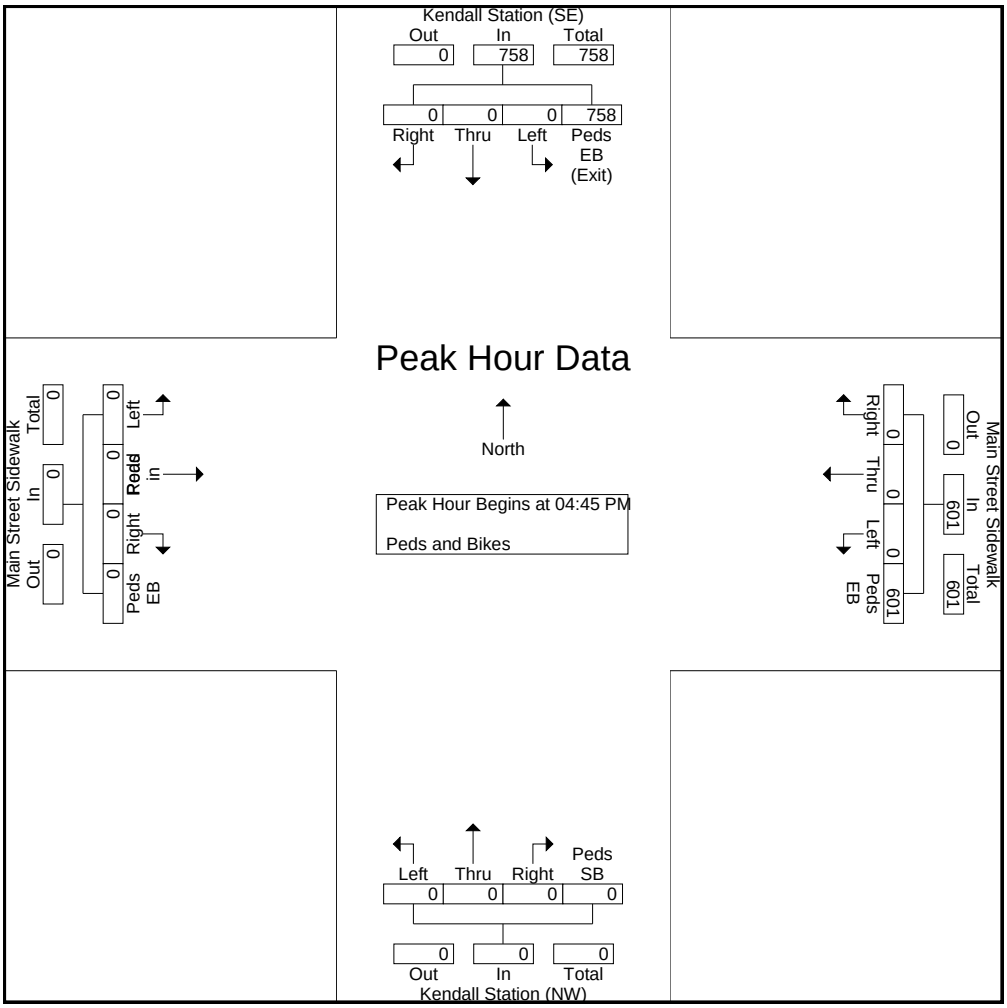

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 AAA
Site Code : TBA
Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (NW) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	90	7	0	0	0	0	1	0	56	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
07:45 AM	0	0	0	0	0	0	154	6	0	0	0	0	1	0	65	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	248
Total	0	0	0	0	0	0	244	13	0	0	0	0	2	0	121	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	420
08:00 AM	0	0	0	0	0	0	137	3	0	0	0	0	0	0	67	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228
08:15 AM	0	0	0	0	0	0	156	8	0	0	0	0	0	0	111	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	302
08:30 AM	0	0	0	0	0	0	92	7	0	0	0	0	1	0	82	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215
08:45 AM	0	0	0	0	0	0	227	18	0	0	0	0	1	0	137	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	421
Total	0	0	0	0	0	0	612	36	0	0	0	0	2	0	397	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1166
09:00 AM	0	0	0	0	0	0	98	8	0	0	0	0	0	0	101	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
09:15 AM	0	0	0	0	0	0	109	17	0	0	0	0	1	0	69	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227
Grand Total	0	0	0	0	0	0	1063	74	0	0	0	0	5	0	688	216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2046
Apprch %	0	0	0	0	0	0	93.5	6.5	0	0	0	0	0.6	0	75.7	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	52	3.6	0	0	0	0	0.2	0	33.6	10.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (NW) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																				
Peak Hour for Entire Intersection Begins at 08:15 AM																																				
08:15 AM	0	0	0	0	0	0	156	8	164	0	0	0	0	0	0	111	27	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	302
08:30 AM							92									82	33	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215
08:45 AM							227	18	245							137	38	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	421
09:00 AM							98		106							101	26	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
Total Volume							573	41	614							431	124	557	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1171
% App. Total							93.3	6.7							0.4	77.4	22.3																			
PHF	.000	.000	.000	.000	.000	.000	.631	.569	.627	.000	.000	.000	.000	.500	.000	.786	.816	.791	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.695

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
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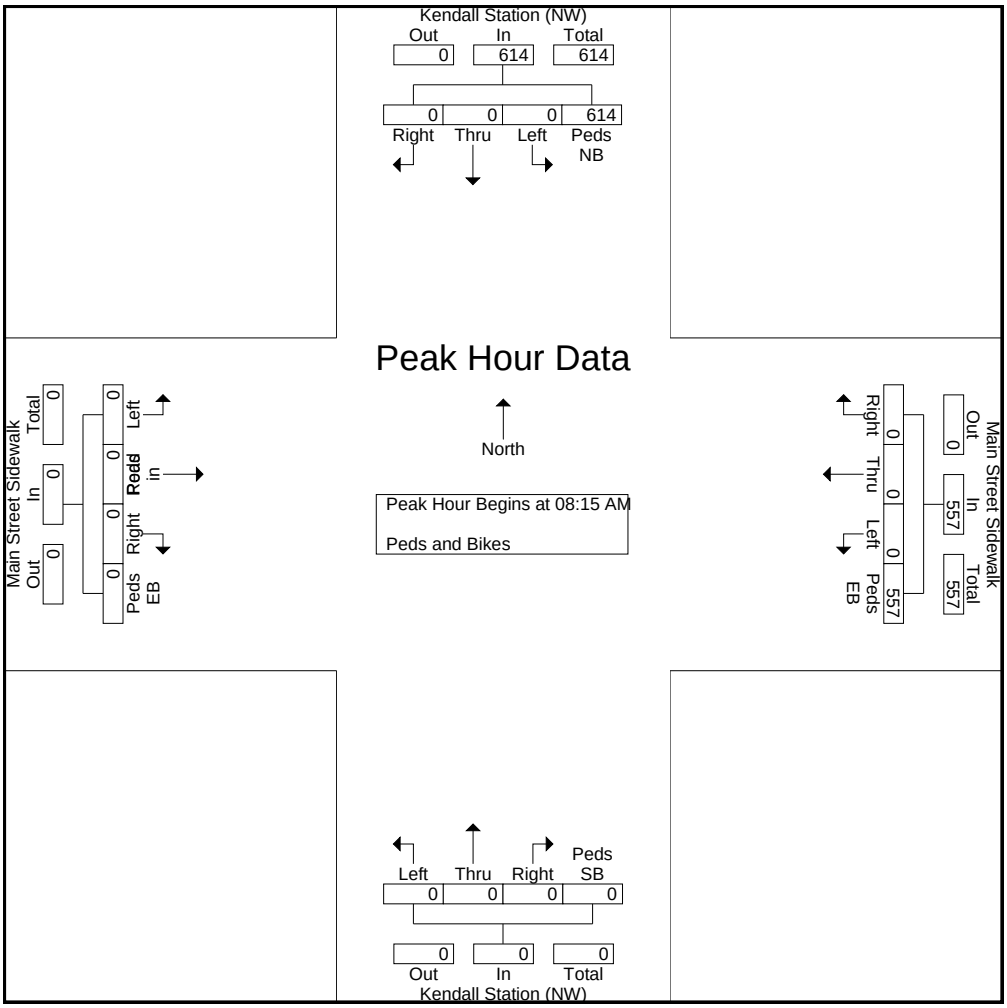
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 AAA
Site Code : TBA
Start Date : 5/12/2015
Page No : 2



N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 AAAA
Site Code : TBA
Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (NW) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	11	134	0	0	0	0	4	0	43	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	267
04:45 PM	0	0	0	0	0	0	24	146	0	0	0	0	1	0	38	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282
Total	0	0	0	0	0	0	35	280	0	0	0	0	5	0	81	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	549
05:00 PM	0	0	0	0	0	0	10	176	0	0	0	0	3	0	29	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320
05:15 PM	0	0	0	0	0	0	23	186	0	0	0	0	2	0	57	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385
05:30 PM	0	0	0	0	0	0	31	137	0	0	0	0	1	0	38	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	293
05:45 PM	0	0	0	0	0	0	33	138	0	0	0	0	0	0	41	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
Total	0	0	0	0	0	0	97	637	0	0	0	0	6	0	165	379	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1284
06:00 PM	0	0	0	0	0	0	40	140	0	0	0	0	3	0	65	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351
06:15 PM	0	0	0	0	0	0	28	128	0	0	0	0	3	0	50	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290
Grand Total	0	0	0	0	0	0	200	1185	0	0	0	0	17	0	361	711	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2474
Apprch %	0	0	0	0	0	0	14.4	85.6	0	0	0	0	1.6	0	33.1	65.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	8.1	47.9	0	0	0	0	0.7	0	14.6	28.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (NW) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																				
Peak Hour for Entire Intersection Begins at 05:15 PM																																				
05:15 PM	0	0	0	0	0	0	23	186	209	0	0	0	0	2	0	57	117	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385
05:30 PM							31	137	168							38	86	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	293
05:45 PM							33	138	171							41	74	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
06:00 PM							40	140	180							65	103	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351
Total Volume							127	601	728							201	380	587	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1315
% App. Total							17.4	82.6								34.2	64.7																			
PHF	.000	.000	.000	.000	.000	.000	.794	.808	.871	.000	.000	.000	.000	.500	.000	.773	.812	.834	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.854

N/S: Kendal Station Doorway (NW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 AAAA
Site Code : TBA
Start Date : 5/12/2015
Page No : 2

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 BBB
Site Code : TBA
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Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SW) From North								Main Street Sidewalk From East								Kendall Station (SW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	65	122	0	0	0	0	0	0	27	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288
07:45 AM	0	0	0	0	0	0	80	104	0	0	0	0	0	2	33	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288
Total	0	0	0	0	0	0	145	226	0	0	0	0	0	2	60	143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	576
08:00 AM	0	0	0	0	0	0	82	98	0	0	0	0	1	0	56	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	304
08:15 AM	0	0	0	0	0	1	111	118	0	0	0	0	0	0	59	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	365
08:30 AM	0	0	0	0	0	0	112	144	0	0	0	0	0	0	86	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	457
08:45 AM	0	0	0	0	0	0	89	150	0	0	0	0	1	1	88	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	446
Total	0	0	0	0	0	1	394	510	0	0	0	0	2	1	289	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1572
09:00 AM	0	0	0	0	0	0	68	162	0	0	0	0	1	0	84	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404
09:15 AM	0	0	0	0	0	0	53	102	0	0	0	0	1	0	85	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	302
Grand Total	0	0	0	0	0	1	660	1000	0	0	0	0	4	3	518	668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2854
Apprch %	0	0	0	0	0	0.1	39.7	60.2	0	0	0	0	0.3	0.3	43.4	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	23.1	35	0	0	0	0	0.1	0.1	18.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SW) From North									Main Street Sidewalk From East									Kendall Station (SW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																				
Peak Hour for Entire Intersection Begins at 08:15 AM																																				
08:15 AM	0	0	0	0	0	1	111	118	230	0	0	0	0	0	0	59	76	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	365
08:30 AM							112	144	256							86	115	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	457
08:45 AM							89	150	239							88	117	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	446
09:00 AM							68	162	230							84	89	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404
Total Volume							380	574	955							317	397	717	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1672
% App. Total						0.1	39.8	60.1						0.3	0.1	44.2	55.4																			
PHF	.000	.000	.000	.000	.000	.250	.848	.886	.933	.000	.000	.000	.000	.500	.250	.901	.848	.866	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.915

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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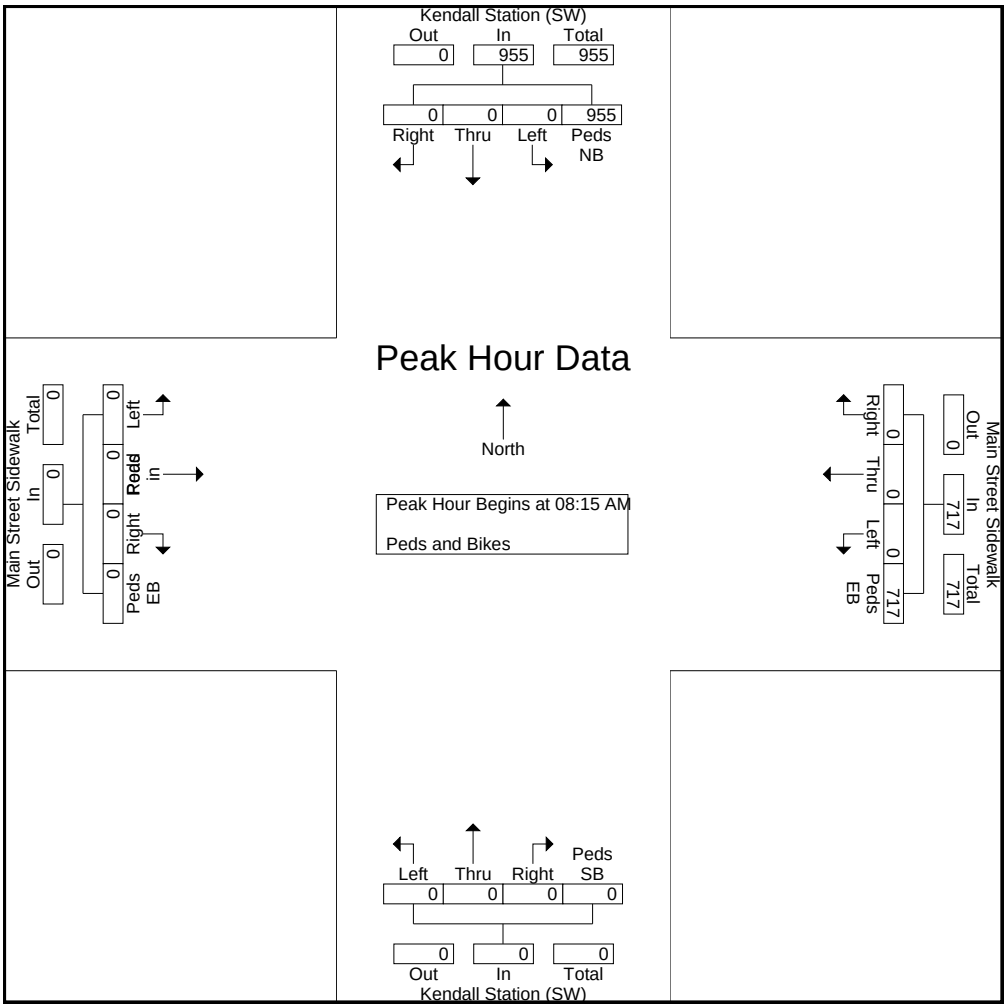

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 BBBB
Site Code : TBA
Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SW) From North								Main Street Sidewalk From East								Kendall Station (SW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	1	0	294	18	0	0	0	0	0	0	109	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	489
04:45 PM	0	0	0	0	1	1	294	14	0	0	0	0	0	0	127	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	537
Total	0	0	0	0	2	1	588	32	0	0	0	0	0	0	236	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1026
05:00 PM	0	0	0	0	0	0	390	13	0	0	0	0	0	0	104	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
05:15 PM	0	0	0	0	0	0	252	17	0	0	0	0	0	2	95	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	451
05:30 PM	0	0	0	0	0	0	242	11	0	0	0	0	0	0	120	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	439
05:45 PM	0	0	0	0	0	0	239	2	0	0	0	0	1	0	107	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	416
Total	0	0	0	0	0	0	1123	43	0	0	0	0	1	2	426	312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1907
06:00 PM	0	0	0	0	0	0	207	5	0	0	0	0	3	0	90	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	393
06:15 PM	0	0	0	0	0	0	190	12	0	0	0	0	1	3	103	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	376
Grand Total	0	0	0	0	2	1	2108	92	0	0	0	0	5	5	855	634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3702
Apprch %	0	0	0	0	0.1	0	95.7	4.2	0	0	0	0	0.3	0.3	57	42.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0.1	0	56.9	2.5	0	0	0	0	0.1	0.1	23.1	17.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SW) From North									Main Street Sidewalk From East									Kendall Station (SW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes SB	Bikes NB	Peds SB	Peds NB	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 04:30 PM																																					
04:30 PM	0	0	0	0	1	0	294	18	313	0	0	0	0	0	0	109	67	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	489
04:45 PM							294	14	310							127	100	227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	537
05:00 PM							390	13	403							104	94	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
05:15 PM							252	17	269							95	85	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	451
Total Volume	0	0	0	0	2	1	1230	62	1295	0	0	0	0	0	2	435	346	783	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2078
% App. Total					0.2	0.1	95	4.8							0.3	55.6	44.2																				
PHF	.000	.000	.000	.000	.500	.250	.788	.861	.803	.000	.000	.000	.000	.000	.250	.856	.865	.862	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.864

N/S: Kendal Station Doorway (SW)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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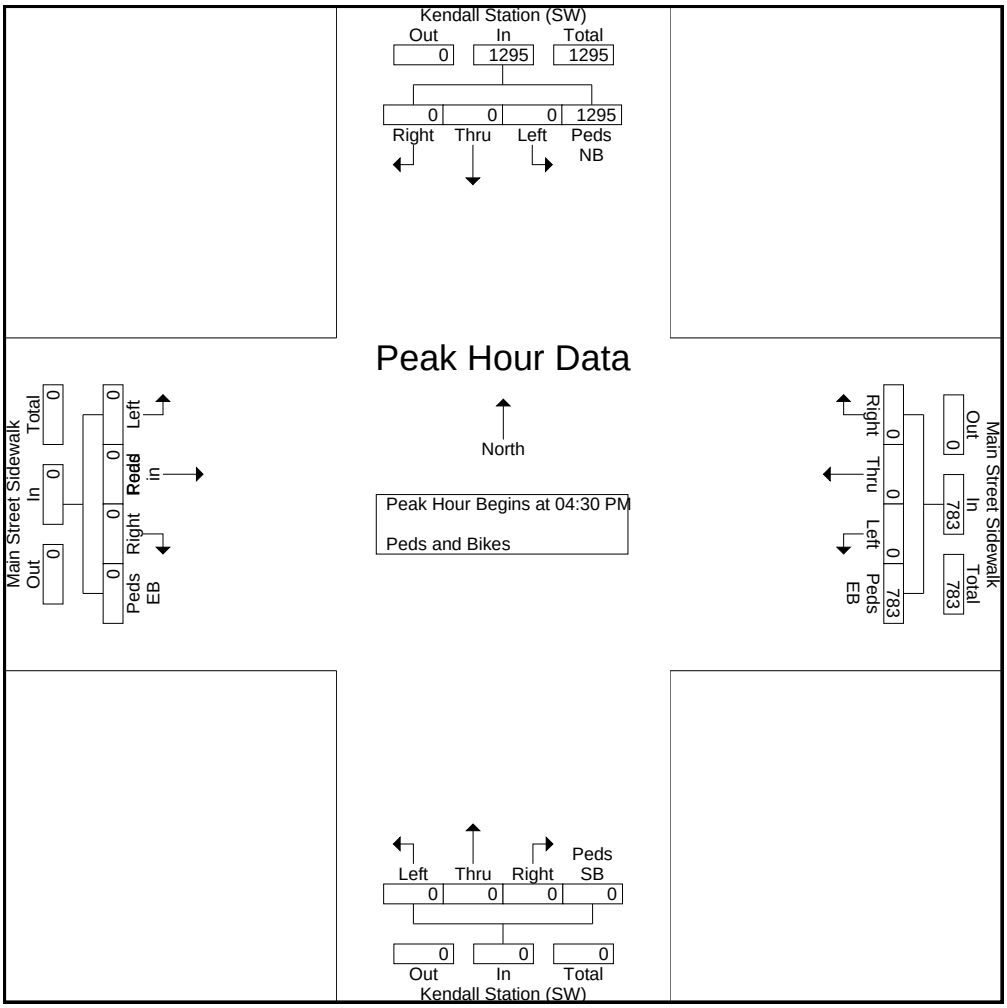

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154435 CCC
Site Code : TBA
Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendal Station Stairway (NE) From North								Main Street Sidewalk From East								Kendal Station Stairway (NE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	10	69	0	0	0	0	0	0	10	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168
07:45 AM	0	0	0	0	0	0	12	105	0	0	0	0	0	0	12	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257
Total	0	0	0	0	0	0	22	174	0	0	0	0	0	0	22	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	425
08:00 AM	0	0	0	0	0	0	14	88	0	0	0	0	0	0	16	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227
08:15 AM	0	0	0	0	0	0	12	133	0	0	0	0	0	0	10	161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316
08:30 AM	0	0	0	0	0	0	19	129	0	0	0	0	0	0	15	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282
08:45 AM	0	0	0	0	0	0	19	246	0	0	0	0	0	0	19	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	518
Total	0	0	0	0	0	0	64	596	0	0	0	0	0	0	60	623	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1343
09:00 AM	0	0	0	0	0	0	11	132	0	0	0	0	0	0	11	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253
09:15 AM	0	0	0	0	0	0	13	137	0	0	0	0	0	0	11	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257
Grand Total	0	0	0	0	0	0	110	1039	0	0	0	0	0	0	104	1025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2278
Apprch %	0	0	0	0	0	0	9.6	90.4	0	0	0	0	0	0	9.2	90.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	4.8	45.6	0	0	0	0	0	0	4.6	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendal Station Stairway (NE) From North									Main Street Sidewalk From East									Kendal Station Stairway (NE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total

Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	0	0	0	0	0	0	12	133	145	0	0	0	0	0	0	10	161	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	316
08:30 AM							19	129	148							15	119	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	282
08:45 AM							19	246	265							19	234	253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	518
09:00 AM							11	132	143							11	99	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253
Total Volume							61	640	701							55	613	668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1369
% App. Total							8.7	91.3								8.2	91.8																			
PHF	.000	.000	.000	.000	.000	.000	.803	.650	.661	.000	.000	.000	.000	.000	.000	.724	.655	.660	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.661

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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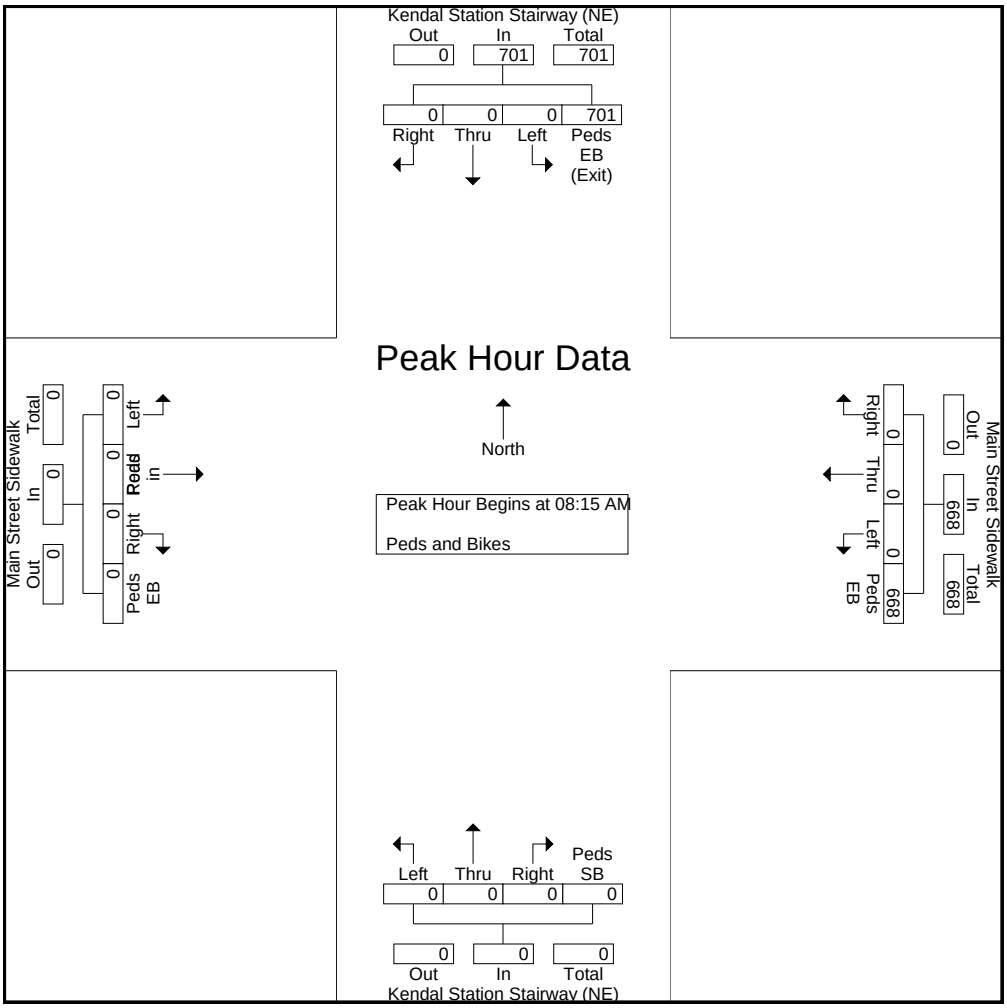

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 CCCC
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Page No : 1

Groups Printed- Peds and Bikes

	Kendal Station Stairway (NE) From North								Main Street Sidewalk From East								Kendal Station Stairway (NE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	58	35	0	0	0	0	0	0	54	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
04:45 PM	0	0	0	0	0	0	82	41	0	0	0	0	0	0	85	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
Total	0	0	0	0	0	0	140	76	0	0	0	0	0	0	139	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	419
05:00 PM	0	0	0	0	0	0	112	30	0	0	0	0	0	0	108	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	276
05:15 PM	0	0	0	0	0	0	135	61	0	0	0	0	0	0	141	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	389
05:30 PM	0	0	0	0	0	0	125	70	0	0	0	0	0	0	119	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	379
05:45 PM	0	0	0	0	0	0	112	32	0	0	0	0	0	0	98	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	275
Total	0	0	0	0	0	0	484	193	0	0	0	0	0	0	466	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1319
06:00 PM	0	0	0	0	0	0	93	66	0	0	0	0	0	0	137	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	346
06:15 PM	0	0	0	0	0	0	102	42	0	0	0	0	0	0	116	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	285
Grand Total	0	0	0	0	0	0	819	377	0	0	0	0	0	0	858	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2369
Apprch %	0	0	0	0	0	0	68.5	31.5	0	0	0	0	0	0	73.1	26.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	34.6	15.9	0	0	0	0	0	0	36.2	13.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendal Station Stairway (NE) From North									Main Street Sidewalk From East									Kendal Station Stairway (NE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total

Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	0	0	0	0	0	0	135	61	196	0	0	0	0	0	0	141	52	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	389
05:30 PM							125	70	195							119	65	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	379
05:45 PM							112	32	144							98	33	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	275
06:00 PM							93	66	159							137	50	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	346
Total Volume							465	229	694							495	200	695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1389
% App. Total							67	33								71.2	28.8																				
PHF	.000	.000	.000	.000	.000	.000	.861	.818	.885	.000	.000	.000	.000	.000	.000	.878	.769	.900	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.893

N/S: Kendal Station Stairway (NE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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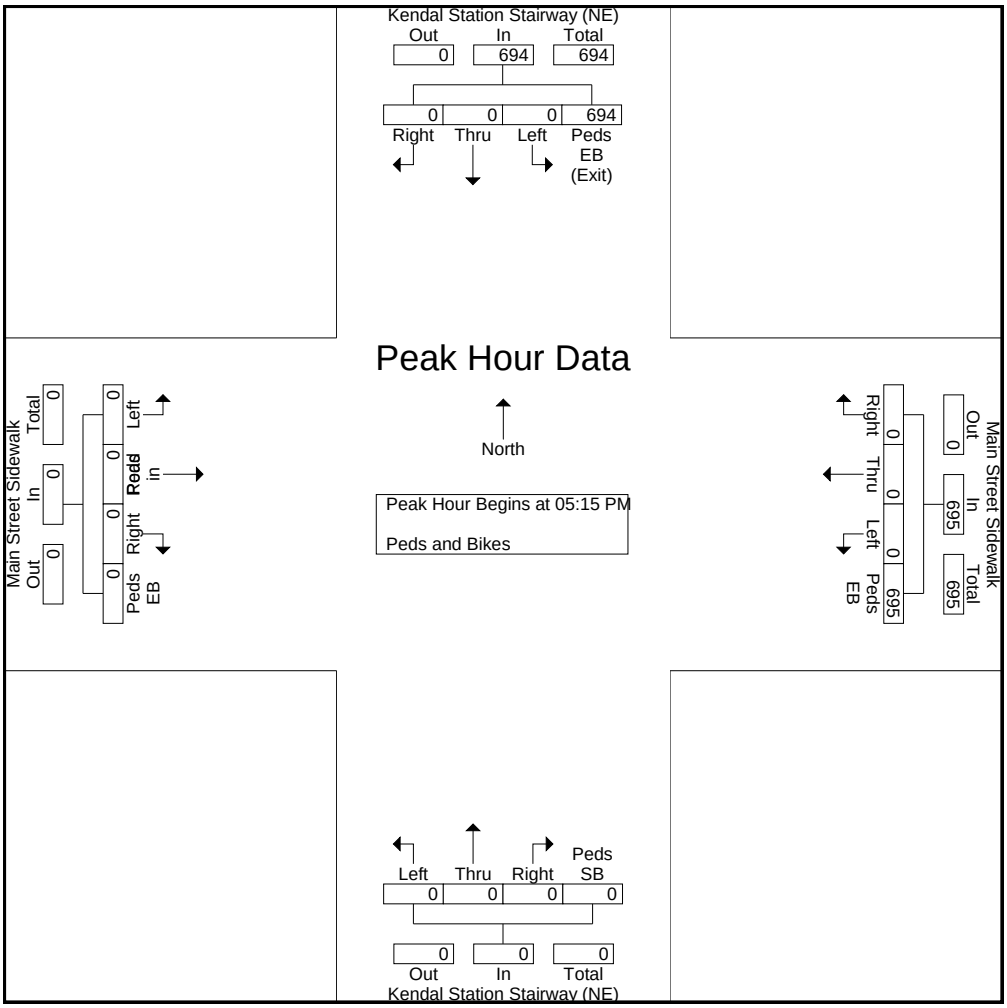
Peak Hour Data



N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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File Name : 154435 DDD
Site Code : TBA
Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SE) From North								Main Street Sidewalk From East								Kendall Station (SE) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
07:30 AM	0	0	0	0	0	0	23	69	0	0	0	0	0	0	41	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
07:45 AM	0	0	0	0	0	0	26	110	0	0	0	0	0	0	46	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	239
Total	0	0	0	0	0	0	49	179	0	0	0	0	0	0	87	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	415
08:00 AM	0	0	0	0	0	0	38	85	0	0	0	0	0	0	46	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228
08:15 AM	0	0	0	0	0	0	40	157	0	0	0	0	0	0	81	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	361
08:30 AM	0	0	0	0	0	0	49	171	0	0	0	0	0	0	94	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	414
08:45 AM	0	0	0	0	0	0	31	164	0	0	0	0	1	0	108	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	411
Total	0	0	0	0	0	0	158	577	0	0	0	0	1	0	329	349	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1414
09:00 AM	0	0	0	0	0	0	30	137	0	0	0	0	0	0	85	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	327
09:15 AM	0	0	0	0	0	0	22	123	0	0	0	0	2	0	92	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	297
Grand Total	0	0	0	0	0	0	259	1016	0	0	0	0	3	0	593	582	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2453
Apprch %	0	0	0	0	0	0	20.3	79.7	0	0	0	0	0.3	0	50.3	49.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	10.6	41.4	0	0	0	0	0.1	0	24.2	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SE) From North									Main Street Sidewalk From East									Kendall Station (SE) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 08:15 AM																																					
08:15 AM	0	0	0	0	0	0	40	157	197	0	0	0	0	0	0	81	83	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	361
08:30 AM							49	171	220							94	100	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	414
08:45 AM							31	164	195							108	107	216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	411
09:00 AM							30	137	167							85	75	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	327
Total Volume							150	629	779							368	365	734	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1513
% App. Total							19.3	80.7						0.1		50.1	49.7																				
PHF	.000	.000	.000	.000	.000	.000	.765	.920	.885	.000	.000	.000	.000	.250	.000	.852	.853	.850	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.914

N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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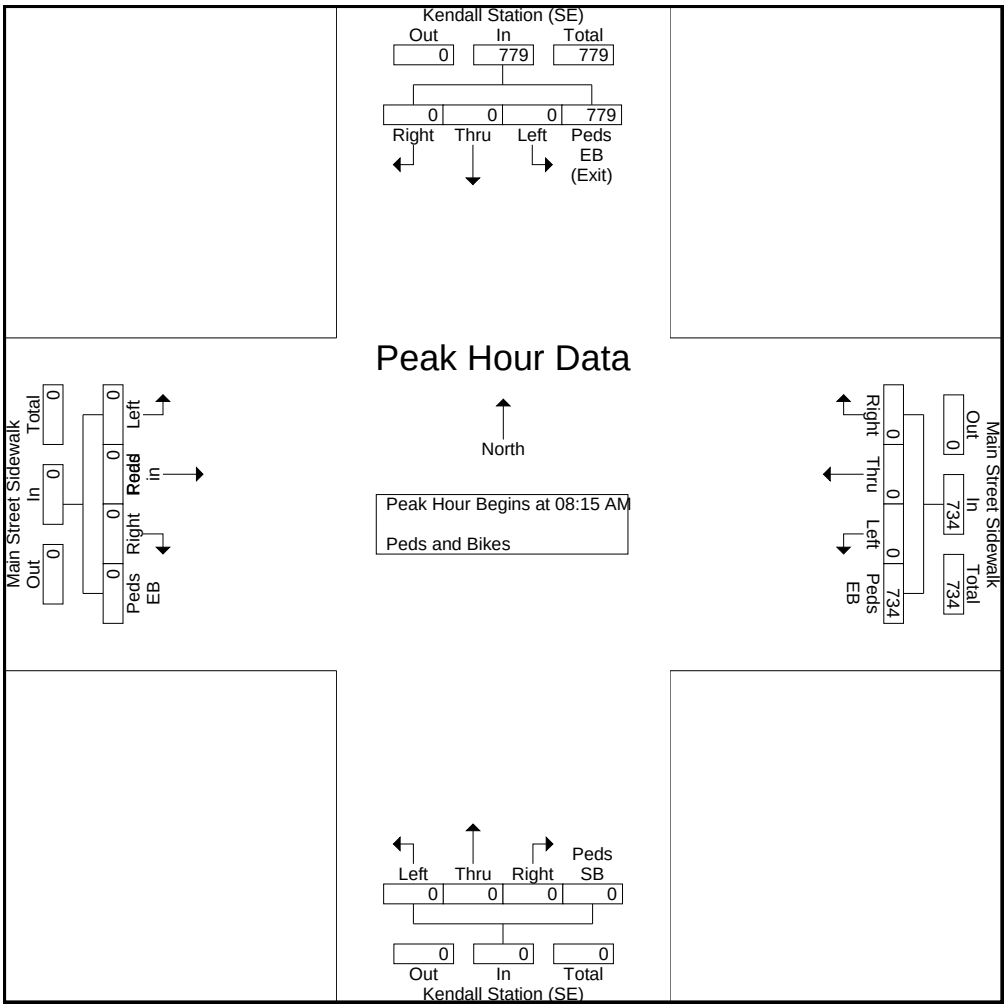

Peak Hour Data

North

Peak Hour Begins at 08:15 AM

Peds and Bikes

N/S: Kendal Station Doorway (SE)
E/W: Main Street Sidewalk
City, State: Cambridge, MA
Client: VHB/ S. Mandzo-Preldzic

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Start Date : 5/12/2015
Page No : 1

Groups Printed- Peds and Bikes

	Kendall Station (SE) From North								Main Street Sidewalk From East								Kendall Station (NW) From South								Main Street Sidewalk From West								
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	Int. Total
04:30 PM	0	0	0	0	0	0	127	27	0	0	0	0	0	0	87	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	303
04:45 PM	0	0	0	0	0	0	121	13	0	0	0	0	1	0	82	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287
Total	0	0	0	0	0	0	248	40	0	0	0	0	1	0	169	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	590
05:00 PM	0	0	0	0	0	0	211	10	0	0	0	0	0	1	53	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	358
05:15 PM	0	0	0	0	0	0	165	26	0	0	0	0	0	0	81	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348
05:30 PM	0	0	0	0	0	0	141	44	0	0	0	0	0	0	86	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321
05:45 PM	0	0	0	0	0	0	152	37	0	0	0	0	1	0	84	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330
Total	0	0	0	0	0	0	669	117	0	0	0	0	1	1	304	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1357
06:00 PM	0	0	0	0	0	0	128	50	0	0	0	0	0	0	69	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300
06:15 PM	0	0	0	0	0	0	107	61	0	0	0	0	1	0	64	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279
Grand Total	0	0	0	0	0	0	1152	268	0	0	0	0	3	1	606	496	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2526
Apprch %	0	0	0	0	0	0	81.1	18.9	0	0	0	0	0.3	0.1	54.8	44.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	45.6	10.6	0	0	0	0	0.1	0	24	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

	Kendall Station (SE) From North									Main Street Sidewalk From East									Kendall Station (NW) From South									Main Street Sidewalk From West									
Start Time	Right	Peds in Road	Thru	Left	Bikes WB (Enter)	Bikes EB (Exit)	Peds WB (Enter)	Peds EB (Exit)	App. Total	Right	Peds in Road	Thru	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Right	Peds in Road	Thru	Left	Bikes NB	Bikes SB	Peds NB	Peds SB	App. Total	Right	Right	Peds in Road	Left	Bikes WB	Bikes EB	Peds WB	Peds EB	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																																					
Peak Hour for Entire Intersection Begins at 05:00 PM																																					
05:00 PM	0	0	0	0	0	0	211	10	221	0	0	0	0	0	1	53	83	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	358
05:15 PM							165	26	191							81	76	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348
05:30 PM							141	44	185							86	50	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321
05:45 PM							152	37	189							84	56	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330
Total Volume							669	117	786							304	265	571	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1357
% App. Total							85.1	14.9						0.2	0.2	53.2	46.4																				
PHF	.000	.000	.000	.000	.000	.000	.793	.665	.889	.000	.000	.000	.000	.250	.250	.884	.798	.909	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.948

N/S: Kendal Station Doorway (SE)
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Start Date : 5/12/2015
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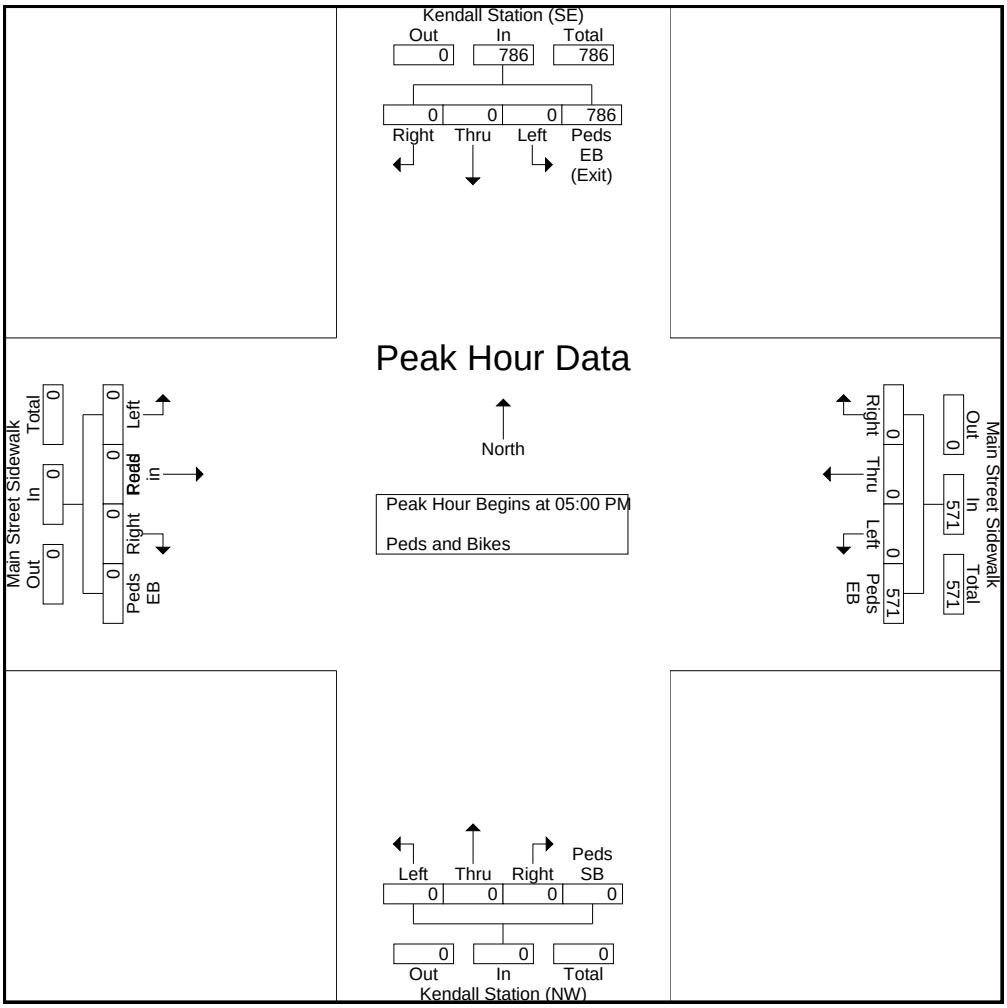


Analysis Calculation Backup

EXITSING BUILD UTILIZATION ANALYSIS

RED LINE

Red Line @ Kendall

	Existing Capacity: Frequency (# Trains/Peak Hour)*	OTP Factor (on time performance)**	# Cars / Red Line Train	MBTA Policy Capacity (# Pax/Car)***	MBTA Policy Capacity (# Pax/Peak Hour)
Inbound (Southbound to Braintree/Ashmont)	13	0.86	6	167	11,202
Outbound (Northbound to Alewife)	13	0.86	6	167	11,202

* Schedule frequency assuming 9 minute headways for two lines = 4.5 min headway at Kendall; 60/4.5 = 13 trains
** MBTA 2014 Annual performance report, rail and transit division scorecard (red line); definition of on-time metric is shown on Page 29 of same report
*** MBTA blue book 14th edition policy capacity & crush capacity (for crush used weighted average across red line vehicle fleet)

	Existing Capacity: Frequency (# Trains/Peak Hour)*	no OTP Factor - USING ACTUAL OBSERVED	# Cars / Red Line Train	MBTA Policy Capacity (# Pax/Car)***	MBTA Policy Capacity (# Pax/Peak Hour)
AM Peak Inbound (Southbound to Braintree/Ashmont)	14	1.00	6	167	14,028
AM Peak Outbound (Northbound to Alewife)	14	1.00	6	167	14,028
PM Peak Inbound (Southbound to Braintree/Ashmont)	12	1.00	6	167	12,024
PM Peak Outbound (Northbound to Alewife)	10	1.00	6	167	10,020

(a) observed frequency in May 2015 was 14 inbound trains during AM and 12 inbound trains during PM; outbound 14 in the AM and 10 in the PM

Existing Ridership — MBTA Data Grown to 2015

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
Inbound	10,713	530	1,667	9,576	4,537	1,873	258	6,152
Outbound	5,381	145	2,017	3,510	9,105	1,471	654	9,922

Source: MBTA November 2012 data, grown by 4% per year for 3 years (File:\\vhb\proj\Boston\11356.00\ssheets\TIS\Transit Analysis\Existing Red Line Ridership.xlsx)

Existing Ridership — VHB Observations May 2015

	AM Peak Hour Load Entering #	AM Peak Hour Boardings (Trips OUT) ##	AM Peak Hour Alightings (Trips IN) ##	AM Peak Hour Load Exiting	PM Peak Hour Load Entering #	PM Peak Hour Boardings (Trips OUT)##	PM Peak Hour Alightings (Trips IN)##	PM Peak Hour Load Exiting
Inbound	13,300	689	958	11,300	4,900	867	1,338	6,800
Outbound	6,700	100	1,501	3,500	10,700	1,294	358	11,800

VHB observed train loads (May 2015) and estimated corresponding numerical load value (File:\\mabos\projects\11356.00\ssheets\TIS\Transit Analysis\CapacityfieldAnalysis\Kendall Sq Field Study - Analysis.xlsx)
VHB station counts from May 5, 2012 (File:\\Mabos\projects\11356.00\ssheets\TIS\Transit Analysis\StationCounts&BikeweekImpactAnalysis\Station Counts (Typical & Bike Week Impact).xlsx)

Existing V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
Inbound	0.96	0.85	0.40	0.55
Outbound	0.48	0.31	0.81	0.89
Inbound	0.95	0.81	0.41	0.57
Outbound	0.48	0.25	1.07	1.18

Project Generated Trips RED LINE

	AM Peak Hour OUT (Boardings)	AM Peak Hour IN (Alightings)	PM Peak Hour OUT (Boardings)	PM Peak Hour IN (Alightings)
Inbound	90	178	198	129
Outbound	13	279	295	34
Inbound	103	456	493	163

Existing+Project Ridership — MBTA

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
Inbound	10,891	620	1,845	9,666	4,665	2,071	386	6,350
Outbound	5,660	158	2,295	3,523	9,139	1,767	688	10,218

Existing+Project Ridership — VHB

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
Inbound	13,478	779	1,136	13,121	5,029	1,065	1,467	4,627
Outbound	6,979	113	1,780	5,312	10,734	1,589	392	11,931

Existing+Project V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
Inbound	0.97	0.86	0.42	0.57
Outbound	0.51	0.31	0.82	0.91
Inbound	0.96	0.94	0.42	0.38
Outbound	0.50	0.38	1.07	1.19

Remaining Red Line Capacity

	Total Pax AM Peak Entering	Total Pax AM Peak Exiting	Total Pax PM Peak Hour Entering	Total Pax PM Peak Hour Exiting	Pax / Train AM Peak Entering	Pax / Train AM Peak Exiting	Pax / Train PM Peak Hour Entering	Pax / Train PM Peak Hour Exiting	Pax / Car AM Peak Entering	Pax / Car AM Peak Exiting	Pax / Car PM Peak Hour Entering	Pax / Car PM Peak Hour Exiting
Inbound	311	1536	6537	4853	24	118	503	373	4	20	84	62
Outbound	5542	7680	2063	985	426	591	159	76	71	98	26	13
Inbound	550	907	6995	7397	39	65	583	616	7	11	97	103
Outbound	7049	8716	-714	-1911	504	623	-71	-191	84	104	-12	-32

Bus Replacement Scenario (No Red Line Trains Running)

per MBTA Data

	Number of Bus Trips AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting
Inbound	202	179	86	118
Outbound	105	65	169	189

per VHB Data

	Number of Bus Trips AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting
Inbound	250	243	93	86
Outbound	129	98	199	221

54 = avg bus capacity (pa

BUS LINES

Bus Routes @ Kendall

	Frequency (# Buses/Peak Hour)****			MBTA Policy Capacity (# Pax/Bus)***	MBTA Policy Capacity (# Pax/Peak Hour)
1 Inbound	8	1.00	1	54	432
1 Outbound	8	1.00	1	54	432
68 Inbound	2	1.00	1	54	108
68 Outbound	2	1.00	1	54	108
85 Inbound	2	1.00	1	54	108
85 Outbound	2	1.00	1	54	108
CT1 Inbound	3	1.00	1	54	162
CT1 Outbound	4	1.00	1	54	216
CT2 Inbound	3	1.00	1	54	162
CT2 Outbound	3	1.00	1	54	162

**** MBTA Scheduled Avg. Peak Hour Frequency (ex: if a bus line runs 6 buses in the AM and 4 buses in the PM, the analysis would use an avg. of 5 buses)
***** On time performance adjustment NOT requested for buses, leave as 100%
*** MBTA blue book 14th edition policy capacity & crush capacity (for crush used weighted average across red line vehicle fleet)

MBTA Data Grown to 2015

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
1 Inbound	309	8	21	296	306	59	7	358
1 Outbound	315	8	60	263	312	27	13	326
68 Inbound	24	0	23	1	10	0	10	0
68 Outbound	0	7	0	7	0	24	0	24
85 Inbound	81	0	81	0	7	0	7	0
85 Outbound	0	4	0	4	0	70	0	70
CT1 Inbound	121	4	6	119	50	33	2	81
CT1 Outbound	122	1	68	55	57	3	3	57
CT2 Inbound	140	27	45	122	31	33	6	57
CT2 Outbound	75	8	38	46	142	27	58	110

Source: MBTA November 2012 data, grown by 2% per year for 3 years (File:\\vhb\proj\Boston\11356.00\ssheets\TIS\Transit Analysis\Existing Bus Ridership.xlsx)

Existing V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
1 Inbound	0.71	0.69	0.71	0.83
1 Outbound	0.73	0.61	0.72	0.75
68 Inbound	0.23	0.01	0.09	0.00
68 Outbound	0.00	0.07	0.00	0.23
85 Inbound	0.75	0.00	0.07	0.00
85 Outbound	0.00	0.04	0.00	0.65
CT1 Inbound	0.75	0.73	0.31	0.50
CT1 Outbound	0.56	0.26	0.27	0.27
CT2 Inbound	0.86	0.75	0.19	0.35
CT2 Outbound	0.47	0.28	0.88	0.68

Project Generated Trips BUSES

	AM Peak Hour OUT (Boardings)	AM Peak Hour IN (Alightings)	PM Peak Hour OUT (Boardings)	PM Peak Hour IN (Alightings)
1 Inbound	3	8	31	3
1 Outbound	3	22	14	6
68 Inbound	0	9	0	4
68 Outbound	3	0	13	0
85 Inbound	0	29	0	3
85 Outbound	2	0	37	0
CT1 Inbound	2	2	17	1
CT1 Outbound	0	25	2	1
CT2 Inbound	11	16	17	3
CT2 Outbound	3	14	14	27
	28	125	145	49

MBTA

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
1 Inbound	317	12	29	300	309	91	11	389
1 Outbound	337	12	83	267	318	41	19	340
68 Inbound	33	0	32	1	14	0	14	0
68 Outbound	0	10	0	10	0	37	0	37
85 Inbound	110	0	110	0	11	0	11	0
85 Outbound	0	6	0	6	0	107	0	107
CT1 Inbound	123	6	9	121	51	50	3	98
CT1 Outbound	147	1	93	56	59	5	5	59
CT2 Inbound	156	37	61	133	34	50	9	75
CT2 Outbound	89	12	52	49	169	41	85	124

Existing+Project V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
1 Inbound	0.73	0.69	0.72	0.90
1 Outbound	0.78	0.62	0.74	0.79
68 Inbound	0.30	0.01	0.13	0.00
68 Outbound	0.00	0.10	0.00	0.35
85 Inbound	1.02	0.00	0.10	0.00
85 Outbound	0.00	0.06	0.00	0.99
CT1 Inbound	0.76	0.74	0.31	0.60
CT1 Outbound	0.68	0.26	0.27	0.27
CT2 Inbound	0.96	0.82	0.21	0.46
CT2 Outbound	0.55	0.30	1.04	0.77

Total Pax / Pax / Bus

	Total Pax AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting	Pax / Bus AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting
1 Inbound	115	132	123	43	14	17	15	5
1 Outbound	95	165	114	92	12	21	14	12
68 Inbound	75	107	94	108	38	53	47	54
68 Outbound	108	98	108	71	54	49	54	35
85 Inbound	-2	108	97	108	-1	54	49	54
85 Outbound	108	102	108	1	54	51	54	1
CT1 Inbound	39	41	111	64	13	14	37	21
CT1 Outbound	69	160	157	157	17	40	39	39
CT2 Inbound	6	29	128	87	2	10	43	29
CT2 Outbound	73	113	-7	38	24	38	-2	13

EZ RIDE

EZRide @ Kendall

	Frequency (# Shuttles/Peak Hour)*			Capacity (# Pax/Shuttle)(a)	Capacity (# Pax/Peak Hour)
Inbound	7	1.00	1	40	267
Outbound	7	1.00	1	40	267

(a) EZRide feasibility report (March 2015) defines functional capacity as 38-40 passengers per bus; use 40 fo rthis analysis
(b) service runs 7-10 minute headways during peak hours; average = 8.5 min round to 9; 60/9=7 buses per peak hour

EZ Ride Shuttle Data 2014

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
Inbound	103	16	49	70	52	31	19	64
Outbound	82	18	36	64	13	18	11	20

Existing V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
Inbound	0.39	0.26	0.20	0.24
Outbound	0.31	0.24	0.05	0.08

Project Generated Trips EZ RIDE

	AM Peak Hour OUT (Boardings)	AM Peak Hour IN (Alightings)	PM Peak Hour OUT (Boardings)	PM Peak Hour IN (Alightings)
Inbound	7	19	17	9
Outbound	8	14	10	5
	15	33	27	15

EZ Ride Shuttl

	AM Peak Hour Load Entering	AM Peak Hour Boardings (Trips OUT)	AM Peak Hour Alightings (Trips IN)	AM Peak Hour Load Exiting	PM Peak Hour Load Entering	PM Peak Hour Boardings (Trips OUT)	PM Peak Hour Alightings (Trips IN)	PM Peak Hour Load Exiting
Inbound	122	23	68	77	61	48	28	81
Outbound	96	26	50	72	18	28	16	30

Existing+Project V/C

	AM Peak Hour Enter V/C	AM Peak Hour Exit V/C	PM Peak Hour Enter V/C	PM Peak Hour Exit V/C
Inbound	0.46	0.29	0.23	0.31
Outbound	0.36	0.27	0.07	0.11

Total Pax / Pax / Shuttle

	Total Pax AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting	Pax / Shuttle AM Peak Entering	AM Peak Exiting	PM Peak Hour Entering	PM Peak Hour Exiting
Inbound	145	190	205	185	22	28	31	28
Outbound	171	195	248	237	26	29	37	35

TOTAL

Project Generated Transit Trips TOTAL ALL TRANSIT MODES

	AM Peak Hour OUT (Boardings)	AM Peak Hour IN (Alightings)	PM Peak Hour OUT (Boardings)	PM Peak Hour IN (Alightings)
	146	614	666	226

Raw Transit Mode Share			
	Residential	Office	
Rail	9%	14%	
North Station (25% of rail)	*2%*	*4%*	assign to EZ Ride/Bus
South Station & Porter (75% of rail)	*7%*	*11%*	assign to Red Line
Bus	37%	22%	
Subway	54%	64%	assign to Red Line
	100%	100%	

Source:

Rail, Subway and Bus % from CTPP Data (Office Census Tract 3523&3531.02; Residential Cenus Tract 3524&3523)

Rail further split between North Station, South Station and Porter Sq per University Park 2014 PTDM Data (25% of rail North Station, 75% of rail South&Porter Stations)

Adjusted Transit Mode Share		
	Residential	Commercial
Bus (incl EZ Ride)	39%	26%
Red Line**	61%	75%
	100%	100%

Note:

*assuming that all transit riders destined for North Station Commuter Rail Line are using EZ Ride Shuttle

** assuming that all transit riders destined for South Station and Porter Sq Commuter Rail Lines are using the Red Line

Mode Share to USE		
	Residential	Commercial
Subway / Red Line	61%	75%

	All Transit Trips (from Master Trip Gen)					
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Residential	10	41	52	41	22	63
Commercial	604	105	709	185	644	829

Total Red Line Trips Both Directions (References 61% Subway Residential and 75% Subway Commercial)					
AM Peak Hour			PM Peak Hour		
In	Out	Total	In	Out	Total
456	103	560	163	493	656

	Existing Station Counts Numbers @ Kendall *				Existing Station Distribution % @ Kendall				Total Subway Trips Distributed By Direction					
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Trips IN (Alightings)	Trips OUT (Boardings)	Total	Trips IN (Alightings)	Trips OUT (Boardings)	Total
Inbound (Southbound to Braintree/Ashmont)	958	689	1338	867	39.0%	87.3%	78.9%	40.1%	178	90	**268**	129	198	**326**
Outbound (Northbound to Alewife)	1501	100	358	1294	61.0%	12.7%	21.1%	59.9%	279	13	**292**	34	295	**330**
Total	*2459*	*789*	*1696*	*2161*	*100%*	*100%*	*100%*	*100%*	*456*	*103*	*560*	*163*	*493*	*656*
									OK	*OK*	*OK*	*OK*	*OK*	*OK*

Source: * VHB Station Counts May 5, 2012 (\\vhb\proj\Boston\11356.00\ssheets\TIS\Transit Analysis\StationCounts&BikeweekImpactAnalysis)

Mode Share to USE		
	Residential	Commercial
Bus	39%	26%

	All Transit Trips (from Master Trip Gen)					
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Residential	10	41	52	41	22	63
Commercial	604	105	709	185	644	829

Total Bus Trips All Routes (References 39% Bus Residential and 26% Bus Commercial)					
AM Peak Hour			PM Peak Hour		
In	Out	Total	In	Out	Total
158	43	201	63	173	236

	Existing Bus Pax Numbers @ Kendall				Existing Bus Pax Distribution % @ Kendall				Total Bus Trips Distributed By Route					
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Alightings (Trips IN)	Boardings (Trips OUT)	Trips IN (Alightings)	Trips OUT (Boardings)	Total	Trips IN (Alightings)	Trips OUT (Boardings)	Total
Bus 1 Inbound	20	8	7	56	4.9%	8.1%	5.3%	18.1%	8	3	**11**	3	31	**35**
Bus 1 Outbound	57	8	12	25	14.0%	8.1%	9.2%	8.1%	22	3	**26**	6	14	**20**
Bus 68 Inbound	22	0	9	0	5.4%	0.0%	6.9%	0.0%	9	0	**9**	4	0	**4**
Bus 68 Outbound	0	7	0	23	0.0%	7.1%	0.0%	7.4%	0	3	**3**	0	13	**13**
Bus 85 Inbound	76	0	7	0	18.6%	0.0%	5.3%	0.0%	29	0	**29**	3	0	**3**
Bus 85 Outbound	0	4	0	66	0.0%	4.0%	0.0%	21.4%	0	2	**2**	0	37	**37**
Bus CT1 Inbound	6	4	2	31	1.5%	4.0%	1.5%	10.0%	2	2	**4**	1	17	**18**
Bus CT1 Outbound	64	1	3	3	15.7%	1.0%	2.3%	1.0%	25	0	**25**	1	2	**3**
Bus CT2 Inbound	42	25	6	31	10.3%	25.3%	4.6%	10.0%	16	11	**27**	3	17	**20**
Bus CT2 Outbound	36	8	55	25	8.8%	8.1%	42.0%	8.1%	14	3	**17**	27	14	**41**
EZRide Inbound	49	16	19	31	12.0%	16.2%	14.5%	10.0%	19	7	**26**	9	17	**27**
EZRide Outbound	36	18	11	18	8.8%	18.2%	8.4%	5.8%	14	8	**22**	5	10	**15**
All Routes Inbound Total	*408*	*99*	*131*	*309*	*53%*	*54%*	*38%*	*48%*	*158*	*43*	*201*	*63*	*173*	*236*
All Routes Outbound Total	*408*	*99*	*131*	*309*	*47%*	*46%*	*62%*	*52%*						
					100%	*100%*	*100%*	*100%*	*158*	*43*	*201*	*63*	*173*	*236*
									OK	*OK*	*OK*	*OK*	*OK*	*OK*

Source: MBTA Bus Ridecheck Data, November 2012 (\\mabos\projects\11356.00\ssheets\TIS\Transit Analysis\MBTA Data)

Source: Charles River TMA Ridership Data from Sept. 2014 (\\vhb\proj\Boston\11356.00\ssheets\TIS\Transit Analysis\EZRide)

* Note that only Boardings are recorded by the TMA, assume that same # of people arrive with EZRide in the AM and leave on EZRide in the PM

RED LINE RIDERSHIP DATA AT KENDALL STATION

	MBTA Nov. 2012 Counts			
	Load Entering Station	**Boardings**	**Alightings**	**Load Exiting Station**
AM Peak Hour(8-9am)		5%	16%	
Southbound	9524	471	1482	8513
Northbound	4784	129	1793	3120
		3%	37%	
PM Peak Hour(5-6pm)		41%	6%	
Southbound	4033	1665	229	5469
Northbound	8094	1308	581	8821
		16%	7%	

GROWTH RATE PER YEAR
1.04

	MBTA 2012 Data grown to 2015 (4% per year for 3 years)			
	Load Entering Station	**Boardings**	**Alightings**	**Load Exiting Station**
AM Peak Hour(8-9am)				
Southbound	10713	530	1667	9576
Northbound	5381	145	2017	3510
PM Peak Hour(5-6pm)				
Southbound	4537	1873	258	6152
Northbound	9105	1471	654	9922

	VHB LOAD OBSERVATION ESTIMATES May 12&13, 2015 (during bikeweek)									
	Estimated Load Entering Station **	*delta from mbta*	**Counted Station Boardings***	*delta from mbta*	**Counted Station Alightings***	*delta from mbta*	**Estimated Load Exiting Station ****	*delta from mbta*	**Calculated Load Exiting Station *****	*delta from mbta*
AM Peak Hour(8-9am)										
Southbound	13300	24%	689	30%	958	-43%	11300	18%	13031	36%
Northbound	6700	25%	100	-31%	1501	-26%	3500	0%	5299	51%
PM Peak Hour(5-6pm)										
Southbound	4900	8%	867	-54%	1338	419%	6800	11%	4429	-28%
Northbound	10700	18%	1294	-12%	358	-45%	11800	19%	11636	17%

* note that station boardings/alightings do NOT necessarily represent train boardings/alightings, as ppl might be waiting in the station

** estimated entering and exiting loads are based on VHB observations (not actual counts)

*** calculated exit load = entering load + boardings - alightings (this calculation assumes that all people entering teh station will get on the train, and will not need to wait; similarly it assumes that ppl alighting the train will exit the station promptly, and not wait on the platforms)

unusually high when compared to mbta number, but correct per PDI count report

MBTA BlueBook Data													
RED LINE GROWTH%	FY 2007	07 - '08	avg annual %	FY 2008	08 - '10	avg annual %	FY 2010	10 - '13	avg annual %	FY 2013	avg annual growth rate		
Typical Weekday Ridership	226,417.0	7.3%	7.3%	242,926.0	-0.5%	-0.3%	241,603.0	13%	4%	272,684.0	3.8%	20%	3.4%
Annual Ridership	66,793,396.0	9.6%	9.6%	73,185,914.0	1.7%	0.9%	74,445,042.0	13%	4%	84,270,589.0	4.9%	26%	4.4%
											4%		4%

Hub and Spoke Study (July 2012)	
Past two decades 1991-2011, Avg annual rate growth	1.2%
Accelerated in the past five years 2006-2011, Avg annual growth	2.9%
Future Baseline Growth Scenario	1.2%
Future Moderate Growth Scenario	1.5%
Future High Growth Scenario	2.9%

BUS RIDERSHIP DATA AT KENDALL SQUARE

	MBTA Nov. 2012 Counts & EZRide 2014			
	Load Entering Stop	**Boardings (Trips OUT)**	**Alightings (Trips IN)**	**Load Exiting Stop**
AM Peak Hour(8-9am)				
Bus 1 Inbound	291	8	20	279
Bus 1 Outbound	297	8	57	248
Bus 68 Inbound	23	0	22	1
Bus 68 Outbound	0	7	0	7
Bus 85 Inbound	76	0	76	0
Bus 85 Outbound	0	4	0	4
Bus CT1 Inbound	114	4	6	112
Bus CT1 Outbound	115	1	64	52
Bus CT2 Inbound	132	25	42	115
Bus CT2 Outbound	71	8	36	43
EZRide Inbound*	103	16	49	70
EZRide Outbound*	82	18	36	64
PM Peak Hour(5-6pm)				
Bus 1 Inbound	288	56	7	337
Bus 1 Outbound	294	25	12	307
Bus 68 Inbound	9	0	9	0
Bus 68 Outbound	0	23	0	23
Bus 85 Inbound	7	0	7	0
Bus 85 Outbound	0	66	0	66
Bus CT1 Inbound	47	31	2	76
Bus CT1 Outbound	54	3	3	54
Bus CT2 Inbound	29	31	6	54
Bus CT2 Outbound	134	25	55	104
EZRide Inbound*	52	31	19	64
EZRide Outbound*	13	18	11	20

Source: MBTA Bus Ridecheck Data, November 2012 (\\mabos\projects\11356.00\ssheets\TIS\Transit Analysis\MBTA Data)

Source: Charles River TMA Ridership Data from Sept. 2013 through Oct. 2014 (\\vhb\proj\Boston\11356.00\ssheets\TIS\Transit Analysis\EZRide)

* EZ Ride Data: CRTMA provided monthly boarding data, use September 2014 (same as EZ Ride Feasibility Study) ; used EZ Ride Feasibility Study (March 2015) OFF % distribution to determine approx loads entering Kendall Station; assuming Total Peak Hour ONs = Total Peak Hour OFFs

MBTA BlueBook Data													
ALL MBTA BUS LINES GROWTH%	FY 2007	07 - '08	avg annual %	FY 2008	08 - '10	avg annual %	FY 2010	10 - '13	avg annual %	FY 2013	avg annual growth rate		
Typical Weekday Ridership	344,111.0	2.9%	2.9%	354,060.0	2.2%	1.1%	361,676.0	4%	1%	376,227.0	1.8%	9%	1.6%
Annual Ridership	101,331,725.0	4.5%	4.5%	105,881,740.0	2.1%	1.0%	108,088,300.0	3%	1%	111,730,664.0	2.2%	10%	1.7%
											2%		2%
											1.02		

Hub and Spoke Study (July 2012)	
Past two decades 1991-2011, Avg annual rate growth	1.2%
Accelerated in the past five years 2006-2011, Avg annual growth	2.9%
Future Baseline Growth Scenario	1.2%
Future Moderate Growth Scenario	1.5%
Future High Growth Scenario	2.9%

GROWTH RATE PER YEAR
1.02

	MBTA 2012 Data grown to 2015 (2% per year for 3 years) NO ADJUSTMENT TO EZRIDE			
	Load Entering Station	**Boardings**	**Alightings**	**Load Exiting Station**
AM Peak Hour(8-9am)				
Bus 1 Inbound	309	8	21	296
Bus 1 Outbound	315	8	60	263
Bus 68 Inbound	24	0	23	1
Bus 68 Outbound	0	7	0	7
Bus 85 Inbound	81	0	81	0
Bus 85 Outbound	0	4	0	4
Bus CT1 Inbound	121	4	6	119
Bus CT1 Outbound	122	1	68	55
Bus CT2 Inbound	140	27	45	122
Bus CT2 Outbound	75	8	38	46
EZRide Inbound	103	16	49	70
EZRide Outbound	82	18	36	64
PM Peak Hour(5-6pm)				
Bus 1 Inbound	306	59	7	358
Bus 1 Outbound	312	27	13	326
Bus 68 Inbound	10	0	10	0
Bus 68 Outbound	0	24	0	24
Bus 85 Inbound	7	0	7	0
Bus 85 Outbound	0	70	0	70
Bus CT1 Inbound	50	33	2	81
Bus CT1 Outbound	57	3	3	57
Bus CT2 Inbound	31	33	6	57
Bus CT2 Outbound	142	27	58	110
EZRide Inbound	52	31	19	64
EZRide Outbound	13	18	11	20

TCRP Report

TRANSIT COOPERATIVE RESEARCH PROGRAM
Sponsored by the Federal Transit Administration

TCRP REPORT 165

Transit Capacity and Quality of Service Manual

Third Edition

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

CHAPTER 3
OPERATIONS CONCEPTS

CONTENTS

low-density residential areas and major activity centers may only be feasible during peak periods or at a very low frequency (hourly or worse) during off-peak periods (*13*).

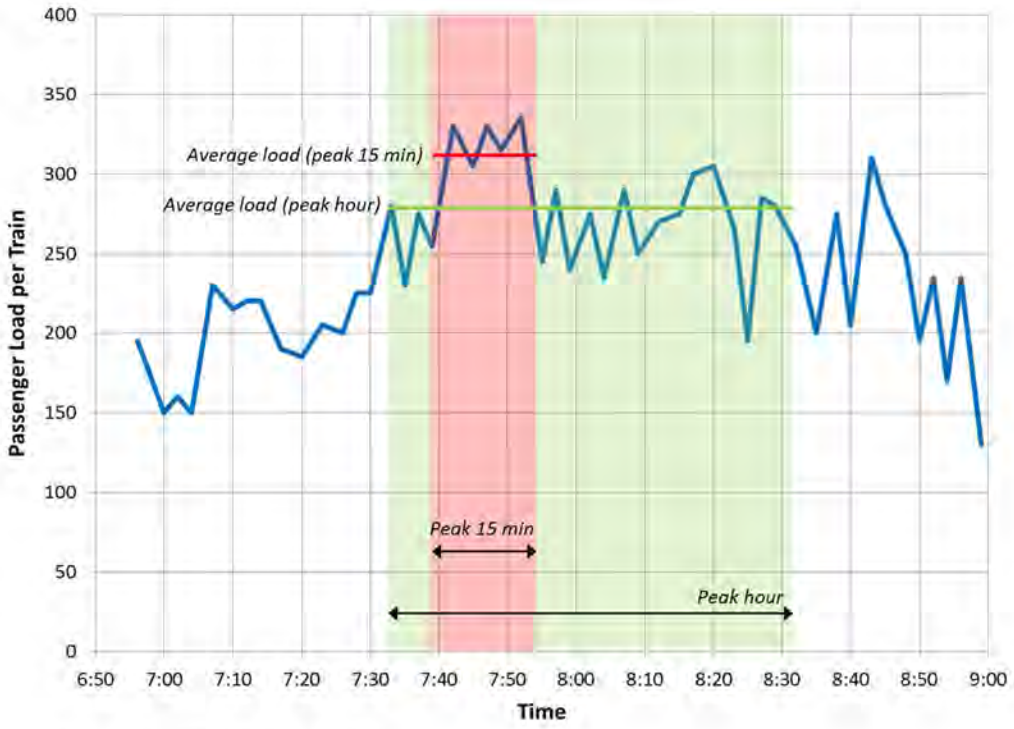
Peak-Hour Demand Variation

Passenger demand can also vary within the peak period. Some of this variation is attributable to people timing their trips to arrive at a destination (e.g., job, school) as close to the desired starting time as possible; other is due to day-to-day variations in people's activities that result in them taking different transit vehicles on different days. These variations have implications on the level of onboard crowding, as a service scheduled to accommodate average demand over the peak hour may experience overcrowded conditions during the peak of the peak.

The concept of a *peak hour factor* (PHF) is used to express this demand variation within the peak hour (or any other analysis hour). The PHF is defined as the demand during the hour divided by four times the demand during the peak 15 min of the hour. Thus a PHF of 1.00 indicates even demand in each 15 min period of the hour, while a PHF of 0.25 would indicate that all the demand occurs in one 15-min period. Typical transit PHFs range from 0.60 to 0.95 (*2, 14*).

Exhibit 3-7 shows actual train loading data for the a.m. peak period for one day at a peak load station on Vancouver's SkyTrain (*15*), with the peak hour and the peak 15 min indicated, along with the average passenger loads during those time periods. The PHF represented in the graph is 0.92, which is relatively high (i.e., relatively even loading by 15-min intervals) for transit service.

Exhibit 3-7
Illustrative Variation in Peak-Hour Demand



Source: Derived from *TCRP Report 13* (*15*).
Note: Vancouver, B.C., Broadway Station inbound, October 27, 1994.

Even though the average load throughout the peak hour, relative to the peak 15 min, is fairly even, it can be seen from the exhibit that there are considerable variations from one train to the next. Furthermore, the average load during the peak 15 min is 35 passengers per train higher than the average for the peak hour. If this agency had only peak-hour ridership totals to work with and had (hypothetically) a service standard of 300 passengers per train, it might appear to meet its standard based on the average peak hour load, while in actuality, peak 15-min loads would exceed the standard. In many cases, the proportional difference between peak-hour and peak-15-min demands will be much greater than shown in Exhibit 3-7.

Both Exhibit 3-6 and Exhibit 3-7 have illustrated the importance of being aware of demand patterns over both long and short periods of time. The use of automatic passenger counting (APC) equipment allows the collection of passenger demand data on a regular basis. *TCRP Report 113: Using Archived AVL-APC Data to Improve Transit Performance and Management* (*16*) provides guidance on collecting, archiving, and using APC data. *TCRP Report 135: Controlling System Costs: Basic and Advanced Scheduling Manuals and Contemporary Issues in Transit Scheduling* (*17*) describes the use of ridership data, in conjunction with transit agency loading standards and policy headways, when developing transit schedules.

DEMAND RELATED TO DEMOGRAPHICS

The *2009 National Household Transportation Survey* (NHTS, *18*) provides data on household travel patterns for all travel modes and trip purposes. The following are selected demographic factors that relate to transit use in the U.S. (*19*):

- *Gender.* Controlling for other factors that influence mode choice, males are 7% more likely to use transit for a given trip than females.
- *Age.* Compared to persons 16–24 years old, persons in the 25–44 and 45–64 age groups are about half as likely to use transit for a given trip (45–64 years olds are slightly less likely to use it than 25–44 year olds), and those 65 and older are one-fifth as likely to use it. (The NHTS did not ask about trips made by children.)
- *Employment.* Persons who are employed are 41% more likely to use transit for a given trip than those not in the workforce or unemployed.
- *Number of cars in household.* Compared to zero-car households, one-car households are 10% as likely, two-car households 3% as likely, and three-car households 2% as likely to use transit for a given trip.

DEMAND RELATED TO LAND USE

Land Use Densities Supporting Various Transit Service Modes and Levels

As indicated above, there are a number of factors that influence the ridership demand for a given transit line—for example, ease of access, demographic factors such as age and car ownership, cost and convenience of transit relative to competing modes—but the density of land uses along the line is a basic requirement. Simply put, the more people and the more jobs that are within easy access distance of transit service, the more potential customers there are to support high-quality service. Conversely, the more spread apart land uses are, the more difficult it is to develop a

BUS RIDERSHIP DATA AT KENDALL SQUARE

	MBTA Nov. 2012 Counts & EZRide 2014			
	Load Entering Stop	**Boardings (Trips OUT)**	**Alightings (Trips IN)**	**Load Exiting Stop**
AM Peak Hour(8-9am)				
Bus 1 Inbound	291	8	20	279
Bus 1 Outbound	297	8	57	248
Bus 68 Inbound	23	0	22	1
Bus 68 Outbound	0	7	0	7
Bus 85 Inbound	76	0	76	0
Bus 85 Outbound	0	4	0	4
Bus CT1 Inbound	114	4	6	112
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Hub and Spoke Report

Hub and Spoke

CORE TRANSIT CONGESTION AND THE FUTURE OF TRANSIT AND DEVELOPMENT IN GREATER BOSTON

Urban Land Institute
Boston
Serving the Six New England States

ULI Foundation

Authored by Stephanie Pollack, Associate Director,
Dukakis Center for Urban & Regional Policy at Northeastern University

Northeastern University
Dukakis Center for Urban and Regional Policy

June 2012

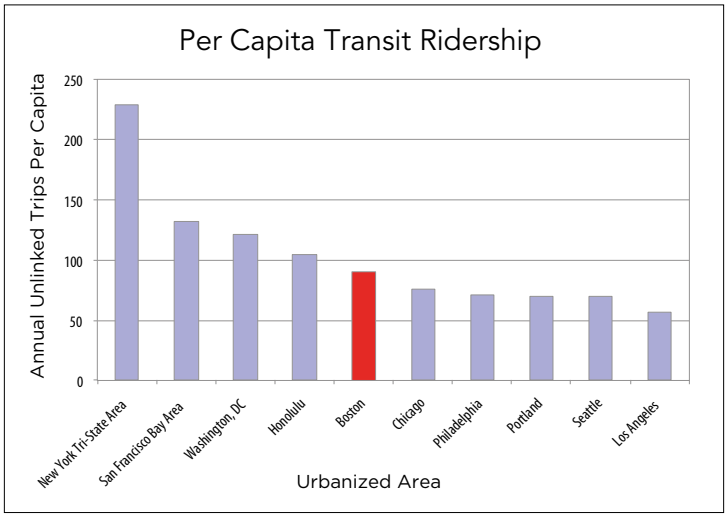
RISING RIDERSHIP

The Massachusetts Bay Transportation Authority, known locally as the T, serves 175 communities with a population of almost 4.7 million people spread over 3,200 square miles. The MBTA's integrated transit system includes 14 commuter rail lines, 4 subway lines and over 180 bus routes as well as bus rapid transit, trackless trollies, ferries and a paratransit system. (MBTA Blue Book 2010).

Boston is one of the top five metropolitan areas in the United States for transit ridership. In 2010, the last year for which the American Public Transportation Association compiled comparative data from the Federal Transit Administration's National Transit Database, the MBTA was the fifth largest transit system in the United States, when measured by the total number of unlinked passenger trips served annually[1] (APTA Fact Book 2011). And when per capita transit use is the metric, as shown in Figure 1, Boston also ranks fifth nationally.

FIGURE 1

U.S. METROPOLITAN AREAS RANKED BY PER CAPITA TRANSIT RIDERSHIP

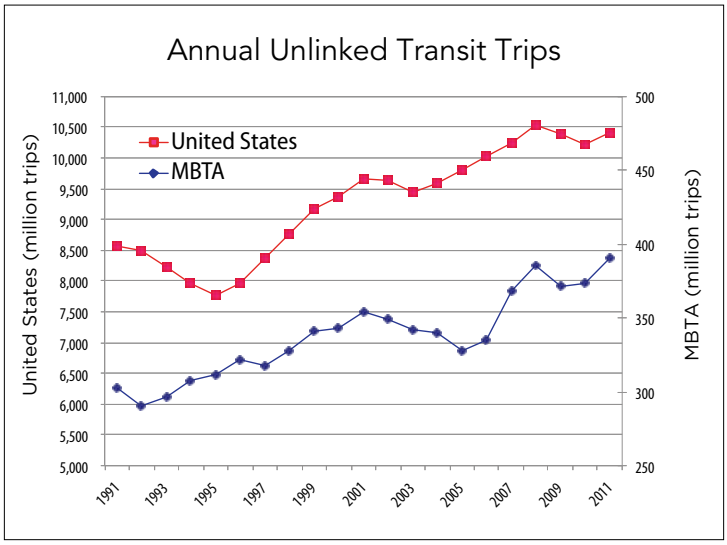


Like transit systems across the country, the MBTA has continued to grow its ridership even in the face of the persistent predictions that transit was a dying transportation mode. Six years ago, when the Urban Land Institute's Boston District Council and Northeastern University's Dukakis Center for Urban and Regional Policy last teamed up to examine transit and transit-oriented development in metropolitan Boston, that *On the Right Track* report acknowledged that "transit ridership has declined in recent years." But the report noted a number of trends "that point toward a future of growing demand for higher quality transit." That prediction, and others like it, has proven correct — ridership has grown steadily and the rate of increase has accelerated.

Transit ridership has actually been growing modestly but steadily for the past two decades, both nationally and on the MBTA. 2011 marked the sixth consecutive year that Americans took more than 10 billion trips on public transportation. The 2011 total of 10.4 billion trips was the second highest annual ridership recorded since 1957, according to the American Public Transportation Association.

FIGURE 2

TRANSIT RIDERSHIP TRENDS FOR THE U.S. AND MBTA



As shown in Figure 2, the MBTA's ridership over the past two decades roughly parallels the national increase in ridership, rising at an average annual rate of 1.2% between 1991 and 2011. Ridership growth on the MBTA has accelerated during the past five years, with trips increasing at an average annual rate of 2.9% between 2006 and 2011. And 2012 is off to a strong start: April 2012 marked the fifteenth consecutive month in which year-over-year ridership on the MBTA increased and the third straight month that average weekday ridership exceeded 1.3 million. Between January 2007 and April 2012 — with fares remaining unchanged and the retail price of gasoline in Massachusetts rising from $2.26/gallon to $3.86/gallon — MBTA ridership rose at more than twice its longer-term historical average of increasing just over one percent per year.

1 "Unlinked trips" are the number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles, no matter how many vehicles they use to travel from their origin to their destination.

FUTURE RIDERSHIP GROWTH

With MBTA ridership rising modestly and steadily over the past twenty years — and the annual rate of increase more than doubling from 1.2% over the past 20 years to 2.9% over the past five years — the MBTA must plan for higher ridership in the future. Even with fares set to increase, which may at least temporarily slow ridership growth, analysis of the MBTA's historical and more recent ridership data, as well as recent modeling performed by the Commonwealth's Central Transportation Planning Staff, support the conclusion that the MBTA needs to plan to be able to serve significantly more riders in the near future.

How many more transit trips should the MBTA plan to accommodate? For this report the Dukakis Center developed three scenarios for forecasting MBTA ridership growth from 2011 through 2021: a baseline forecast, a moderate growth scenario and a high growth scenario. The results, as illustrated in Figure 3 and explained in "Ridership Growth Scenarios" on the next page, are both exciting and sobering.

The MBTA's 2011 ridership was 390 million unlinked trips or approximately 1.28 million unlinked trips on an average weekday, with average weekday ridership increasing to over 1.3 million average weekday riders in the early months of 2012. Figure 4 shows the forecast level of ridership in 2021:

- The baseline growth rate of 1.2% annually predicts that the MBTA would serve at least 420 million unlinked trips in 2021, equivalent to approximately 1.4 million average weekday riders.
- The moderate growth rate of 1.5% annually predicts that the MBTA would serve 450 million unlinked trips in 2021, equivalent to approximately 1.5 million average weekday riders.
- The growth rate of 2.9% annually predicts that the MBTA would serve 500 million unlinked trips in 2021, equivalent to approximately 1.67 million average weekday riders.

FIGURE 3

FORECAST MBTA RIDERSHIP GROWTH IN 2021

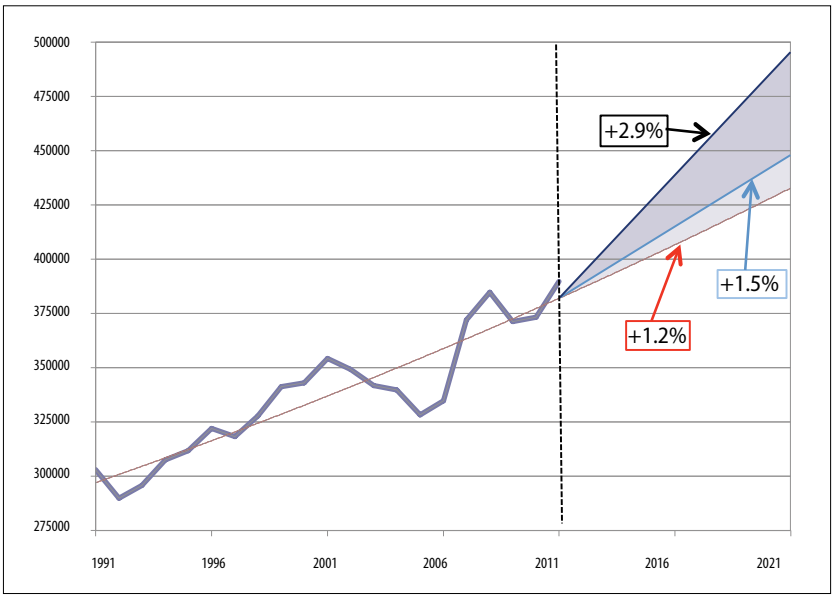
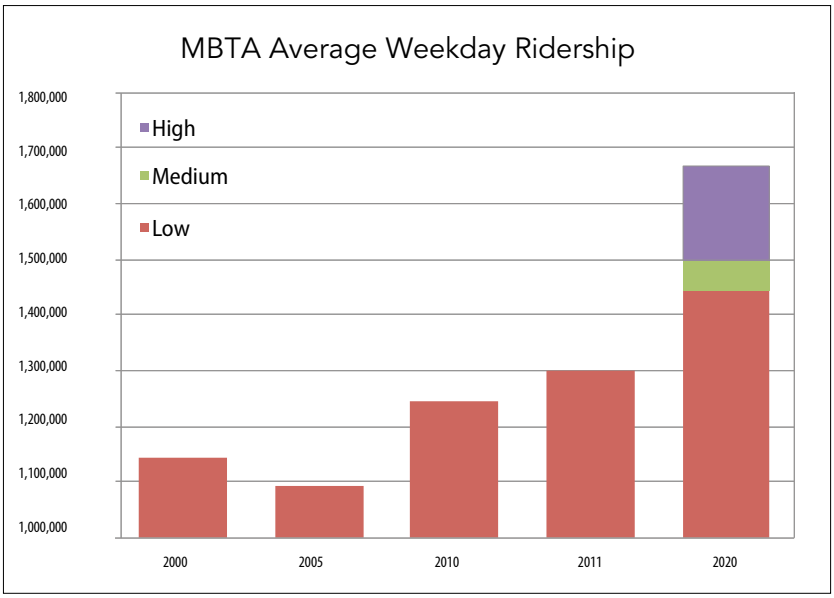


FIGURE 4

FORECAST GROWTH IN AVERAGE WEEKDAY RIDERSHIP



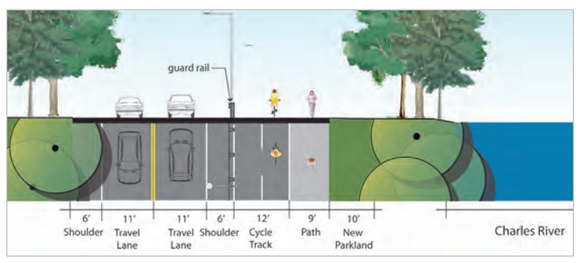
Bicycle Analysis

Charles River Basin Report

Charles River Basin

Pedestrian and Bicycle Study for Pathways and Bridges

Pedestrian and Bicycle Connectivity Study



May 2013

massDOT Massachusetts Department of Transportation Highway Division

dcr Massachusetts

HALVORSON DESIGN PARTNERSHIP

alta PLANNING + DESIGN

HDR

Charles River Basin

Pedestrian and Bicycle Study for Pathways and Bridges

Pedestrian and Bicycle Connectivity Study

Prepared for

Massachusetts Department of Transportation | Highway Division

and Massachusetts Department of Conservation + Recreation

by

Halvorson Design Partnership, Inc.

Alta Planning + Design

HDR, Inc.

May 2013

Table of Contents

Acknowledgements

Massachusetts Department of Transportation
Highway Division

Richard A. Davey, Secretary and CEO
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Edward M. Lambert Jr., Commissioner
John P. Murray, Deputy Commissioner
Joseph Orfant, Director of Bureau of Planning + Resource Protection
Dan Driscoll, Director of Recreational Facilities Planning
Karl Haglund, Senior Planner
Richard Corsi, Senior Planner
Ken Kirwin, Traffic Engineer

City of Boston

Boston Transportation Department
Jim Gillooly, Deputy Commissiomer
Nicole Freedman, Director of Boston Bikes
Charlotte Fleetwood, Transportation Planner

City of Cambridge

Traffic, Parking + Transportation Department
Sue Clippinger, Director

Community Development Department
Cara Seiderman, Transportation Program Manager
Jeff Rosenblum, Transportation Planner

City of Watertown

Steve Magoon, Director of Community Development & Planning
Gideon Schreiber, Senior Planner

Consultant Team

Halvorson Design Partnership, Inc.

Prime Consultant | Planning + Landscape Architecture

Cynthia Smith FASLA, Principal, Project Manager
Monique Hall, Landscape Designer
Lin Teng-Yen, Landscape Designer
Chris Greene, Landscape Planning + Graphic Design

Alta Planning + Design

Multi-modal Specialists
Jeff Olson, Principal
Phil Goff, Project Manager
Shannon Simms, Designer
Amy Linné, Designer

HDR, Inc.

Civil Engineering
Jerry Friedman, Civil Section Manager

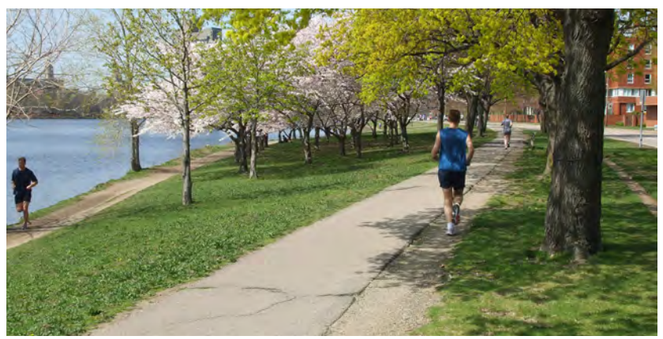
Executive Summary

Executive Summary

The Charles River Basin is a world-class resource for people and nature. The park that stretches eight-and-a-half miles along the river from Watertown to Boston is the convergence of the region's built and natural environments, and a critical nexus in the metropolitan transportation network. As the Charles River approaches Boston Harbor, it passes through communities of increasing density. The path systems that frame the river banks and the bridges that span the river form a "trunk route" of non-motorized transportation for Newton, Watertown, Cambridge, Boston, and beyond. As many as 10,000 cyclists, pedestrians and runners an hour use these routes. Several of the surrounding urban areas feature well-established bicycle and pedestrian links to the park system. However, many have fragmented or nonexistent connections due to the adjacent parkways, the Massachusetts Turnpike, rail yards or auto-oriented land uses. These barriers can discourage walking and bicycling to, along and across the river. Recognizing these and other concerns, the Department of Conservation and Recreation (DCR) and the Massachusetts Department of Transportation (MassDOT) in 2009 jointly commissioned a study as part of Governor Patrick's Accelerated Bridge Program to evaluate the conditions and needs of the pedestrian and bicycle facilities along the Charles River Basin.

The Charles River Basin Pedestrian + Bicycle Study for Pathways + Vehicular Bridges begins with the need to identify connectivity gaps that exist where physical or other constraints impede bicycle and pedestrian travel throughout the network of paths, intersections and bridges along the Charles River Basin. The study area focuses on the Charles River Reservation from the Galen Street Bridge in Watertown downstream to the Craigie Dam Bridge and Drawbridge and includes areas within two blocks of the Reservation itself.

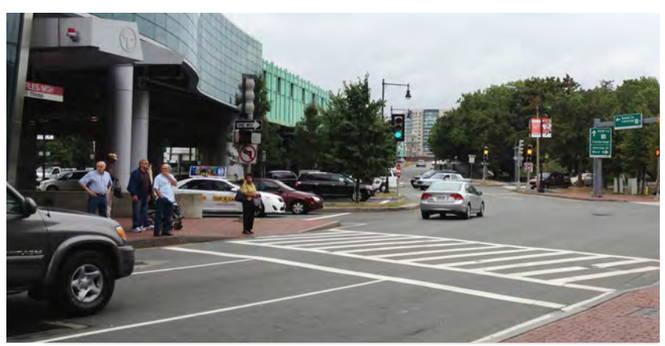
Typical Conditions in the Study Area



User-created "goat tracks" occur when users feel that the path surface provided is too narrow, too hard or both. Here, three informal paths have been created.

Access for pedestrians and cyclists on the important desire line between Arsenal Mall and the river is uncontrolled and unmarked.

In some of the upstream portions of the Study Area, the character is more rural.



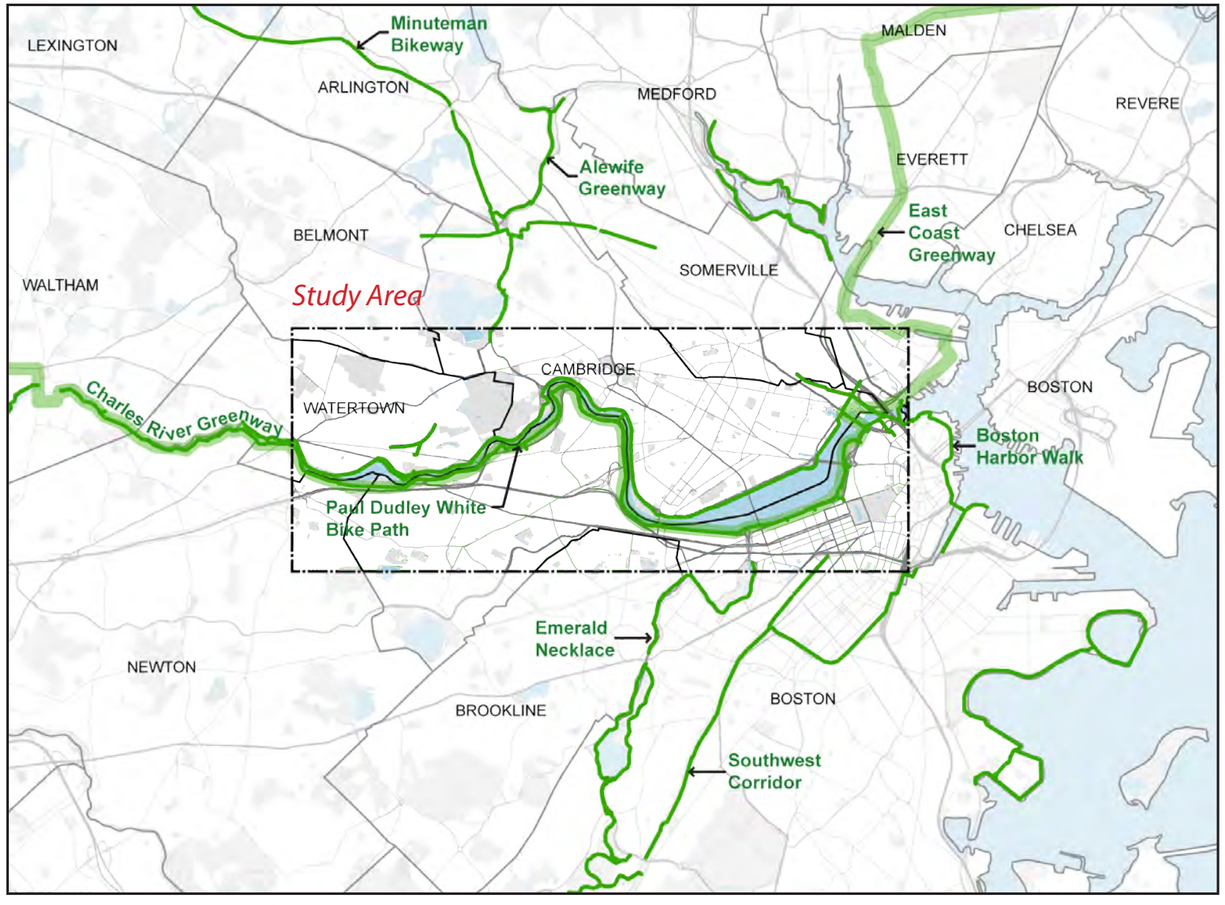
Accommodation for pedestrians and bicycles is needed on many of the the bridges over the river, as well as safe and well-marked ways to negotiate the intersections at either end. This is Charles Circle at the South Bank end of Longfellow Bridge.

The Bowker Overpass roadway may be wide enough, relative to its anticipated vehicular use, to accommodate a dedicated zone for bicycles.

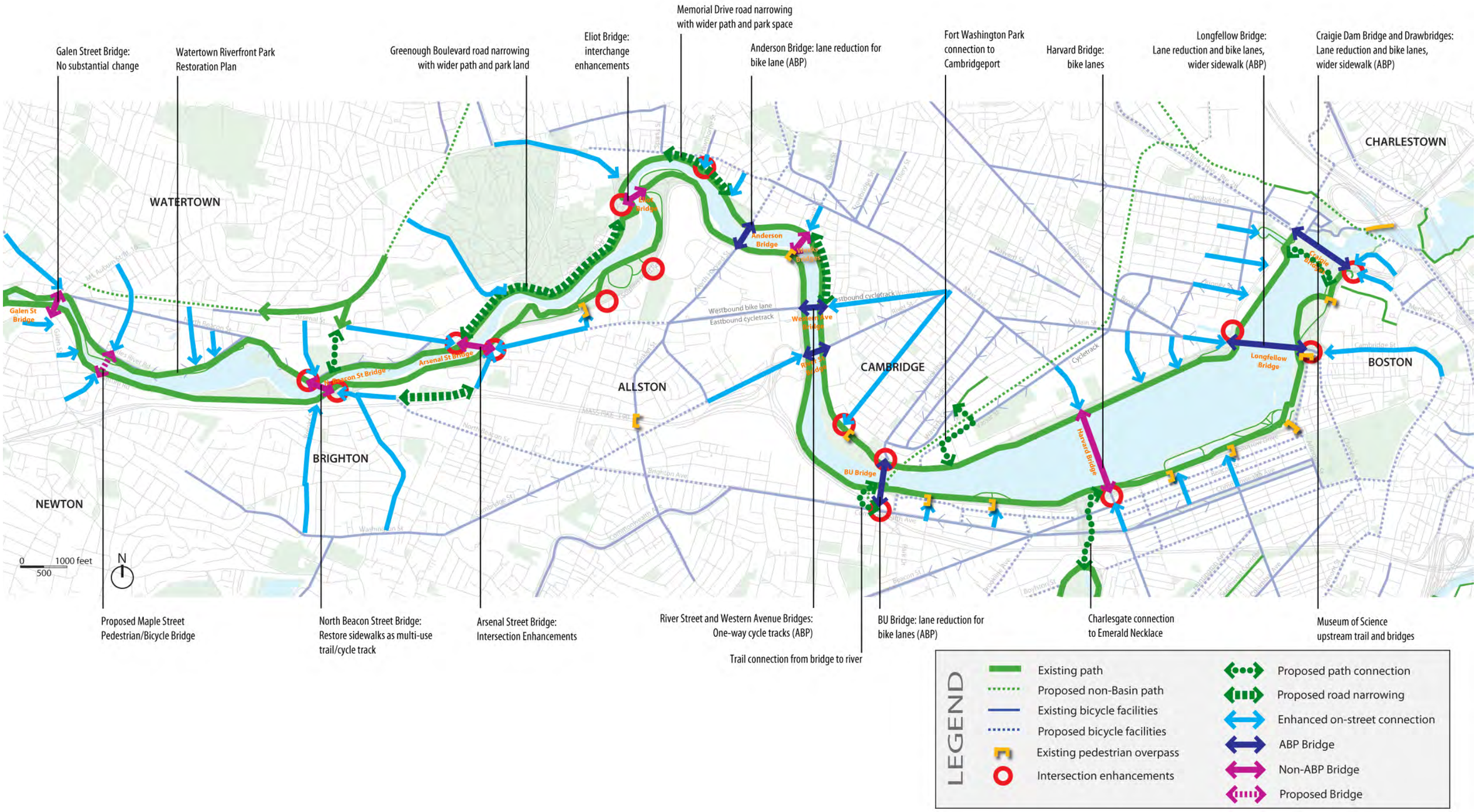
A "user counter" on the Esplanade records three different types of user sharing the path right-of-way: a jogger, a cyclist and a stroller.

The primary goal of the report is to provide conceptual design recommendations for connectivity improvements to and along the Basin for DCR, MassDOT and the adjacent municipalities to incorporate in the future. Part I, Background + Analysis, (pages 1-10) provides a background and introduction to the study and description of the public process and analysis. It also illustrates the existing pedestrian and bicycle infrastructure and the activity generators within the study area. Part II, Recommendations, (pages 11-35) divides the Basin into segments bounded by the river bridges, beginning at the upstream end of the Basin. It details the recommended enhancements and includes supporting graphics.

The recommendations are listed at the end of the report in the Project Implementation Tables (pages 36-40), showing each project's priority, relevant jurisdictions, and potential funding sources. Some of these recommendations can be implemented in the short term, while others will require further study and will need to be incorporated into long-term planning and fundraising. The recommendations are preliminary and conceptual in nature. Proposed improvements will need to be evaluated for design and construction feasibility, regulatory compliance, and long-term maintenance costs.



Context map showing relationship of the Study Area to the existing regional path systems.


Galen Street Bridge: No substantial change
Watertown Riverfront Park Restoration Plan
Greenough Boulevard road narrowing with wider path and park land
Eliot Bridge: interchange enhancements
Memorial Drive road narrowing with wider path and park space
Anderson Bridge: lane reduction for bike lane (ABP)
Fort Washington Park connection to Cambridgeport
Harvard Bridge: bike lanes
Longfellow Bridge: Lane reduction and bike lanes, wider sidewalk (ABP)
Craigie Dam Bridge and Drawbridges: Lane reduction and bike lanes, wider sidewalk (ABP)
WATERTOWN
CHARLESTOWN
ALLSTON
CAMBRIDGE
BOSTON
BRIGHTON
NEWTON
Galen St Bridge
Arsenal St Bridge
Anderson Bridge
Western Ave Bridge
BU Bridge
Harvard Bridge
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Craigie Bridge
Westbound bike lane
Eastbound cycletrack
0 1000 feet
500
N
Proposed Maple Street Pedestrian/Bicycle Bridge
North Beacon Street Bridge: Restore sidewalks as multi-use trail/cycle track
Arsenal Street Bridge: Intersection Enhancements
River Street and Western Avenue Bridges: One-way cycle tracks (ABP)
Trail connection from bridge to river
BU Bridge: lane reduction for bike lanes (ABP)
Charlesgate connection to Emerald Necklace
Museum of Science upstream trail and bridges
LEGEND
Existing path
Proposed non-Basin path
Existing bicycle facilities
Proposed bicycle facilities
Existing pedestrian overpass
Intersection enhancements
Proposed path connection
Proposed road narrowing
Enhanced on-street connection
ABP Bridge
Non-ABP Bridge
Proposed Bridge

The Connectivity Study is intended for the use of DCR, MassDOT and the municipalities that line the Charles River as a blueprint for moving forward, with recommendations for both near-term and future projects. MassDOT's GreenDOT policy (http://www.massdot.state.ma.us/greendot.aspx) includes a commitment by Massachusetts Secretary of Transportation Richard Davey to triple walking, bicycling and transit mode share in the Commonwealth by 2030. The variety of projects presented in this report will help Greater Boston become a truly multi-modal region and create a model for integrating green infrastructure that connects people and nature. As the primary corridor for pedestrian and bicycle transportation and recreation, the Charles River Basin will play a central role in ensuring a sustainable future for the region.

Connectivity Recommendations

General recommendations that apply throughout the Basin include:

- DCR should strive to develop a 10'-wide paved path with a parallel soft-surface trail or shoulder for runners where possible. All path widening projects must take into consideration the value of the Reservation as a natural resource. Exceptions to the path-width standards should be made in the presence of historic landscape , riparian habitat or large and mature trees. In "pinch point" conditions, a minimum 8' paved path, with 3' shoulder on one side, should be incorporated.;
- Traffic signals should be examined to determine if concurrent or exclusive pedestrian phases are appropriate. Exclusive signals are recommended where feasible;
- A wayfinding study should be conducted to identify the type and location of wayfinding signage to enhance pedestrian and bicycle connectivity and to support environmental stewardship, education and interpretation;
- Signing the pathways along the Basin as the "Charles River Greenway" to support the concept of green infrastructure as an integrated element of the Basin's conservation strategy;
- Regular maintenance of the paths throughout the Reservation is essential to the continued success as a transportation, conservation and recreation corridor.

Other key recommendations include:

- Numerous streetscape enhancements in Watertown and Newton along roadways that should connect directly to the Reservation, but currently do not;
- A new footbridge over the Charles River that connects Newton and Watertown, providing additional opportunities for walking and bicycling loops between the Galen and North Beacon Street bridges;
- New crosswalks, roadway geometry and bike lanes on or adjacent to the North Beacon Street Bridge;
- The lane reduction of a mile-long stretch of Greenough Boulevard to provide new parkland and paths that form an integrated loop with Herter Park on the south bank of the river;
- Road narrowing along Memorial Drive between Mt. Auburn Hospital and John Fitzgerald Kennedy Park in Cambridge to improve connections to Brattle Street and provide space for separated paved and soft-surface paths;
- A link from the Boston University Bridge to the Esplanade, incorporating the rail trestle that may be redeveloped as a part of the Grand Junction trail project;
- A plan to connect the Esplanade with the Emerald Necklace, utilizing a new path through DCR-owned land adjacent to the Bowker Overpass, paralleling the Muddy River and along a widened sidewalk of the viaduct over the Turnpike;
- Previously planned improvements as part of the Memorial Drive Phase II project that will widen the existing concrete path adjacent to the seawall, introduce a parallel soft-surface path in places and plant additional trees;
- Enhancements to improve connections from the Albany and Sidney Street corridors in Cambridgeport to the river using shared lanes, signage, an improved at-grade railroad crossing and new paths through Fort Washington Park;
- In conjunction with the planned improvements to the Longfellow Bridge through MassDOT's ABP, new traffic signals and crosswalks to link the Broad Canal path to Cambridge Parkway;
- Bicycle connections through Charles Circle that will include green bike lanes, enhanced signage and frequent shared-lane markings;
- A critical link from the north to the south bank of the Charles utilizing a pair of new foot bridges along the upstream side of the Museum of Science on the 1910 dam, one located where Lechmere Canal and the River join, and the second spanning the 1910 lock, ideas being explored in a preliminary study initiated by DCR;
- At-grade pedestrian and bike enhancements at Leverett Circle (with provisions for a pedestrian overpass in the future).

Section G Harvard Bridge to Longfellow Bridge

The reservation between the Harvard and Longfellow Bridges is one of the most trafficked in the whole Basin.

North Bank. Major improvements are planned for the path system along Memorial Drive as part of DCR's Memorial Drive Phase II project. For most of this section there will be a 10-foot, two-way, paved shared-use path adjacent to the roadway with a separated, 6-foot stabilized aggregate path along the river.

Ames Street provides a connection to Kendall Square, the Sixth Street Pedestrian Walk, and East Cambridge. On-street improvements will enhance this connection, as will a proposed pedestrian-actuated signal at the intersection with Memorial Drive. Wadsworth Street connects to Kendall Square and, when reconstructed, will connect to Third Street and East Cambridge. Improvements to this street should follow the reconstruction of the intersection at Main and Third Streets.

East of the crosswalks at Wadsworth Street, there is an existing pedestrian signal and crosswalks to facilitate access to the Longfellow Bridge. This crossing, however, is relatively far from the bridge itself. Wayfinding signage should be added to this area to direct path users to Longfellow Bridge and Main Street.

In the Spring of 2013, construction will begin to rehabilitate the Longfellow Bridge as part of MassDOT's Accelerated Bridge Program. The plans maintain the bike lanes across the bridge, adding a buffered bike lane to the outbound side and widening sidewalks. The rehabilitation will also include the widening of the path under the Longfellow Bridge along Memorial Drive (See Section H).

68. Photosimulation of the reservation adjacent to Memorial Drive showing Phase II improvements, downstream of MIT's Pierce Boathouse.

69. Photosimulation of Memorial Drive with Phase II improvements, upstream of MIT's Pierce Boathouse.

South Bank. On the Boston side of the river, there are four overpasses over Storrow Drive between the Harvard Bridge and the Longfellow Bridge. The overpasses at Fairfield Street and Dartmouth Street need better bicycle and pedestrian connections to Beacon Street. Both streets are one way for that block; however, bicycle demand is two-way. Counter-flow lanes should be considered in both directions. Further improvements to Fairfield and Dartmouth Streets will improve the connectivity to the river from the Back Bay neighborhood.

The Arthur Fielder foot bridge, built in 1953 and named after the famous Boston Pops conductor, currently provides a vital pedestrian and bicycle connection between Arlington Street and the Esplanade landscape. Nearby destinations include the Hatch Shell concert area, the Esplanade Playspace, Community Boating, an outdoor café and public bathrooms as well as access to the recreational paths along the river. The striking orange/pink curving concrete bridge spans Storrow Drive allowing people from Beacon Hill and Back Bay to access the parkland from the city any time of year.

70. On the occasion of the 2010 centennial of the Charles River Esplanade, the non-profit Esplanade Association came together with DCR and a group of volunteers, professionals, and concerned citizens to envision an ambitious future of the this beloved stretch of riverfront parkland.

With guiding principles for the park's future, and an extensive list of forward-looking improvements, the ***Esplanade 2020 Plan*** *provides an excellent context for long-term planning in this area. It is available online from The Esplanade Association.*

The Connectivity Study recommendations have considered the visionary ideas of the 2020 Plan. One of the more imaginative proposals from the Plan—currently unfunded—would involve lowering Storrow Drive, enabling the creation of an at-grade crossing near the Hatch Shell, shown in the detail above.

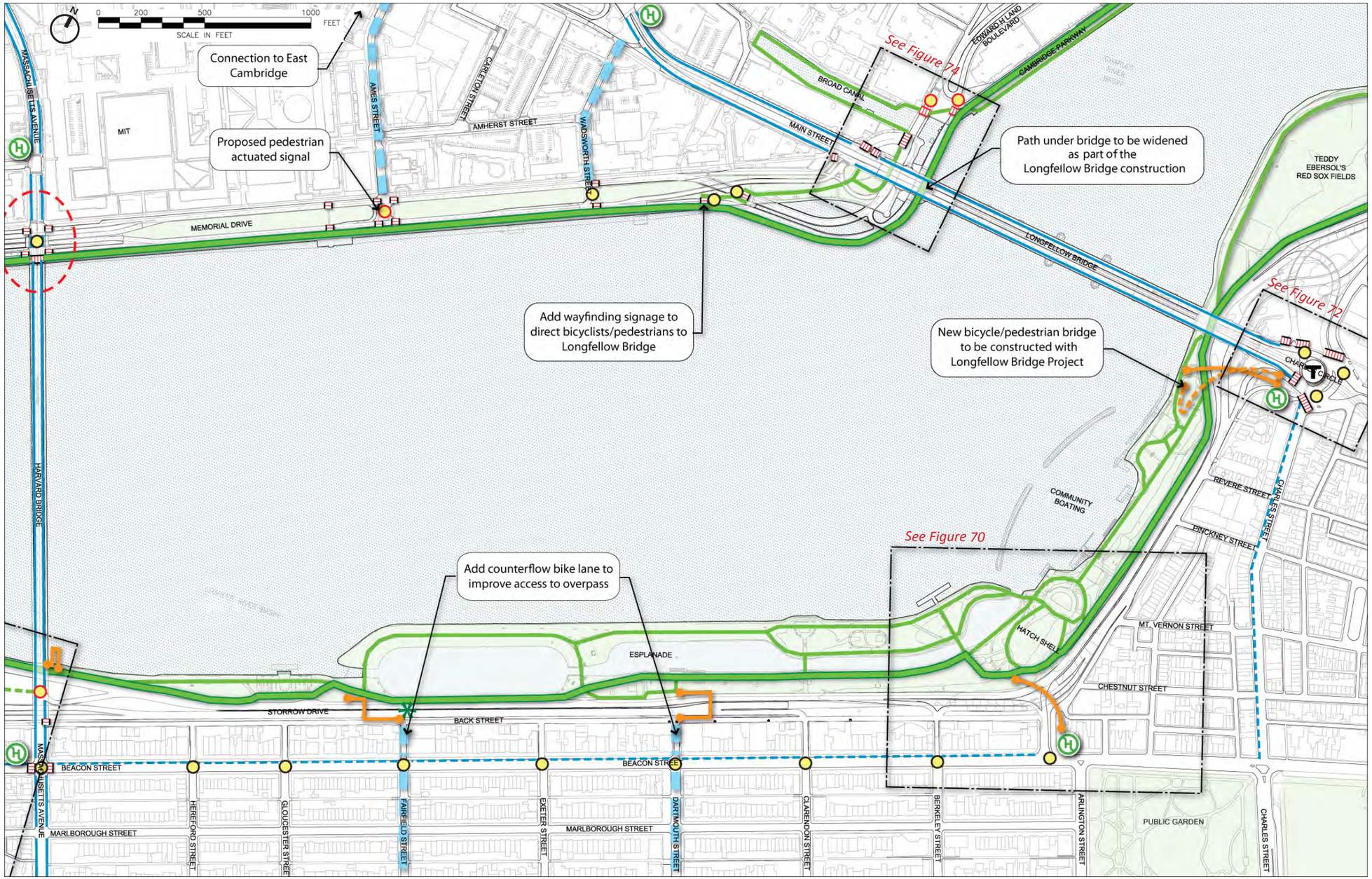
Figure 71

Recommendations

Section G
Harvard Bridge to Longfellow Bridge

Legend

- Existing crosswalk, no improvements needed
- Existing crosswalk, needs improvement
- Proposed crosswalk
- Existing/funded signal
- Proposed signal
- Existing ped bridge/overpass
- Proposed ped bridge/overpass
- Existing Hubway station
- Existing/funded bike lane/cycle track
- Proposed bike lane/cycle track
- Existing/funded multi-use path/sidewalk (primary)
- Existing/funded multi-use path/sidewalk (secondary)
- Proposed multi-use path
- New path/landscaping/reduced lanes
- Proposed bike/ped and street-scape improvements within ROW
- Reconfiguration of intersection recommended
- Entry node to the river with art, seating, lighting, landscape elements and small plaza features



South Bank *continued.* The existing pedestrian overpass from Charles Circle to the Esplanade is to be replaced in conjunction with the Longfellow Bridge Reconstruction. Due to the extremely high volumes of cyclists and pedestrians that use this bridge particulary during events on the Esplanade, the width of the new bridge should be no narrower than 12 feet.

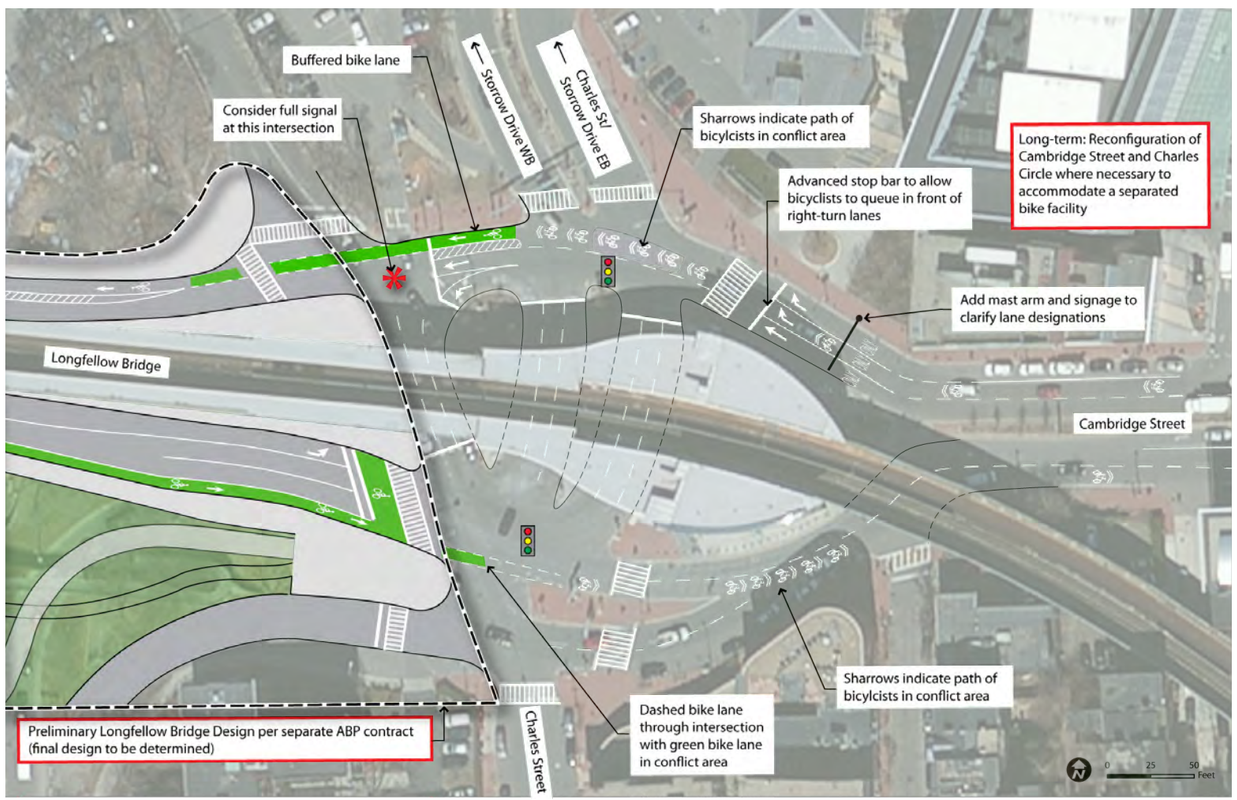
The bicycle connection through Charles Circle is critical. Currently it represents a significant barrier that nearly precludes less-experienced cyclists from bicycling to and from downtown Boston over the Longfellow Bridge.

While there are bike lanes on the Longfellow Bridge, the ***Draft Boston Bike Master Plan*** recommends shared lane markings on Cambridge Street. At Charles Circle these two facility types meet (Figure 72). For eastbound Longfellow Bridge traffic, the current design includes a wide bike box intended for queueing bicyclists traveling through to Cambridge Street or left to Charles Street or Mass. General Hospital. Green paint or thermoplastic in a dashed bike lane will also help motorists see this conflict area.

East of Charles Street, a series of tightly spaced "sharrows" can help define another conflict zone where bicyclists may conflict with motorists merging from their right.

Westbound bicyclists on Cambridge Street have difficulty traveling straight through the traffic light due to heavy volumes of right-turning motor vehicles from all three existing travel lanes. Shared lane markings or a green priority shared lane should be incorporated to encourage bicyclists to stay in the middle lane as they enter the intersection. A series of tightly spaced sharrows will help define the path of bicyclists traveling straight through this intersection. In the long term, Cambridge Street and Charles Circle should be reconfigured to accommodate a separated bicycle facility. Once bicyclists pass the Storrow Drive on-ramps, they would enter a buffered bike lane that continues to the planned buffered bike lane on the Longfellow Bridge. Green coloration helps define another conflict area where motorists turn right from Storrow Drive onto the bridge.

Full signalization of this intersection should be studied to discourage motorists from taking a "rolling stop" through the flashing red light from the Storrow Drive off-ramp.



72. Charles Circle detail plan showing an interim bicycle connection between the Longfellow Bridge and Cambridge Street.

73. Existing and proposed view of westbound Cambridge Street at Charles Circle.

Section H Longfellow Bridge to Craigie Dam Bridge + Drawbridge

74. Plan diagram showing connectivity improvements where the Broad Canal meets the Charles River

The paths on the Boston and Cambridge sides of the river between the Longfellow Bridge and the Craigie Dam Bridge and Drawbridge provide access to the Broad Canal, Lechemere Canal, the Museum of Science, and Teddy Ebersol's Red Sox Fields.

North Bank. The recommended connections between the Longfellow Bridge, Broad Canal, and the path are shown in Figure 74. The short ramp from First Street to the westbound lane of the Longfellow Bridge can easily include a bicycle lane. The addition of several crosswalks across First Street and Land Boulevard will connect the end of this ramp, the Broad Canal path, and the path along Cambridge Parkway. Because of the slope and short sight lines, a pedestrian-actuated signal should be incorporated at these two crosswalk locations.

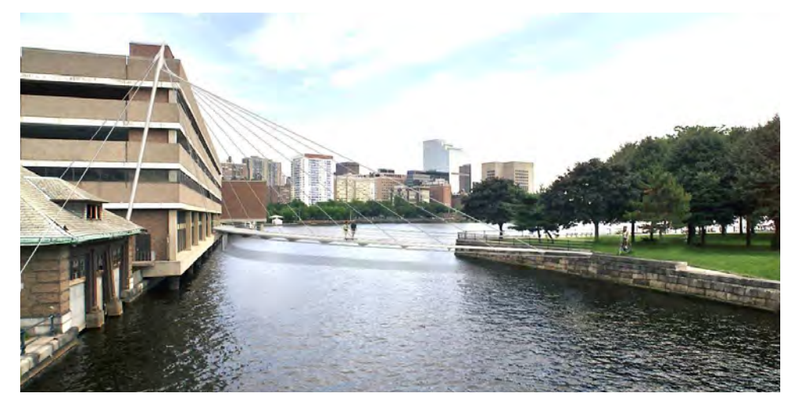
To further enhance the pedestrian connection under the bridge, the wall on the west side of First Street will be enhanced by providing openings in the granite wall. This work will be done during the rehabilitation of the Longfellow Bridge. There are existing bike lanes and a planned cycle track on Binney Street, which ends at Land Boulevard. Across the street, Front Park links to the Cambridge Parkway. A more clearly defined bicycle connection through this park will help complete the movement from Binney Street.

Other streets that provide connections to the East Cambridge neighborhood include Charles Street, which has a signalized crossing at Land Boulevard, and Thorndike Street, which connects to the path around the Lechmere Canal. This canal path links to the Charles River path; however, the connections are not ADA-compliant because of the steep slope from the river to Land Boulevard on the north side.

Currently, the primary path connects from Cambridge Parkway to Land Boulevard, over the Lechmere Canal, and along Charles River Dam Road on the downstream side of the Museum of Science. An alternate route for the path would be on the upstream side of the Museum of Science.

Two new bridges are required to make this connection. DCR consultants have completed conceptual designs for these two bridges. The first is a curved bridge (Figure 75) which will connect from the Esplanade at the north end of Cambridge Parkway over the canal to the Museum of Science parking garage. A cantilevered walkway will be necessary to connect to the existing path behind the Museum of Science. Another bridge will be necessary to cross the open lock that leads to the Craigie Drawbridge. Because of occasional boat traffic, this bridge will need to be a movable bridge (see Figure 76). These connections will create a loop around the east end of the Charles River Basin along the water's edge, without any road crossings.

In addition to this long-term vision for connectivity on the upstream side of the Museum of Science, improvements are needed to the existing connection on the downstream side. Improved crosswalks at today's Museum Way signal will enhance the connection of the path to North Point Park and the new North Bank Bridge, which links to Paul Revere Park in Charlestown. There is a long-term vision to connect the Somerville Community Path to the river in this area. This portion of the river also includes the proposed Inlet Bridge between Charles River Dam Road and North Point Park in Cambridge, and the Draw One Walkway across the river, connecting Cambridge and Boston..



75. Proposed curved bridge design by Rosales/Schlaich Bergermann, linking the path behind the Museum of Science to the North Bank. (image courtesy of DCR).

South Bank. On the Boston side of the river, the South Bank Bridge, serving cyclists and pedestrians, is planned by DCR to cross over the MBTA train tracks and connect Nashua Street Park with the new Charles River Dam.

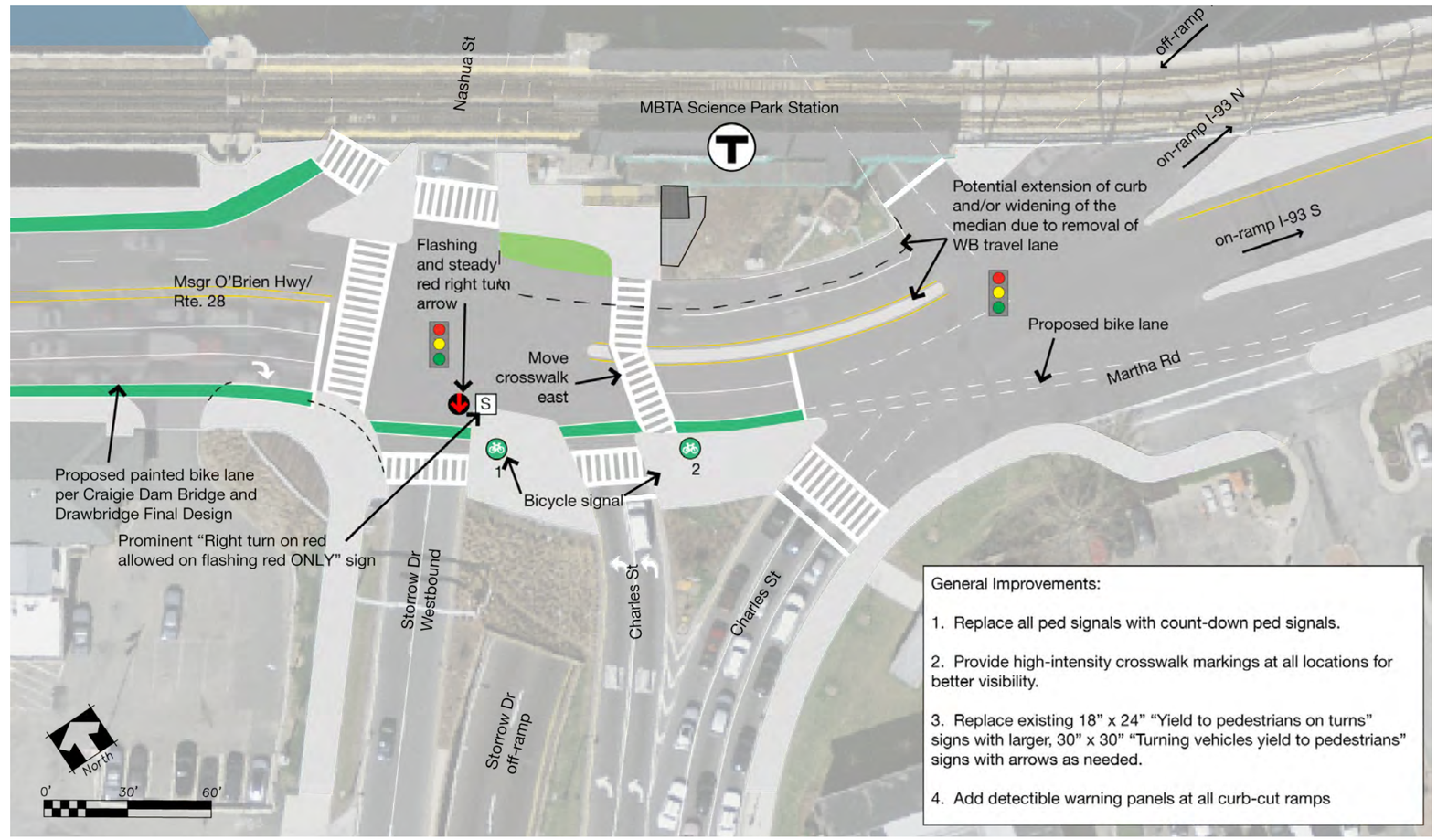
MassDOT has committed to reconstruct the pedestrian overpass at Leverett Circle, which will link the MBTA station to the east- and westbound walkways along Storrow Drive. At-grade improvements will help bicyclists and pedestrians navigate this complex intersection. The planned bike lanes on the O'Brien Highway should extend through Leverett Circle. Bike signals and an alternating flashing/steady red right turn arrow will mediate the conflict between eastbound bicyclists and right-turning motorists.

If a flashing red arrow cannot be accommodated with the existing signal equipment, then a permanent "No Right Turn on Red" sign, with hour restrictions, should be installed. The addition of a crosswalk from a traffic island to the MBTA station will satisfy an existing pedestrian desire line while avoiding conflict with vehicles from Nashua Street. These improvements were developed by the Connectivity Study team for MassDOT in the *Leverett Circle Pedestrian + Bicycle Crossing Study* (2011).*

Both Martha Road and Nashua Street are important links between North Station and the Charles River Reservation. Bicycle facilities are recommended for both streets. Further study is needed to determine if a lane reduction and the addition of bike lanes is appropriate on Nashua Street. Currently the *Draft Boston Bike Master Plan* recommends shared lane markings along Martha Road and Naushua Street. Additionally, the path connection to the west side of North Station is not well defined. Pavement markings and wayfinding signage directing bicyclists from Martha Road will improve this connection. Bicyclists leaving North Station via Nashua Street will benefit from the addition of a stop sign for cars exiting the underground parking garage.

* http://www.massdot.state.ma.us/portals/0/docs/infoCenter/docs_materials/Leverett_report.pdf

76. Proposed movable bridge by Rosales/Schlaich Bergermann at the lock on the South Bank (courtesy DCR)



77. In addition to the proposed pedestrian overpass at Leverett Circle, some at-grade intersection improvements can be made to enhance pedestrian/bicycle connections to the T station and the West End neighborhood.

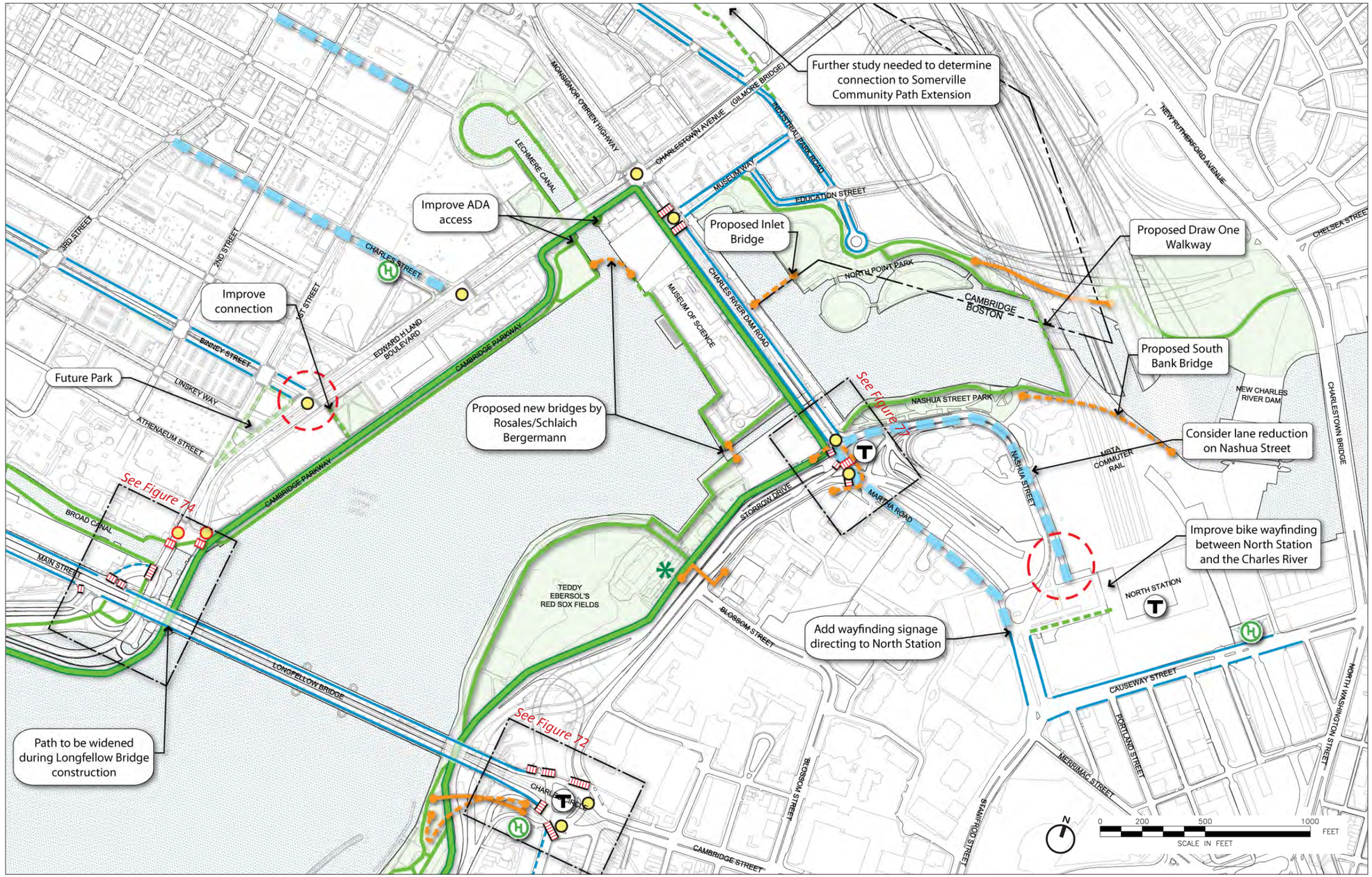
Figure 78

Recommendations

Section H
Harvard Bridge to Craigie Dam Bridge + Drawbridge

Legend

- Existing crosswalk, no improvements needed
- Existing crosswalk, needs improvement
- Proposed crosswalk
- Existing/funded signal
- Proposed signal
- Existing ped bridge/overpass
- Proposed ped bridge/overpass
- Existing Hubway station
- Existing/funded bike lane/cycle track
- Proposed bike lane/cycle track
- Existing/funded multi-use path/sidewalk (primary)
- Existing/funded multi-use path/sidewalk (secondary)
- Proposed multi-use path
- New path/landscaping/reduced lanes
- Proposed bike/ped and street-scape improvements within ROW
- Reconfiguration of intersection recommended
- Entry node to the river with art, seating, lighting, landscape elements and small plaza features



Implementation Project Tables

The recommedations set forth in this report are intended for the use of DCR, MassDOT and the municipalities that line the Charles River as a blueprint for moving forward and to help meet the recent call of Massachusetts Secretary of Transportation Richard Davey to triple walking and bicycling in the Commonwealth.

The recommendations are conceptual in nature and will require further analysis and study before moving forward to implementation. The following summary tables categorize each measure by order of magnitude costs, timeline, and jurisdiction. Projects which have been identified as both early to mid-term actions and low to medium cost are listed as priority projects for municipalities and state agencies to act upon in the near future.

The variety of projects presented in this report will help move Greater Boston closer to becoming a truly multi-modal region and will help create a model for integrating green infrastructure that connects people and nature.

Priority Projects

A. UPPER CHARLES RIVER BASIN (GALEN ST BRIDGE TO ELIOT BRIDGE)

PROJECT AREA/DESCRIPTION	*DESCRIPTION*	*JURISDICTIONAL INVOLVEMENT*
Watertown Square Intersection	*Shared lane markings on Charles River Rd and N Beacon St to continue bike lanes through the intersection*	*Watertown*
Irving Street / Charles River Road	*New crossing with pedestrian signal, entry node to path with art, seating, etc.*	*DCR, Watertown*
N. Beacon Street / Charles River Road	*Improvements to crosswalks and widen path to 10 feet at pinch point*	*DCR, DOT*
Arsenal Mall and Arsenal Park Path	*Path connection with new crosswalk between Arsenal Street and the N. Beacon Street Bridge*	*DCR, Watertown*
N. Beacon Street Bridge (north end)	*Pedestrian actuated signal; improve crosswalks*	*DCR, DOT*
N. Beacon Street Bridge	*Lane reduction, new bike lanes or cycle tracks*	*DCR*
Community Rowing Launch Site	*Improve path visibility at boat launch*	*DCR*
North Beacon St Bridge (south end)	*Improve path crossing*	*DCR, DOT, City of Boston*
Arsenal Bridge (south end)	*Improve crosswalks and curb ramps at path crossing; remove or tighten free-right turn lanes*	*DCR, DOT, City of Boston*
Soldiers Field Road parking lot (east of Western Avenue)	*Improve path connection through parking lot; improve crosswalk*	*DCR*
Everett Street at Soldiers Field Road	*New crosswalks across Soldiers Field Road*	*DCR, City of Boston*

B. MIDDLE CHARLES RIVER BASIN (ELIOT BRIDGE TO BU BRIDGE)

Memorial Drive at Hawthorn Street	*Enhanced crosswalk; potential entry node to river with art, seating, etc.*	*DCR, City of Cambridge*
JFK Street	*Bike lanes from Anderson Bridge to Eliot Street*	*City of Cambridge*
Dewolfe Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Mt. Auburn Street)*	*City of Cambridge*
River Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Putnam Avenue)*	*City of Cambridge*
Path improvements along Memorial Drive	*Raised crosswalks along path at driveways, widen path to 10 ft between River Street Bridge and BU*	*DCR, City of Cambridge*
Path along Soldiers Field Road (west of Anderson Bridge)	*Improve path crossings to be more visible at driveways to boathouse (potential raised crosswalk)*	*DCR*

C. LOWER CHARLES RIVER BASIN (BU BRIDGE TO CRAIGIE BRIDGE)

Memorial Drive Rotary at BU Bridge	*Colored bike lanes in conflict areas, signage and curb adjustments*	*DCR, City of Cambridge*
Memorial Drive / Ames Street	*Improve crosswalks; proposed pedestrian actuated signal*	*DCR, City of Cambridge*
Path west of Longfellow Bridge	*Add wayfinding signage to direct bicyclists/pedestrians to and from the Longfellow Bridge*	*DCR, City of Cambridge*
Longfellow Bridge (Cambridge side)	*Improve crosswalks at on/off ramp from bridge to Memorial Drive/Land Boulevard*	*DCR, City of Cambridge*
Commonwealth Avenue / BU Bridge	*Improve all crosswalks; potential two-stage left turn queue box for bikes*	*DOT, City of Boston*
Boylston Ave to Beacon Street via Charlesgate East ramp	*Sidewalk widened to shared-use path, improved crossings (part of proposed Charlesgate connection)*	*DCR, City of Boston*
Beacon Street to Harvard Bridge	*New crosswalk, add curb extension to remove slip lane; proposed path connection under Storrow Drive ramp and around gatehouse*	*DCR, City of Boston*
Harvard Bridge / Storrow Dr WB off-ramp	*New traffic signal and crossings (part of proposed Charlesgate connection)*	*DCR, DOT, City of Boston*
Beacon Street / Massachusetts Ave	*Improve crosswalks and other intersection improvements (part of proposed Charlesgate connection)*	*DCR, City of Boston*
Dartmouth Street	*Bike/ped ROW and streetscape improvements; add counterflow bike lane to improve access to overpass*	*City of Boston*
Charles Circle	*Bike improvements: bike lanes, shared lane markings, green bike lanes in conflict areas, etc.*	*DCR, DOT, City of Boston*
Leverett Circle	*Improvements to existing crosswalk, new crosswalk, and other at-grade improvements*	*DCR, DOT, City of Boston*

D. NEW CHARLES RIVER BASIN (CRAIGIE BRIDGE TO NORTH STATION)

North Station to Martha Road connection	*New path connection between North Station and Martha Road, including wayfinding signage*	*City of Boston*
Nashua Street at North Station	*Improve bike wayfinding between North Station and the Charles River*	*City of Boston*

All Recommended Projects | Sections A - C

UPPER CHARLES RIVER BASIN
(GALEN ST BRIDGE TO ELIOT BRIDGE)

MAP SECTION	PROJECT #	PROJECT AREA/DESCRIPTION	DESCRIPTION	PRIORITY PROJECT	TIMELINE: EARLY ACTION (1-2 yrs)	TIMELINE: MID TERM (3-6 yrs)	TIMELINE: LONG RANGE (>6 yrs)	JURISDICTION: MASS DCR	JURISDICTION: MASS DOT	JURISDICTION: CITY OF BOSTON	JURISDICTION: CITY OF CAMBRIDGE	JURISDICTION: CITY OF NEWTON	JURISDICTION: TOWN OF WATERTOWN	JURISDICTION: OTHER	COST: LOW	COST: MEDIUM	COST: HIGH	POTENTIAL FUNDING ASSISTANCE: MIT	POTENTIAL FUNDING ASSISTANCE: HARVARD	POTENTIAL FUNDING ASSISTANCE: NON-PROFIT FOUNDATION	POTENTIAL FUNDING ASSISTANCE: OTHER	ADDITIONAL NOTES
		NORTH SIDE (WATERTOWN - CHARLES RIVER RD - GREENOUGH BLVD)																				
A	1	Watertown - Main Street	*Adjust vehicular travel lane widths to accommodate bike lanes*		●								●		●							
	2	Watertown Square Intersection	*Shared lane markings on Charles River Road and N. Beacon Street to continue bike lanes through the intersection*	●	●								●		●							
	3	Galen Street Bridge (north end)	*Entry node to path with art, seating, etc.; improved crossings through intersection*			●		●					●			●						
	4	Park between Riverside Street and Charles River Road	*Path from Riverside Street to primary riverfront path; improved crossings*			●		●					●			●						
	5	Irving Street	*Bike/ped ROW and streetscape improvements (from Charles River Road to Mt. Auburn Street)*			●							●		●	●					●	
	6	Irving Street / Charles River Road	*New crossing with pedestrian signal, entry node to path with art, seating, etc.*	●		●		●					●			●					●	Coordinate with the Perkins School for the Blind
	7	Riverside Street from Irving Street to Perkins School	*Bike/ped ROW and streetscape improvements*			●							●		●	●					●	
	8	Beechwood Avenue and Paul Street	*Bike/ped ROW and streetscape improvements (from Charles River Road to N. Beacon Street)*			●							●		●	●						
	9	Watertown Square to North Beacon Street	*Path improvements proposed in Watertown Riverfront Park Restoration Plan*				●	●									●					
	10	Charles River Road (various locations)	*New crosswalks to access river at Wheeler Lane, Beechwood Avenue and Paul Street*			●		●					●		●							
	11	Charles River Rd between Bay St & Watertown Yacht Club	*Complete sidewalk on north side of Charles River Road*			●		●					●			●						
	12	N. Beacon Street / Charles River Road	*Improvements to crosswalks and widen path to 10 feet at pinch point*	●		●		●	●							●						
	13	Arsenal Mall and Arsenal Park Path	*Path connection with new crosswalk between Arsenal Street and the N. Beacon Street Bridge*	●		●		●					●	●		●						- Collaborate with Arsenal Mall (private property)
B	1	Arsenal Street	*Bike/ped ROW and streetscape improvements from School Street to the Arsenal Bridge*				●						●		●	●						
	2	Talcott Avenue	*Bike/ped ROW and streetscape improvements*				●						●		●	●						
	3	N. Beacon Street Bridge (north end)	*Pedestrian actuated signal; improve crosswalks*	●		●		●	●							●						
	4	N. Beacon Street Bridge	*Lane reduction, new bike lanes or cycle tracks*	●		●		●							●							
	5	Arsenal Street between Coolidge Ave and Greenough Blvd	*Widen/improve sidewalk*				●						●			●						
	6	Greenough Blvd at Arsenal Street (western intersection)	*Improve crosswalk*			●		●	●				●		●						●	
	7	Arsenal Street at Greenough Blvd (eastern intersection)	*Improve crosswalks; potential reconfiguration of intersection*			●		●	●		●					●					●	Potential involvement of Solomon Foundation
C	1	Greenough Blvd from Arsenal Street to Eliot Bridge	*Road diet and parkland expansion*			●		●	●		●		●			●	●				●	
	2	Grove Street	*Bike/ped ROW and streetscape improvement (from Greenough Blvd. to future Waterown Path extension)*			●		●					●			●						
	3	Path at Grove Street crossing	*Entry node to the river with art, seating, etc.*				●	●					●			●						
		SOUTH SIDE (NEWTON -SOLDIERS FIELD ROAD - BRIGHTON)																				
A	14	Galen Street Bridge (south end)	*Improve path visibility; improve crossing*			●		●	●				●		●							
	15	Watertown Street and Aldrich Street	*Bike/ped ROW and streetscape improvements (from Galen Street to Casey Park)*			●							●		●							
	16	Water Street	*Bike/ped ROW and streetscape improvements (from Galen Street to Nonantum Road)*			●							●		●							
	17	Hunt Street/Maple Street	*Bike/ped ROW and streetscape improvements (from Galen Street to Nonantum Road)*			●						●	●			●						
	18	Jefferson Street	*Bike/ped ROW and streetscape improvements (from Galen Street to Maple Street)*			●						●				●						
	19	Nonantum Road (various locations)	*Improvements to bicycle transition from roadway to path adjacent to Nonantum Road (Water Street, Maple Street and Brook Street intersections)*			●		●	●			●	●			●						
	20	Nonantum Rd at Maple Street	*Potential location for new bike/ped bridge across river (located above culvert)*				●	●				●	●				●				●	- Coordinate with Mass. Water Resource Authority
	21	Nonantum Rd at Charlesbank Rd	*Potential new signal*			●		●								●						
B	8	Brooks Street	*Bike/ped ROW and streetscape improvements (Nonantum Road to Washington Street)*		●					●						●						
	9	Community Rowing Launch Site	*Improve path visibility at boat launch*	●	●			●							●							
	10	N. Beacon Street Bridge (south end)	*Improve path crossing*	●	●			●	●	●					●							
	11	N. Beacon Street Bridge (south end)	*Add crossing from south end of bridge to pool across Nonantum Road*				●	●	●	●					●							
	12	Soldiers Field Road connection to Parsons Street	*New crossings from river path to Parsons Street (in conjunction with new path connection); includes study for new signal at crossing of Soldiers Field Road; includes entry node to the river with art, seating, etc.*			●		●	●	●						●			●			
	13	Birmingham Parkway	*New path connection between Parsons Street and N. Beacon Street along the parkway, new crosswalks at N. Beacon Street signal*				●	●		●						●						
	14	N. Beacon Street	*Bike/ped ROW and streetscape improvements (from bridge to Birmingham Parkway)*				●	●		●						●						
	15	Parsons Street	*Bike/ped ROW and streetscape improvements (from N. Beacon Street to Washington Street)*				●	●		●						●						
	16	Arsenal Bridge (south end)	*Improve crosswalks and curb ramps at path crossing; remove or tighten free-right turn lanes*	●		●		●	●	●					●	●					●	
	17	Soldiers Field Road at Western Ave/Arsenal Bridge	*New crosswalks*			●		●	●	●					●						●	
	18	Birmingham Parkway from N. Beacon to Lincoln Street	*Road diet and/or path along north side of parkway*			●		●	●	●						●	●				●	Possible coordination with New Balance Campus Master Plan
	19	Birmingham Parkway from Lincoln Street to Western Ave	*Bike/ped ROW and streetscape improvements*			●		●	●	●						●					●	
	20	Intersection of Leo M Birmingham Pkwy & Lincoln Street	*Improve existing crosswalks; add crosswalks across the Parkway*			●		●	●	●					●						●	
	21	Market Street	*Bike/ped ROW and streetscape improvements (from N. Beacon Street to Birmingham Parkway)*			●		●	●	●						●					●	
C	4	Western Avenue	*Bike/ped ROW and streetscape improvements (from Birmingham Parkway to Everett Street)*		●					●						●						
	5	Soldiers Field Road parking lot (east of Western Avenue)	*Improve path connection through parking lot; improve crosswalk*	●	●			●							●							
	6	Telford Street	*Bike/ped ROW and streetscape improvements (from pedestrian overpass to Western Avenue)*		●					●					●							
	7	Everett Street	*Bike/ped ROW and streetscape improvements (from Soldiers Field Road to Western Avenue)*			●				●					●							
	8	Everett Street at Soldiers Field Road	*New crosswalks across Soldiers Field Road*	●	●			●		●					●							
	9	Soldiers Field Road / Herter Park	*New path from Soldiers Field Road/Everett Street to existing path network in Herter Park; entry node to river with art, seating, etc.*			●		●	●	●						●						
	10	Soldiers Field Road / Smith Playground	*Potential new crosswalk at Soldiers Field Road from Smith Playground to Herter Park; includes study to incorporate future signal*				●	●	●	●						●			●			

All Recommended Projects | Sections D - E

MIDDLE CHARLES RIVER BASIN
(ELIOT BRIDGE TO BU BRIDGE)

MAP SECTION	PROJECT #	PROJECT AREA/DESCRIPTION	DESCRIPTION	PRIORITY PROJECT	TIMELINE: EARLY ACTION (1-2 yrs)	TIMELINE: MID TERM (3-6 yrs)	TIMELINE: LONG RANGE (>6 yrs)	JURISDICTION: MASS DCR	JURISDICTION: MASS DOT	JURISDICTION: CITY OF BOSTON	JURISDICTION: CITY OF CAMBRIDGE	JURISDICTION: CITY OF NEWTON	JURISDICTION: TOWN OF WATERTOWN	JURISDICTION: OTHER	COST: LOW	COST: MEDIUM	COST: HIGH	POTENTIAL FUNDING ASSISTANCE: MIT	POTENTIAL FUNDING ASSISTANCE: HARVARD	POTENTIAL FUNDING ASSISTANCE: NON-PROFIT FOUNDATION	POTENTIAL FUNDING ASSISTANCE: OTHER	ADDITIONAL NOTES
		NORTH SIDE (MEMORIAL DRIVE - WEST CAMBRIDGE)																				
D	1	Intersection at Memorial Drive & Gerry's Landing Road	*Improve existing crosswalks*			●		●	●		●				●	●						
D	2	Gerry's Landing Road	*Bike/ped ROW and streetscape improvements - curb cuts and area sidewalks*			●		●	●		●					●						
D	3	Memorial Drive at Sparks Street	*New path connection from Sparks Street to parkland, including new crosswalk at Memorial Drive*				●	●			●				●						●	Potential interest from Mount Auburn Hospital
D	4	Memorial Drive from Sparks Street to JFK Park	*Reduction of travel lanes with parkland expansion*				●	●	●		●						●				●	Potential interest from Mount Auburn Hospital
D	5	Memorial Drive at Hawthorn Street	*Enhanced crosswalk; potential entry node to river with art, seating, etc.*	●	●			●			●				●							- Note: Assumes installation of traffic signal in separate process
D	6	Hawthorn Street from Mt Auburn St to Memorial Dr	*Bike/ped ROW and streetscape improvements*				●				●				●							- Note: Assumes installation of traffic signal in separate process
D	7	University Road	*Bike/ped ROW and streetscape improvements (from JFK Park to Mt. Auburn Street)*			●					●				●							
D	8	University Road to Memorial Drive	*Improved path connection to river*			●		●			●				●							
D	9	Memorial Drive at JFK Park	*New crosswalk in conjunction with changes per project D-4*				●	●			●				●							
D	10	JFK Street	*Bike lanes from Anderson Bridge to Eliot Street*	●	●						●				●							
D	11	Dewolfe Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Mt. Auburn Street)*	●	●						●				●				●			
D	12	Dewolfe Street at Memorial Drive	*Improve crosswalks; add entry node to river with art, seating, etc.*		●		●	●			●					●			●			
D	13	John W. Weeks Bridge	*Improve Weeks Bridges for bicycle access and ADA compliance*				●	●			●			●		●	●		●			- Involvement of Mass. Historic Commission likely
D	14	Memorial Drive between Dewolfe and Western Ave	*Widen sidewalk on Cambridge-side of Memorial Drive*				●	●			●					●						- Involvement of Mass. Historic Commission likely
D	15	Memorial Drive between Dewolfe and Western Ave	*Lane reduction due to westbound left-turn lane onto Western Avenue Bridge*			●		●	●		●					●	●					- Involvement of Mass. Historic Commission likely
E	1	Memorial Drive and Western Ave	*Potential new crosswalk across Memorial Drive on the east side of intersection*		●			●	●		●				●							
E	2	River Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Putnam Avenue)*	●	●						●				●	●						
E	3	Pleasant Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Putnam Avenue)*			●					●					●						
E	4	Parking lot enhancements	*Connection through parking lot and to river, primarily within City of Cambridge right-of-way*				●				●					●						
E	5	Memorial Dr between Pleasant Street and Magazine Street	*Raised crosswalks at all parking lot entrances on the Cambridge side of Memorial Drive*			●		●			●					●						
E	6	Path improvements along Memorial Drive	*Raised crosswalks along path at driveways, widen path to 10 ft between River Street Bridge and BU Bridge*	●		●	●	●			●					●	●					
E	7	Magazine Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Massachusetts Avenue)*			●					●					●						
E	8	Magazine Street at Memorial Drive	*Entry node to river with art, seating, etc.*				●	●			●				●	●						
		SOUTH SIDE (BRIGHTON - ALLSTON)																				
D	16	Eliot Bridge (East Side)	*Realign paths between underpass and bridge sidewalk to be ADA compliant*				●	●								●						
D	17	Path along Soldiers Field Road (west of Anderson Bridge)	*Improve path crossings to be more visible at driveways to boathouse (potential raised crosswalk)*	●	●			●							●	●						
D	18	Sinclair Weeks Bridge	*Improve overpass for bicycle access and ADA compliance*				●	●	●								●		●			- Involvement of Mass. Historic Commission likely
E	9	Cambridge Street	*Proposed bike lane/cycle track In coordination with Boston Bike Master Plan effort*			●			●	●					●	●						
E	10	Path downstream of River Street Bridge	*Widen path to 10 ft with cantilever*			●		●	●							●	●					- Partial widening part of River Street Bridge design
E	11	BU Bridge / Grand Junction Path	*Connection between the bridge and the Grand Junction Path*				●	●	●		●						●				●	- Potential interest from Boston University

All Recommended Projects | Sections F - H

LOWER CHARLES RIVER BASIN
(BU BRIDGE TO CRAIGIE BRIDGE)

MAP SECTION	PROJECT #	PROJECT AREA/DESCRIPTION	DESCRIPTION	PRIORITY PROJECT	TIMELINE: EARLY ACTION (1-2 yrs)	TIMELINE: MID TERM (3-6 yrs)	TIMELINE: LONG RANGE (>6 yrs)	JURISDICTION: MASS DCR	JURISDICTION: MASS DOT	JURISDICTION: CITY OF BOSTON	JURISDICTION: CITY OF CAMBRIDGE	JURISDICTION: CITY OF NEWTON	JURISDICTION: TOWN OF WATERTOWN	JURISDICTION: OTHER	COST: LOW	COST: MEDIUM	COST: HIGH	POTENTIAL FUNDING ASSISTANCE: MIT	POTENTIAL FUNDING ASSISTANCE: HARVARD	POTENTIAL FUNDING ASSISTANCE: NON-PROFIT FOUNDATION	POTENTIAL FUNDING ASSISTANCE: OTHER	ADDITIONAL NOTES
		NORTH SIDE (CAMBRIDGEPORT - MIT - EAST CAMBRIDGE)																				
F	1	Memorial Drive Rotary at BU Bridge	*Colored bike lanes in conflict areas, signage and curb adjustments*	●	●			●			●				●	●						
F	2	Path east of BU Bridge	*Widen sidewalk/path between BU Bridge and BU Boathouse*			●		●			●					●					●	- Potential involvement of Boston University
F	3	Vassar Street at Amesbury Street	*Direct bike/ped traffic on Vassar to Amesbury St through signage and other enhancements*			●					●				●			●				
F	4	Amesbury Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Vassar Street)*			●					●				●			●				
F	5	Amesbury Street at Memorial Drive	*Improve crosswalks; add entry node to river; potential signal phase adjustments*			●		●	●		●				●	●		●				
F	6	Connection to Fort Washington Park	*Improve connection from Vassar St to the park with a new crossing through parking lot*			●					●			●	●			●				- Potential involvement of private property owner
F	7	Grand Junction Overpass	*Proposed railroad overpass connecting Pacific Street to Vassar Street per MIT plan*				●				●			●			●	●				
F	8	Memorial Drive / Endicott Street	*Improve crosswalk on westbound side of Memorial Drive*		●			●			●				●							
F	9	Memorial Drive / Massachusetts Ave	*Improve all crosswalks; potential reconfiguration of intersection to mitigate bike lane pinch point*		●			●	●		●				●			●				
G	1	Memorial Drive at MIT Sailing Pavilion	*Improve crosswalks*		●			●			●				●			●				
G	2	Ames Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Main Street)*			●					●				●	●		●				
G	3	Memorial Drive / Ames Street	*Improve crosswalks; proposed pedestrian actuated signal*	●		●		●			●					●		●				
G	4	Wadsworth Street	*Bike/ped ROW and streetscape improvements (from Memorial Drive to Main Street)*		●						●				●	●		●				
G	5	Memorial Drive / Wadsworth Street	*Improve crosswalks*		●			●			●				●			●				
G	6	Path west of Longfellow Bridge	*Add wayfinding signage to direct bicyclists/pedestrians to and from the Longfellow Bridge*	●	●			●			●				●							
G	7	Longfellow Bridge (Cambridge side)	*Improve crosswalks at on/off ramp from bridge to Memorial Drive/Land Boulevard*	●	●			●			●				●							
H	1	Path along Broad Canal/Cambridge Parkway	*New crosswalks for path crossing; new signals on Land Blvd.*				●	●			●					●						
H	2	Binney Street / Edward H Land Boulevard	*New path connection to river; potential reconfiguration of intersection*				●	●			●					●						
H	3	Path at Lechmere Canal	*Improve ADA access from path to bridge above*				●	●			●					●	●					
H	4	Upstream-side of Museum of Science	*New bridges over the Lechmere Canal and the old Charles River lock per Rosales/Schlaman Bergmann design*				●	●		●	●						●				●	- Potential involvement of Museum of Science
		SOUTH SIDE (STORROW DR - BACK BAY - BEACON HILL)																				
F	10	Commonwealth Avenue / BU Bridge	*Improve all crosswalks; potential two-stage left turn queue box for bikes*	●	●		●		●	●					●						●	Potential involvement of Boston University
F	11	Storrow Drive crossing below BU Bridge	*Potential new signal and crossing to connect BU Bridge stair with Esplanade*				●	●	●	●						●					●	
F	12	Pedestrian overpass east of BU Bridge	*Make ADA compliant, may require replacement of bridge*				●	●	●	●						●	●				●	
F	13	Silber Way	*Bike/ped ROW and streetscape improvements (from Comm Ave to Storrow overpass)*			●				●					●						●	
F	14	Boylston Ave to Beacon Street via Charlesgate East ramp	*Sidewalk widened to shared-use path, improved crossings (part of proposed Charlesgate connection)*	●		●		●		●						●				●		Potential involvement of Solomon Foundation
F	15	Beacon Street to Harvard Bridge	*New crosswalk, add curb extension to remove slip lane; proposed path connection under Storrow Drive ramp and around gatehouse (part of proposed Charlesgate connection)*	●		●		●		●						●				●		
F	16	Harvard Bridge / Storrow Dr WB off-ramp	*New traffic signal and crossings (part of proposed Charlesgate connection)*	●		●		●	●	●						●				●		
F	17	Beacon Street / Massachusetts Ave	*Improve crosswalks and other intersection improvements (part of proposed Charlesgate connection)*	●		●		●		●						●				●		
G	8	Beacon Street between Mass Ave and Berkeley Street	*Proposed bike lane/cycle track per City of Boston Bike Master Plan*		●					●					●							
G	9	Fairfield Street	*Bike/ped ROW and streetscape improvements (from Beacon Street to Storrow Drive overpass)*		●					●					●							
G	10	Fairfield Street overpass	*Entry node to river with art, seating, etc.*				●	●								●						
G	11	Dartmouth Street	*Bike/ped ROW and streetscape improvements; add counterflow bike lane to improve access to overpass*	●	●					●					●							
G	12	Charles Street	*Proposed bike lane/cycle track per City of Boston Draft Bike Master Plan (from Charles Circle to Beacon Street)*			●										●						
H	5	Charles Circle	*Bike improvements: bike lanes, shared lane markings, green bike lanes in conflict areas, etc.*	●	●			●	●	●					●							
H	6	Blossom Street at Storrow Drive	*Entry node to river with art, seating, etc. at base of bike/ped overpass*				●	●								●					●	- Potential involvement of Mass General Hospital
H	7	Leverett Circle	*Improvements to existing crosswalk, new crosswalk, and other at-grade improvements*	●	●			●	●	●					●	●						
H	8	Leverett Circle	*Proposed pedestrian overpass*			●		●	●	●							●					

All Recommended Projects | Craigie Dam - North Station

MAP SECTION	PROJECT #	PROJECT AREA/DESCRIPTION	DESCRIPTION	PRIORITY PROJECT	TIMELINE: EARLY ACTION (1-2 yrs)	TIMELINE: MID TERM (3-6 yrs)	TIMELINE: LONG RANGE (>6 yrs)	JURISDICTION: MASS DCR	JURISDICTION: MASS DOT	JURISDICTION: CITY OF BOSTON	JURISDICTION: CITY OF CAMBRIDGE	JURISDICTION: CITY OF NEWTON	JURISDICTION: TOWN OF WATERTOWN	JURISDICTION: OTHER	COST: LOW	COST: MEDIUM	COST: HIGH	POTENTIAL FUNDING ASSISTANCE: MIT	POTENTIAL FUNDING ASSISTANCE: HARVARD	POTENTIAL FUNDING ASSISTANCE: NON-PROFIT FOUNDATION	POTENTIAL FUNDING ASSISTANCE: OTHER	ADDITIONAL NOTES
NEW CHARLES RIVER BASIN (CRAIGIE BRIDGE TO NORTH STATION)																						
		NORTH SIDE (CAMBRIDGE - NORTH POINT PARK - CHARLESTOWN)																				
H	9	Charles River Dam Road to North Point Park	*Proposed inlet bridge per North Point Master Plan*				●	●			●						●				●	- Potential involvement of North Point developer
H	10	North of Industrial Park Road	*Further study needed: connection to Somerville Community Path Extension*			●		●			●			●		●						- Potential involvement of City of Somerville
H	11	Draw One Walkway	*Path connection adjacent to existing bridge between Spaulding Hospital/Nashua Street to the North Point Park*			●		●			●			●			●					
		SOUTH SIDE (WEST END - NORTH STATION - NORTH END)																				
H	12	Martha Road	*Bike/ped ROW and streetscape improvement per City of Boston Bike Master Plan (from Storrow Dr. to Causeway)*		●					●					●	●						
H	13	Nashua Street	*Bike/ped ROW and streetscape improvement; consider lane reduction (from Storrow Dr. to North Station)*		●			●		●						●						
H	14	North Station to Martha Road connection	*New path connection between North Station and Martha Road, including wayfinding signage*	●	●	●				●					●	●					●	Potential involvement of Delaware North Company
H	15	Nashua Street at North Station	*Improve bike wayfinding between North Station and the Charles River*	●	●					●					●						●	
H	16	Nashua Street Park connection to North Station	*Future South Bank Bridge project per DCR design contract*			●	●	●	●	●							●					

Overview

The primary **goals** of the recommend enhancements to the roadways, bridges, paths and intersections within, and adjacent to, the Charles River Basin include:

- promotion of walking and bicycling as transportation;
- highlighting the recreational, environmental and cultural opportunities within the Reservation;
- making the Reservation accessible for all users.

The **study area** stretches from the Galen Street Bridge in Watertown downstream to the Craigie Dam Bridge and Drawbridge, including all areas within one or two blocks from the Reservation itself. When fully implemented, the roadway, trail and bridge improvements will enhance pedestrian and bicycle connectivity to the adjacent neighborhoods, many of which currently have limited or missing connections to the river.

The proposed changes to the Basin are intended to connect the adjacent communities, transit and Halloway stations, and create a more cohesive and well-connected network of paths, sidewalks, intersections and bike facilities. These improvements seek to manage better the wide range of uses along the river; reduce negative impacts caused by overuse of the current infrastructure; and create a greenway network that supports sustainability in the Basin. They take into account the improved pedestrian and bike facilities that have been planned and, in some cases implemented, through MassDOT's Accelerated Bridge Program (ABP). For example, the ABP has recently included bike lanes on the Boston University Bridge and will soon design one-way cycle tracks on the River Street and Western Avenue bridges, bike lanes and intersection improvements to the Anderson Memorial Bridge and wider sidewalks and bike lanes along the Longfellow Bridge. The latter project will also include a replacement footbridge over Storrow Drive from Charles Circle to the Esplanade. In addition to the currently recommended pedestrian and bicycle facilities, the MassDOT ABP bridge team have also studied the potential for underpasses below the intersections adjacent to the Anderson, River and Western Bridges. Although they have determined underpasses to be infeasible at this time, the ABP projects will not preclude the construction of underpasses in the future.

The planning-level recommendations above are expected to be designed, funded and implemented, over time, with reference to MassDOT's ABP projects, the City of Boston's Bike Master Plan, the Esplanade 2020 Plan and DCR's on-going maintenance and upgrades of pathways and parkland within the Charles River Reservation.

For the purposes of the Connectivity Study, the 8-mile-long Charles River Basin has been divided into 8 sections (A-H). Connectivity recommendations for the north and south banks of each section are described on the following pages.

38. Key to the recommendation sections.