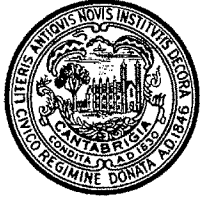


Attachment 2: Transportation Impact Study



CITY OF CAMBRIDGE
Traffic, Parking and Transportation
344 Broadway
Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Susan E. Clippinger, Director
Brad Gerratt, Deputy Director

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

July 7, 2014

Sean Manning, P.E., PTOE
Vanasse Hangen Brustlin, Inc.
99 High Street, 10th Floor
Boston, MA 02110-2354

RE: Ames Street Residences

Dear Sean,

We have reviewed your Traffic Impact Study (TIS) dated June 10, 2014 for the Ames Street Residences by BP Cambridge Center Residential, LLC. The study includes revisions which were made in response to our July 1, 2014 comment letter. Based on staff review your TIS is certified as complete and reliable.

Please call Adam Shulman at 617-349-4745 if you have any questions.

Sincerely,

Adam Shulman on behalf of Susan Clippinger

Susan E. Clippinger
Director

cc: Adam Shulman, TPT
Brian Murphy, CDD
Stuart Dash, CDD
Liza Paden, CDD
Susanne Rasmussen, CDD.

Ames Street Residences

Cambridge, Massachusetts

Submitted to: City of Cambridge
Traffic, Parking and Transportation Department

Submitted by: BP Cambridge Center Residential, LLC

Prepared by: **VHB /Vanasse Hangen Brustlin, Inc.**
Transportation, Land Development, Environmental Services
99 High Street, 10th floor
Boston, Massachusetts 02110-2354
617-728-7777

Under the Direction of: _____
Sean M. Manning, P.E., PTOE
Massachusetts Registration No. 45812

June 10, 2014

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Introduction & Project Overview

On behalf of BP Cambridge Center Residential, LLC (the project proponent), Vanasse Hangen Brustlin, Inc. (VHB) has conducted a Transportation Impact Study (TIS) for the proposed Ames Street Residences Project. The project is proposed to be built within Cambridge Center on a parcel of land that is located along Ames Street between Broadway to the north and Main Street to the south in Cambridge, Massachusetts and just west of the existing East Garage (with a portion of the project proposed to replace a part of that existing garage).

The proposed development will include a mixed-use building with 280 residential apartment units above approximately 16,000 square feet of ground-floor retail space. No new parking will be constructed as part of the Project. A portion of the East Garage will be reconfigured to accommodate the Project's building footprint, resulting in a loss of approximately 40 spaces; thereby, reducing the garage's capacity to 804 spaces. The existing loading dock at the west edge of the East Garage that serves 5 Cambridge Center would also be relocated to support the construction of the Project. Its new location would be positioned along the southwest face of the garage with access/egress via Ames Street. This drive would serve the dual purpose of access/egress for the loading dock and egress only for the East Garage.

This TIS responds to the scope dated April 14, 2014 as defined by the City of Cambridge Traffic, Parking, and Transportation (TP&T) Department in response to VHB's Request for Scoping dated March 20, 2014. A copy of the City's scoping letter is included in the Appendix. This TIS has been prepared in conformance with current City of Cambridge *Guidelines for Transportation Impact Study* required under the Article 19 Special Permit Project Review. The TIS document comprises three components, as follows:

- *Introduction and Project Overview*, describing the framework in which the transportation component of this project was evaluated;



- *Transportation Impact Study*, presenting the technical information and analysis results as required under the guidelines; and,
- *Planning Board Special Permit Criteria*, summarizing the evaluation of the proposed project as defined under the guidelines.

The required TIS Summary Sheets and Planning Board Criteria Performance Summary are included herein. Supplementary data and analysis worksheets are provided in a technical appendix. Electronic files for automatic traffic recorder (ATR) counts, turning movement counts (TMC), and Synchro analyses are also included on an accompanying CD.

Project Overview

The proposed project will include 280 residential apartment units, grossing approximately 200,000 GSF, with approximately 16,000 GSF of ground floor retail space. Approximately 140 parking spaces will be allocated within the existing, adjacent East Garage, as described below and illustrated in the relevant figures.

- **Figure A** presents a site location map
- **Figure B** presents an aerial view of the proposed site and its neighborhood context
- **Figure C** presents the existing site plan
- **Figure D.1** presents a ground floor parking access and egress plan for the Project
- **Figure D.2** illustrates the layout of proposed short term bicycle parking facilities to be built on-site
- **Figures D.3.1-D.3.3** illustrate the proposed secure bicycle room access and layout plan
- **Figure D.4** illustrates proposed replacement loading and service that will support the Project and the adjacent 5 Cambridge Center
- **Figure D.5** illustrates the City of Cambridge proposed future layout of Ames Street, including lane configurations, bicycle infrastructure and sidewalks.
- **Figure D.6** illustrates an alternate future layout of Ames Street

As shown in **Figures A and B**, the project is located along the east side of Ames Street between Broadway to the north and Main Street to the south.



As shown in **Figure C**, the site includes vacant land, a portion of the existing East Garage, and a portion of the east side of Ames Street's current geometric layout. The East Garage's current layout and some of its access characteristics would be modified to support the Project. The Garage's existing west driveway to Ames Street and adjacent loading dock would both be eliminated to support construction of the Project. As shown in **Figure D.1**, all vehicular access to the East Garage would be accommodated from the existing entrance on Broadway. Egress would be provided via the existing Broadway exit, and supported with an additional, new egress-only drive that would connect the garage back to Ames Street (just north of 5 Cambridge Center).

A total of 294 long-term bicycle parking spaces will be located within the residential building in two dedicated bike rooms. One room will be within the building on the cellar floor containing 262 spaces and the other room will be located on the first floor of the parking garage containing 32 spaces. The bike room will be accessed via a service elevator dimensioned 6' 8" by 5' 1/2" which is able to accommodate a bicycle with trailer. The proposed 1.05 ratio of sheltered, long-term bicycle spaces per residential unit complies with current zoning requirements, and, as described in Section 12 of the TIS, there will be some sharing of bicycle spaces by residential and retail users. In addition, short-term/visitor bicycle racks for approximately 38 bikes will be provided outside the project's building lobby on Ames Street for visitors and employees of the residential and retail land uses. **Figure D.2** illustrates the location of the short-term bicycle parking while **Figure D.3.1 through Figure D.3.3** illustrates the layout of proposed long-term bicycle parking in the building.

The existing loading dock at the west edge of the East Garage that serves 5 Cambridge Center would be relocated to support the construction of the Project. Its new location would be positioned along the southwest face of the garage with access/egress via Ames Street. This drive would serve the dual purpose of access/egress for the loading dock and vehicular egress only for the East Garage. The new dock will include four service bays sized to accommodate an SU-35 sized truck. This dock would serve both the existing 5 Cambridge Center facility and the proposed Ames Street Residences. **Figure D.4** illustrates the geometric configuration of the proposed loading and service area.

Enhancing and promoting sustainable transportation is also an important objective for the City of Cambridge and changes to Ames Street support Cambridge's policies to promote improved pedestrian and bicycle infrastructure within the City. As currently planned, the existing 4-lane Ames Street would be reconfigured to support implementation of dedicated bicycle infrastructure along the corridor between Main Street and Broadway. Current plans call for a buffered 2-way cycle track along the east side of Ames Street with on-street parking separating bike travel from vehicle travel. Additionally, the pedestrian



sidewalk along the east side of Ames Street would be widened considerably, from its current width of 11-14 feet to approximately 15.5 feet. To support these changes, Ames Street would be narrowed to two travel lanes (one lane for each direction of travel). These changes would also require adjustments to sidewalks, accessible ramps, and traffic signalization at the intersections of Ames Street/Main Street and Ames Street/Broadway. The proposed reconfiguration of Ames Street as indicated by the City of Cambridge, including its future geometric condition, is illustrated in **Figure D.5**.

An alternate Ames Street layout, as illustrated in **Figure D.6**, has also been developed in addition to the City of Cambridge layout. The alternate layout proposes bicycle lanes as opposed to a two-way cycle track.

The proposed project program is summarized in **Table A** below.

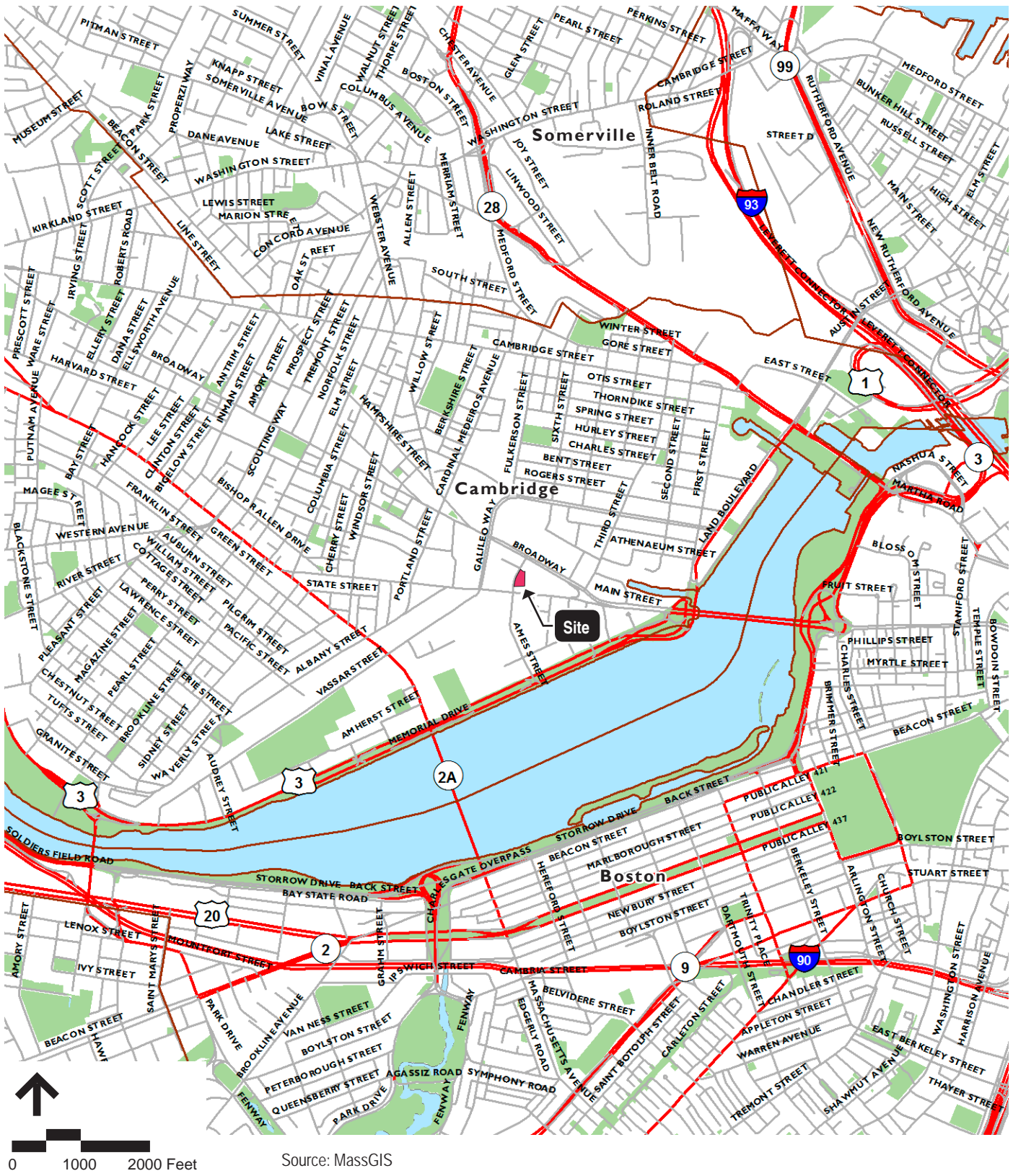
Table A
Proposed Development Program

Use	Size
Residential (Apartments)	200,000 GSF/280 units
<u>Retail Space (Ground Floor)</u>	<u>16,000 GSF</u>
Total SF	216,000 GSF
Vehicle Parking	140 spaces for Residents
Bicycle Parking	294 long-term bike parking spaces for residents and retail / 38 short-term bike parking spaces for residents and retail

A total of 140 vehicle parking spaces will be provided for residential use. As described in the parking analysis in Section 9 of the TIS, these spaces will be allocated within the existing Cambridge Center East Garage. No new parking will be built in connection with the Project.

The TIS study area for the proposed project, as defined by the City of Cambridge, is shown in **Figure E**. The study intersections include the following locations:

1. Broadway at Galileo Galilei Way
2. Main Street/Vassar Street at Galileo Galilei Way
3. Main Street at Ames Street
4. Broadway at Ames Street
5. Broadway at Third Street
6. Ames Street at Cambridge Center East Garage
7. Broadway at Cambridge Center East Garage

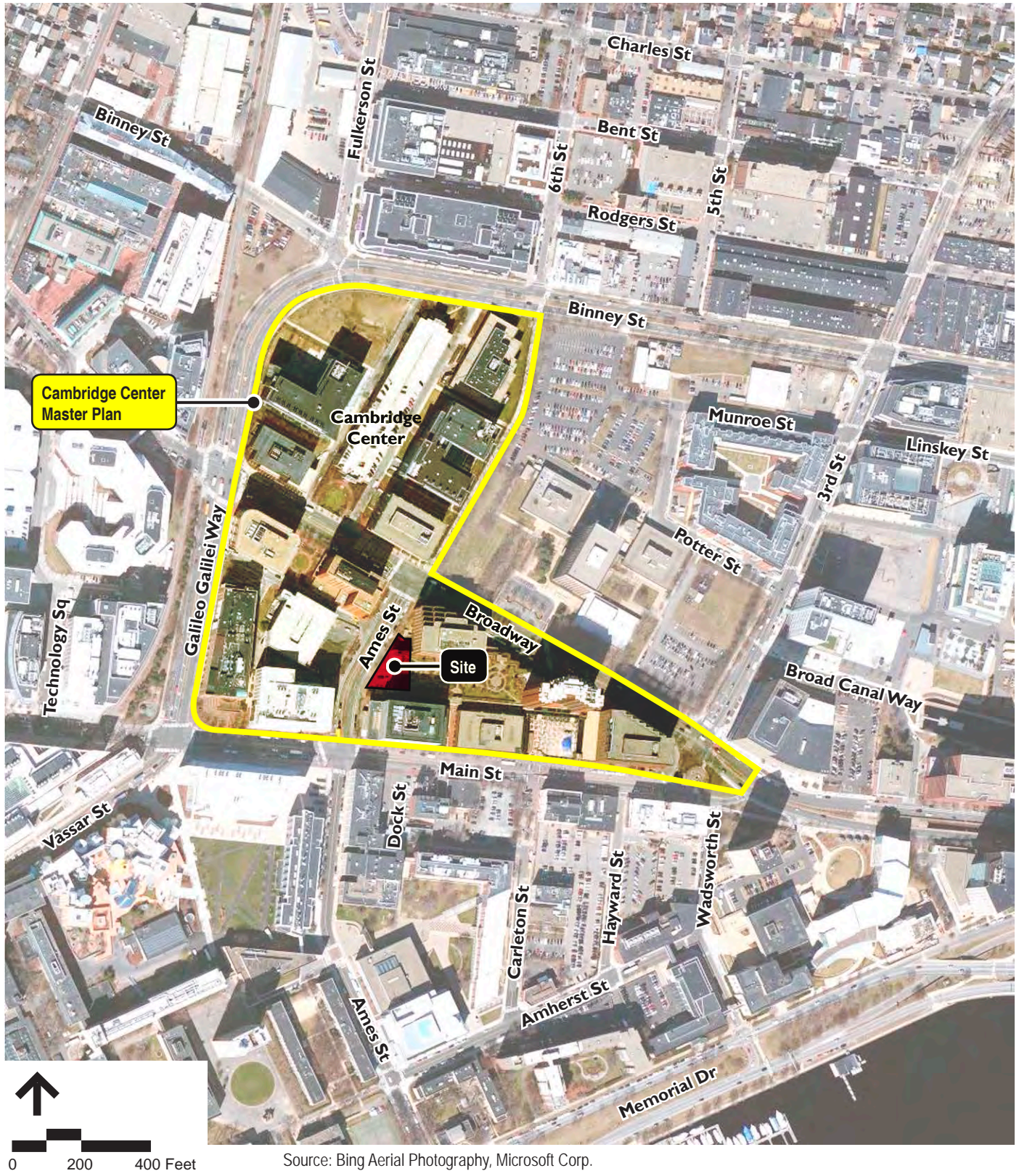


Vanasse Hangen Brustlin, Inc.

Site Location Map

Figure A

Ames Street Residences
Kendall Square, Cambridge, MA

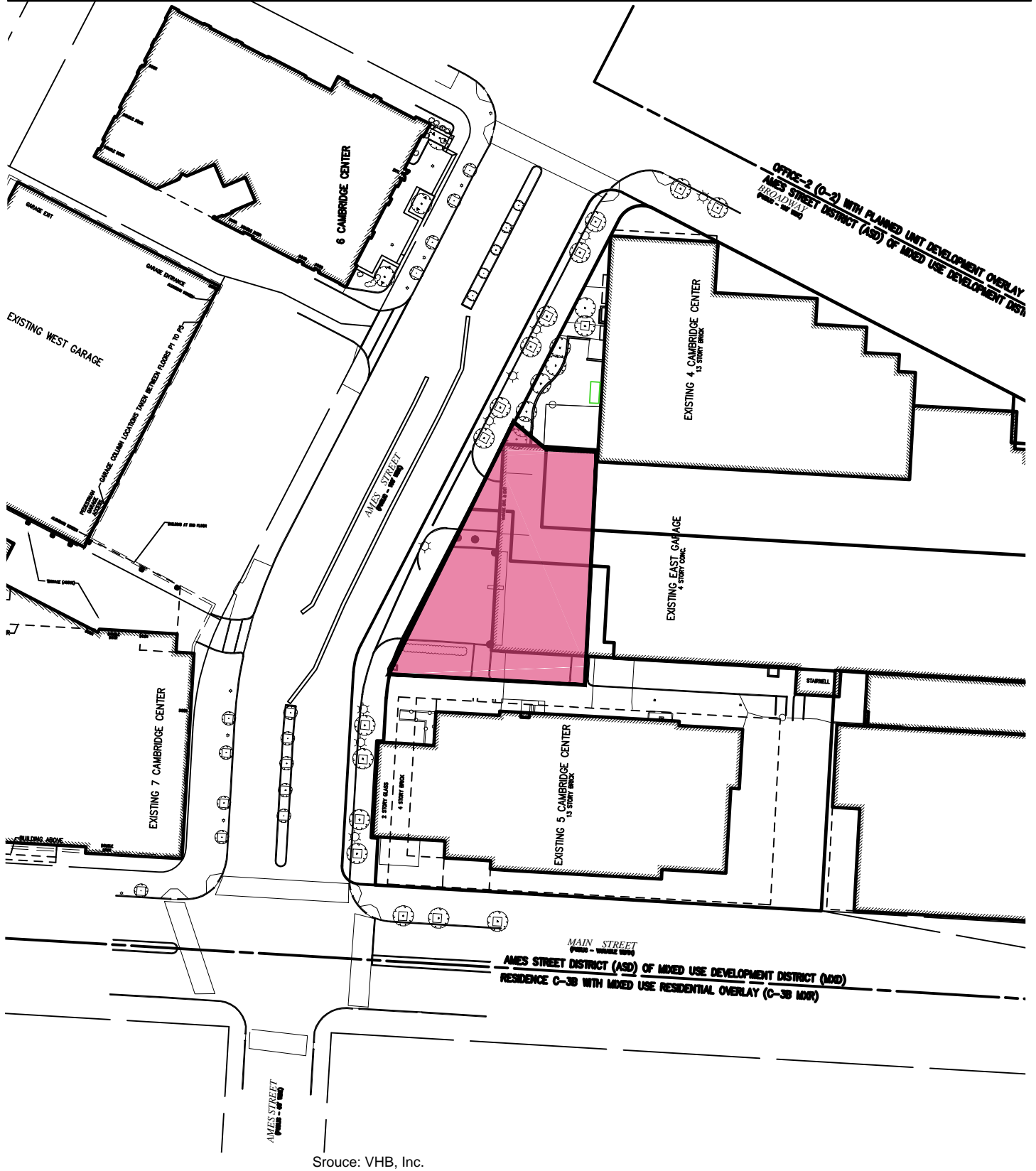


Vanasse Hangen Brustlin, Inc.

Project Context

Figure B

Ames Street Residences
Kendall Square, Cambridge, MA



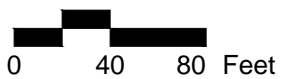
Srouce: VHB, Inc.

Vanasse Hangen Brustlin, Inc.

Existing Site Plan

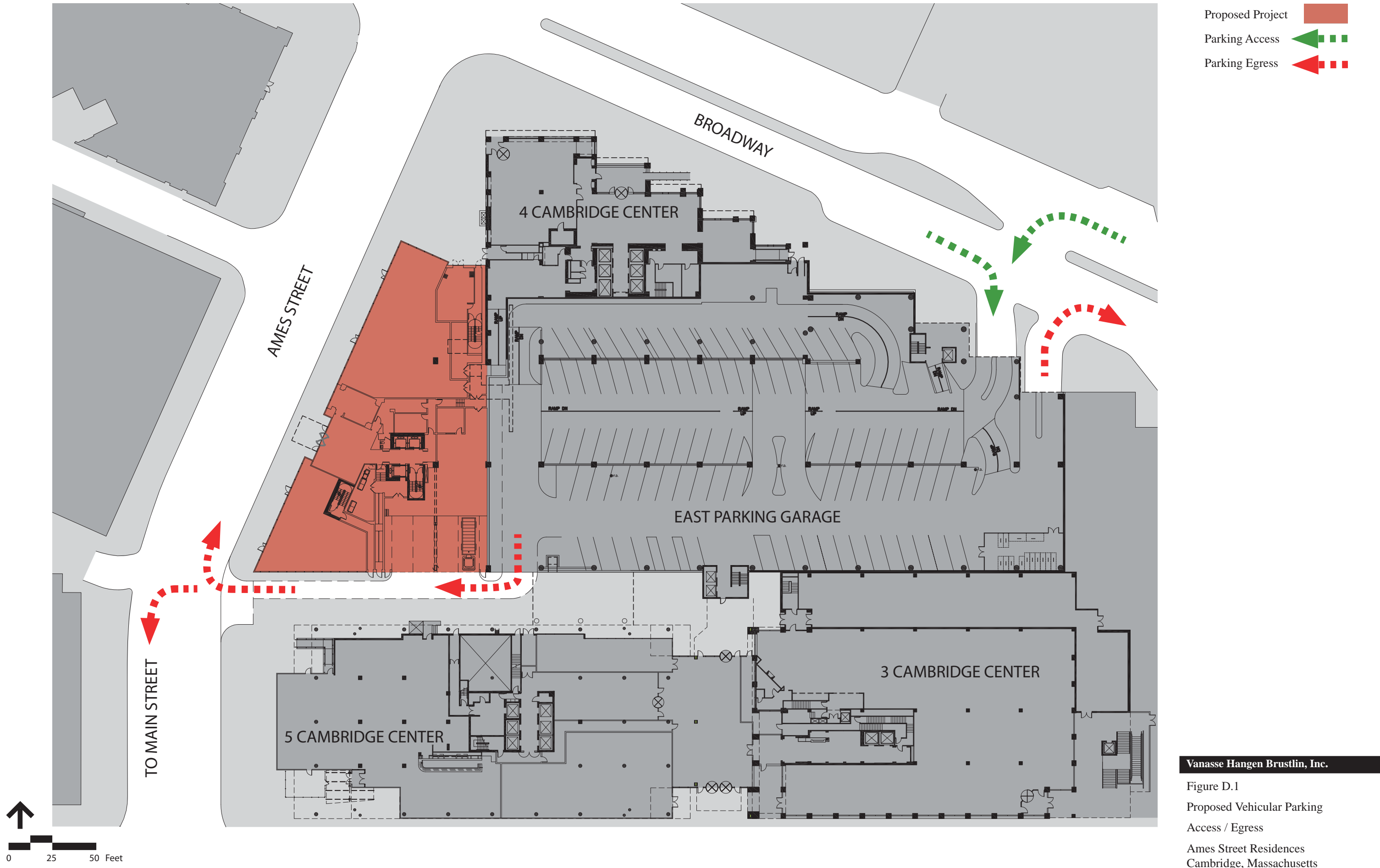
Figure C

Ames Street Residences
Kendall Square, Cambridge, MA



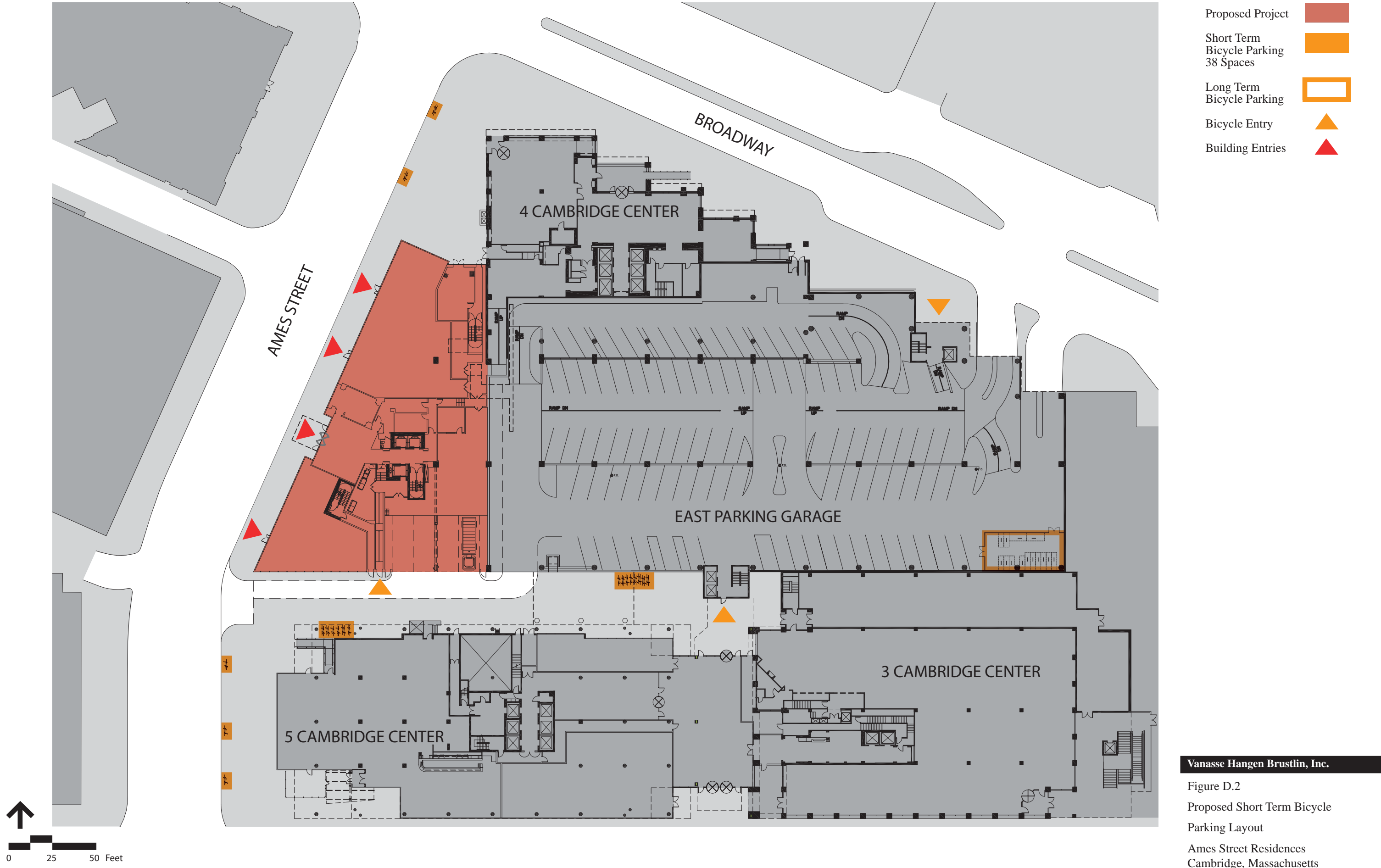


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Vanasse Hangen Brustlin, Inc.

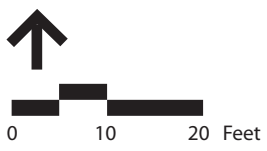
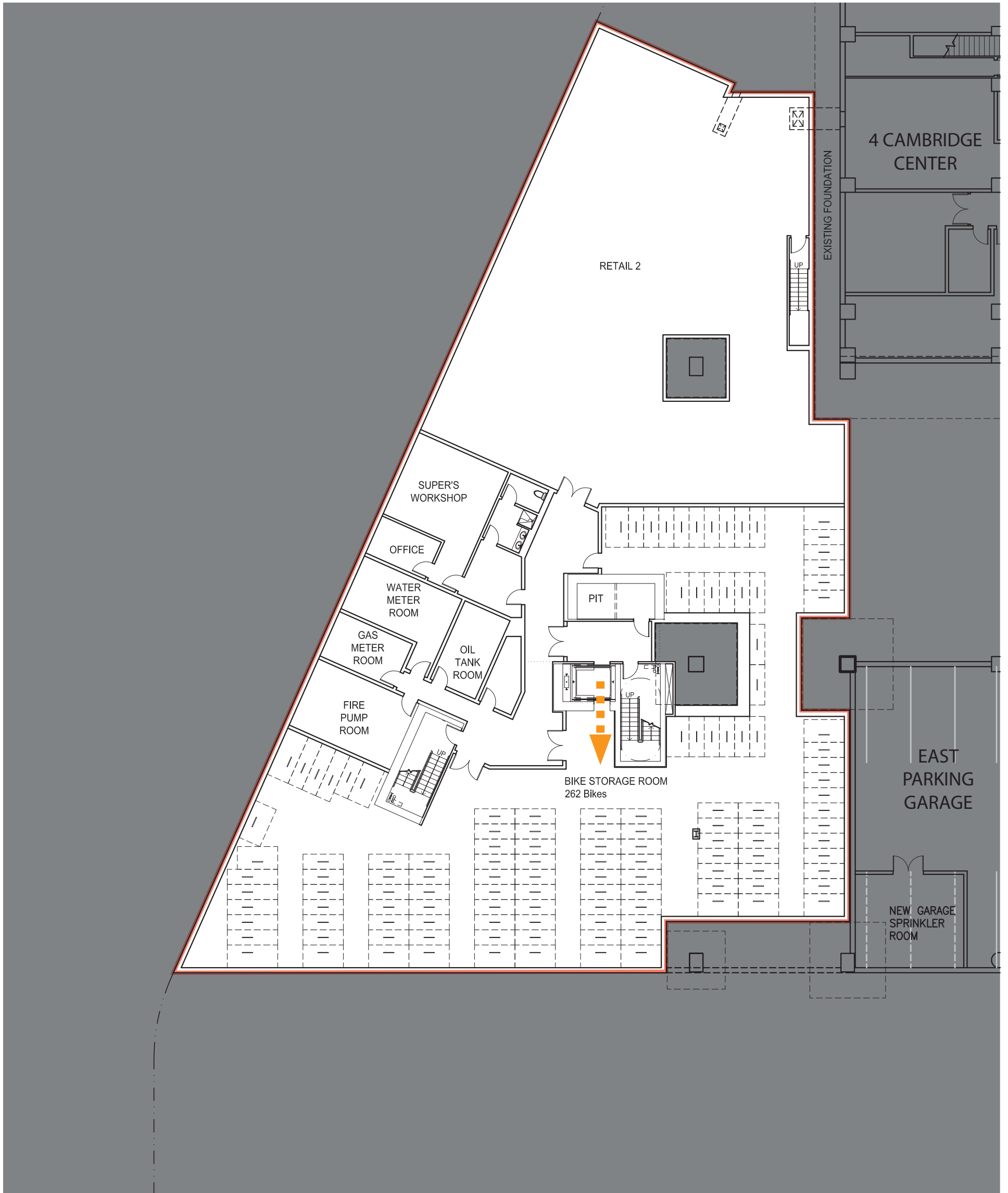
Figure D.1
Proposed Vehicular Parking
Access / Egress
Ames Street Residences
Cambridge, Massachusetts



Vanasse Hangen Brustlin, Inc.

Figure D.2
Proposed Short Term Bicycle
Parking Layout
Ames Street Residences
Cambridge, Massachusetts

Proposed Project 
Bicycle Access 



Source:

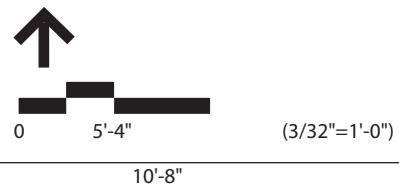
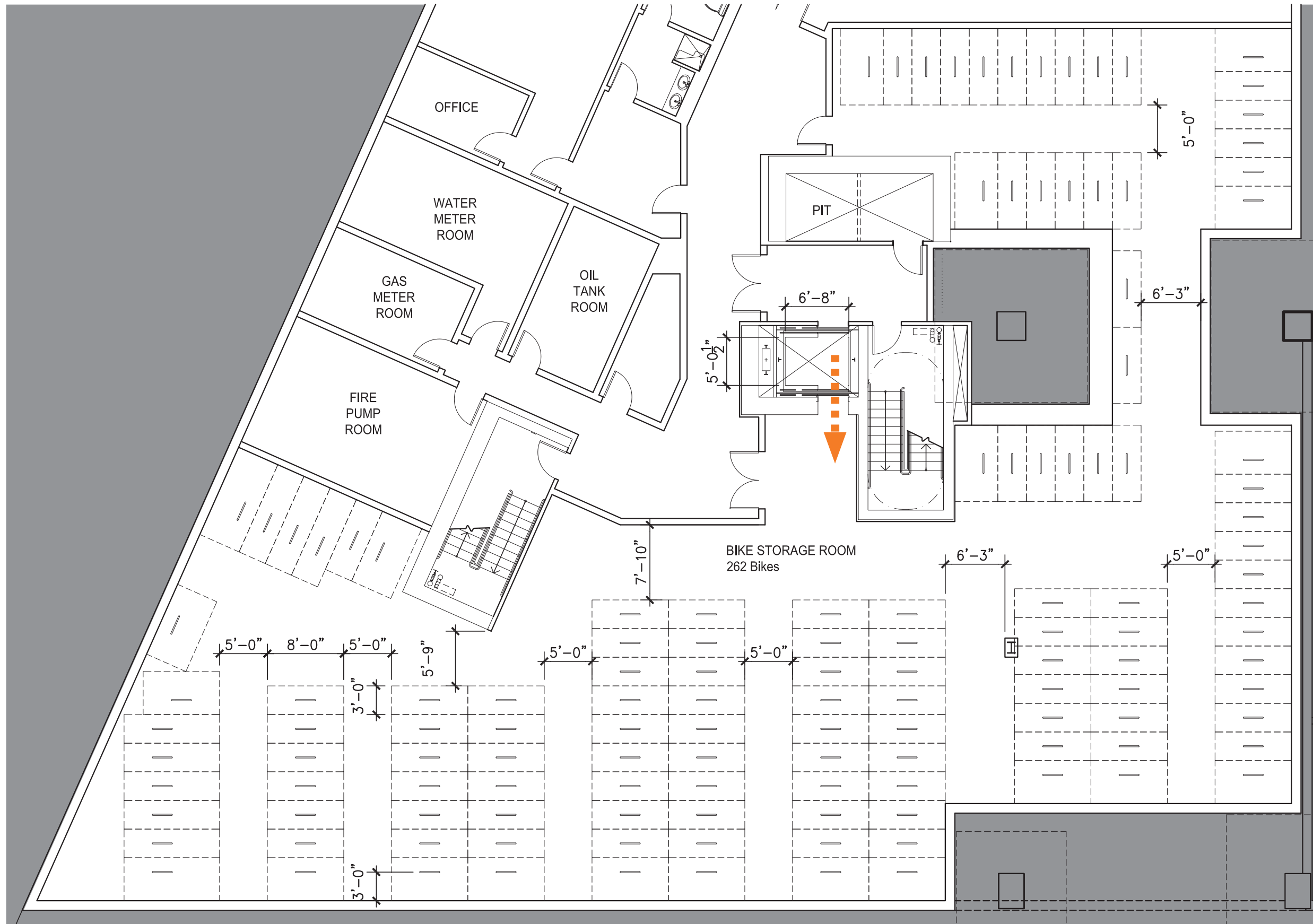
Vanasse Hangen Brustlin, Inc.

Figure D.3.1

Proposed Secure Bicycle Room Access
Cellar Floor Plan

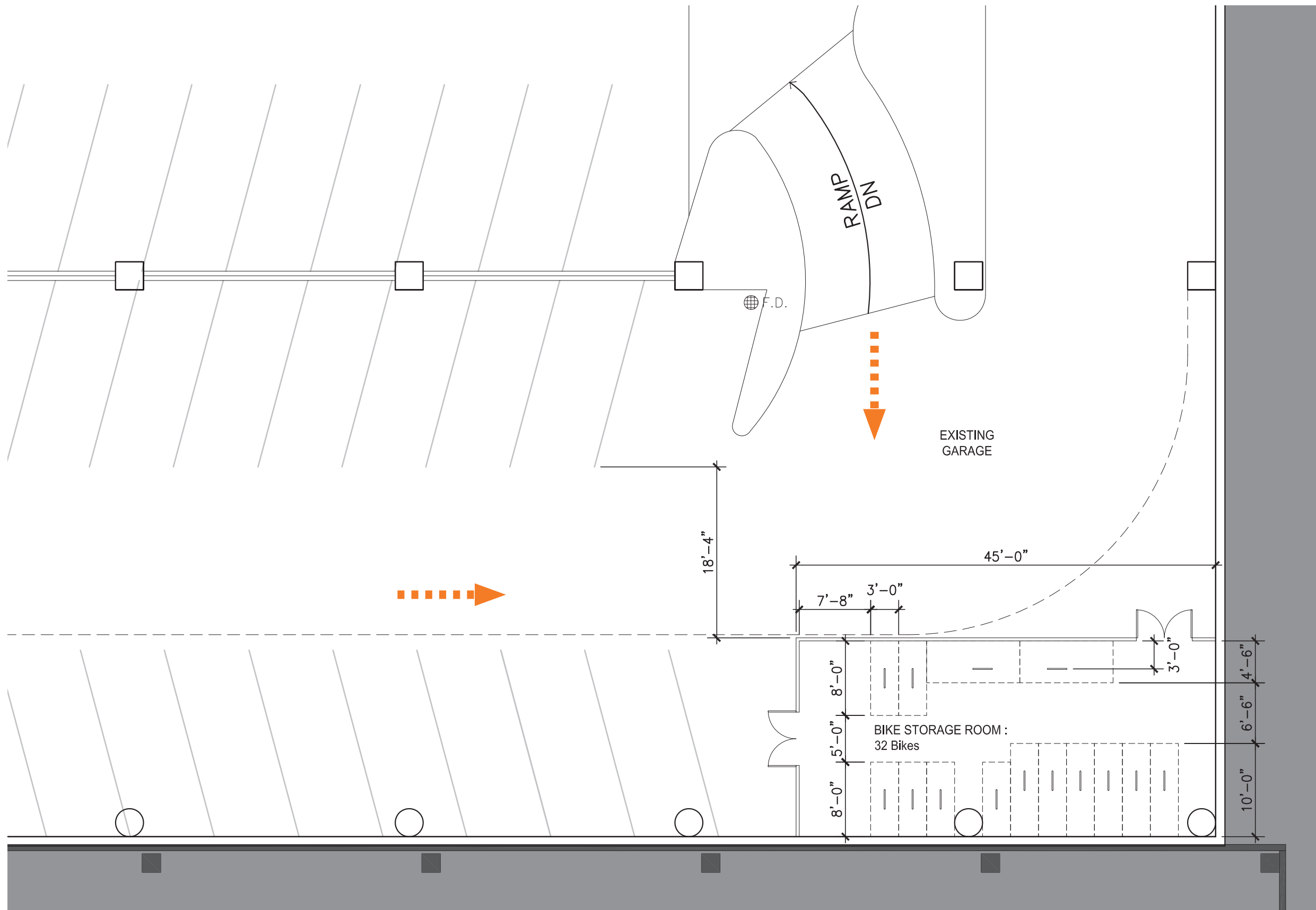
Ames Street Residences
Cambridge, Massachusetts

Bicycle Access 

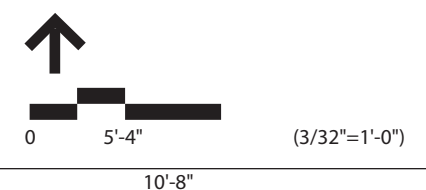


Vanasse Hangen Brustlin, Inc.

Figure D.3.2
 Proposed Long Term Bicycle
 Parking Layout - Cellar Level
 Ames Street Residences
 Cambridge, Massachusetts

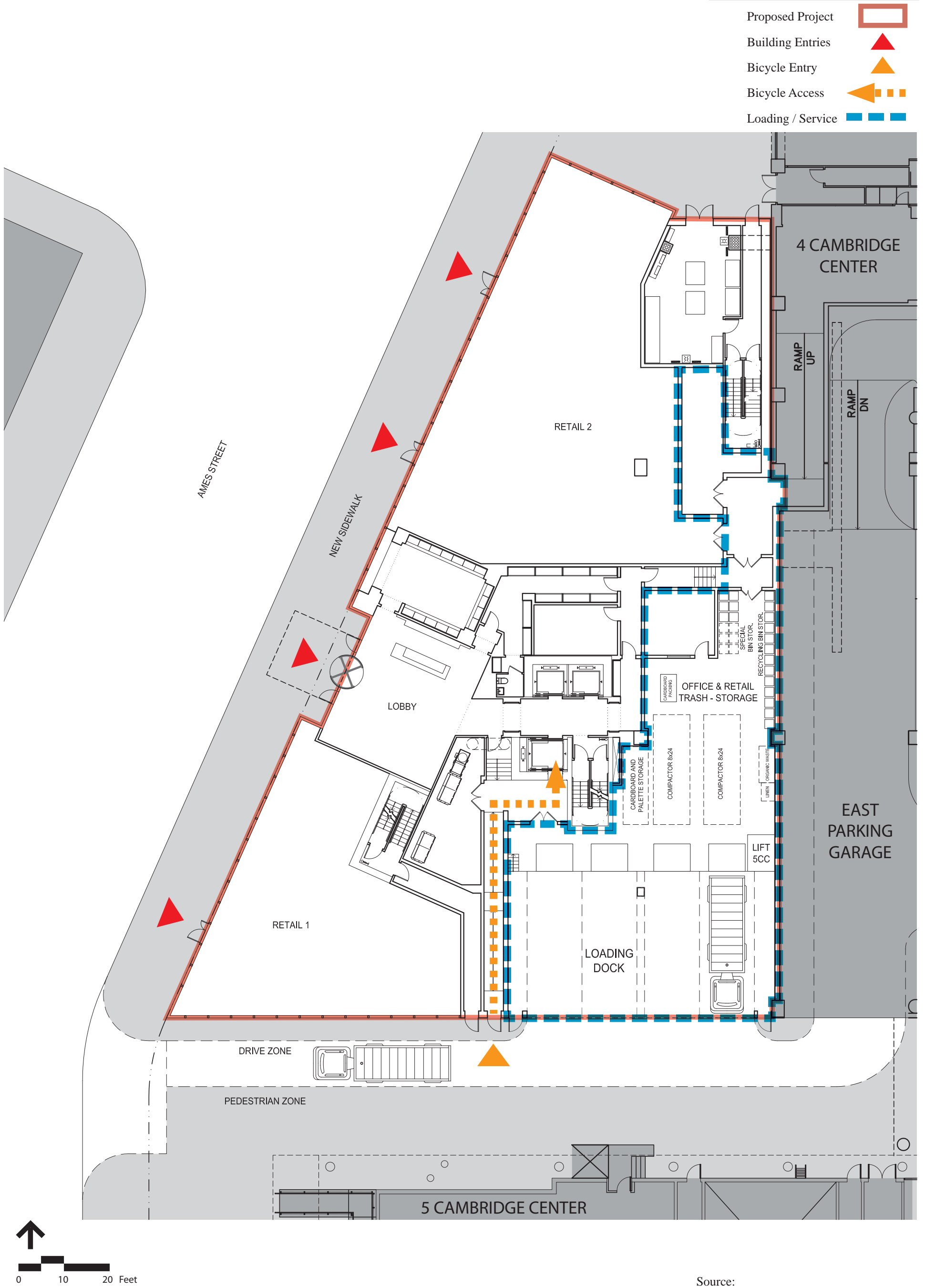


Bicycle Access 



Vanasse Hangen Brustlin, Inc.

Figure D.3.3
Proposed Long Term Bicycle
Parking Layout - Garage Level 1
Ames Street Residences
Cambridge, Massachusetts



Source:

Vanasse Hangen Brustlin, Inc.

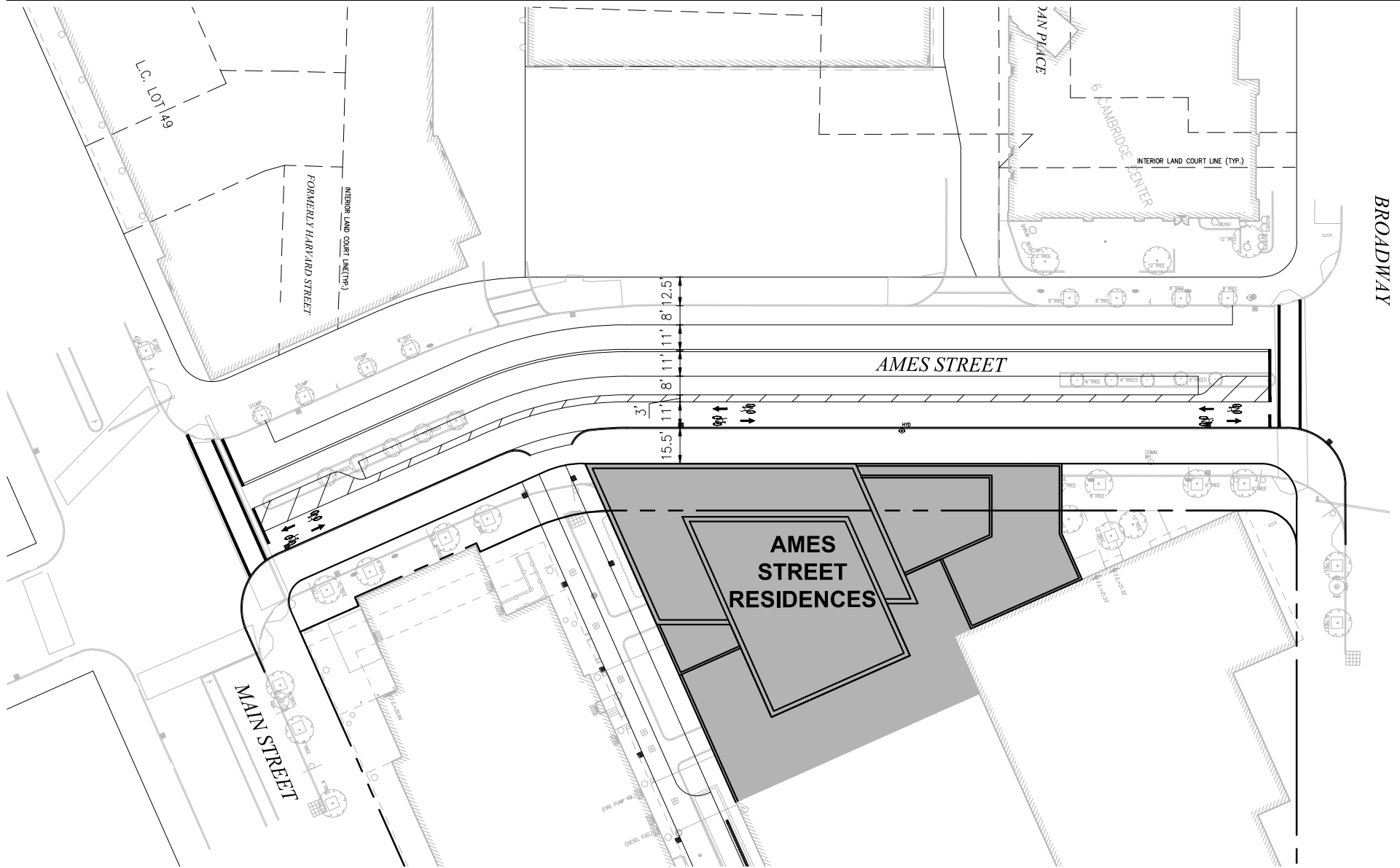
Figure D.4

Proposed Loading And Service Layout

Ground Floor Plan

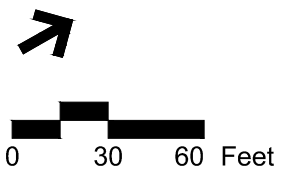
Ames Street Residences

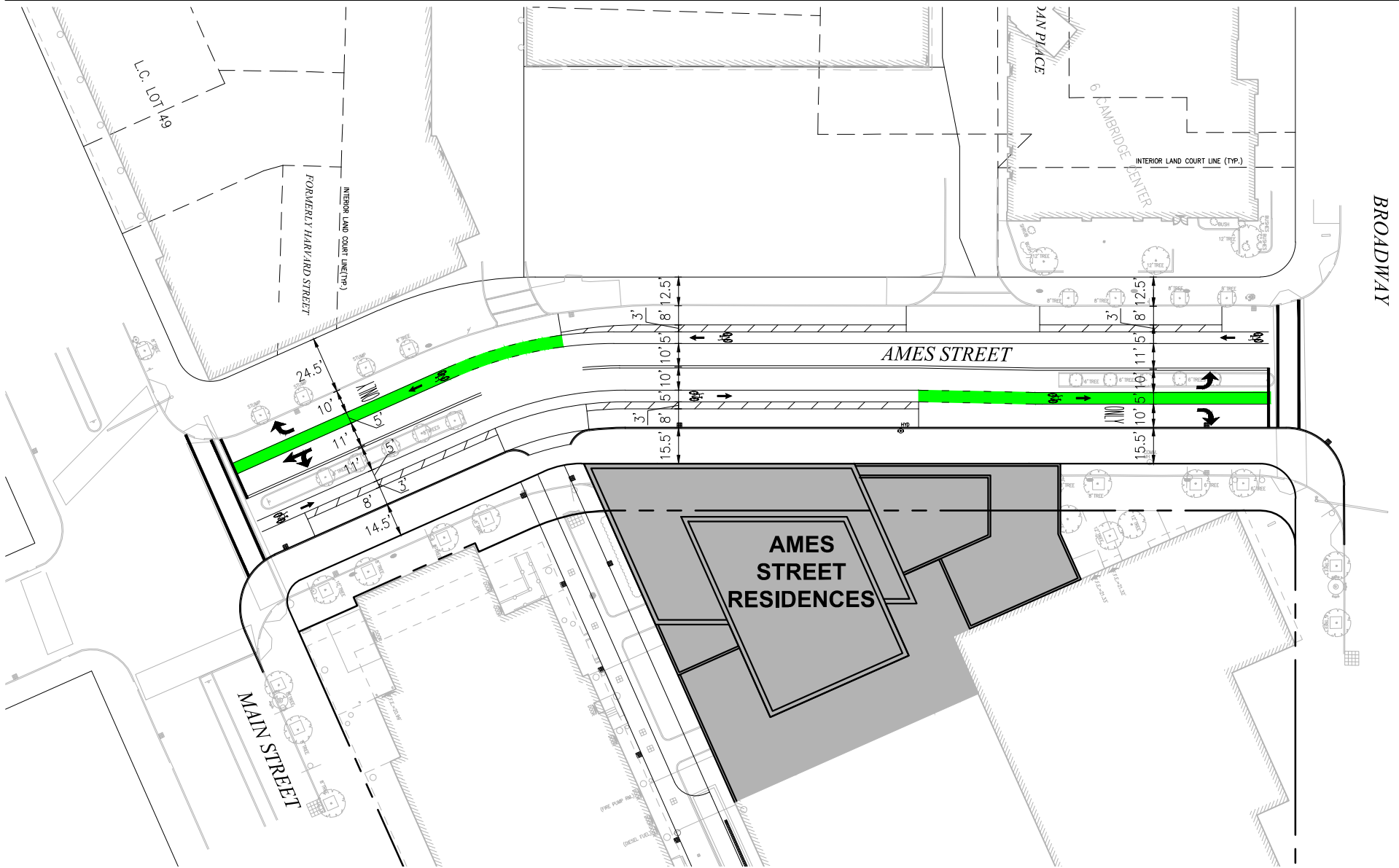
Cambridge, Massachusetts



Vanasse Hangen Brustlin, Inc.

Figure D5
May 2014
Ames Street Layout
City of Cambridge Cycle Track Concept
Ames Street Residences
Kendall Square, Cambridge, MA

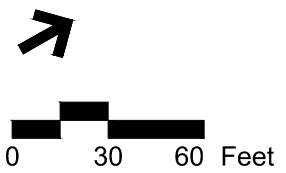


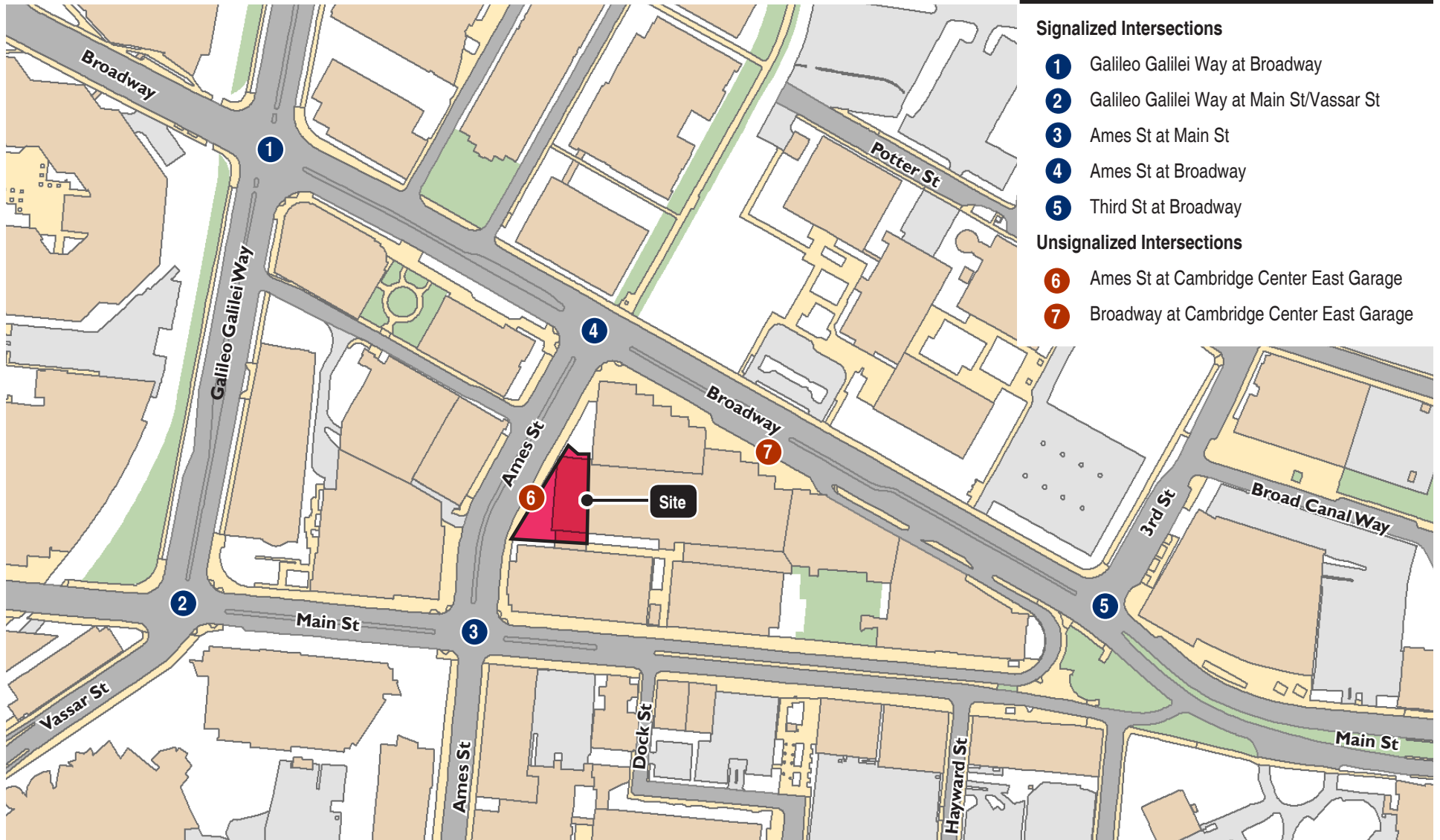


Vanasse Hangen Brustlin, Inc.

Figure D6 May 2014

Ames Street Layout
Alternative Bike Lane Concept
Ames Street Residences
Kendall Square, Cambridge, MA





Source: City of Cambridge GIS

Vanasse Hangen Brustlin, Inc.

Figure E

Study Area Intersections

Ames Street Residences

Kendall Square, Cambridge, MA





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Planning Board Criteria Summary

Based on the TIS analysis, the project has been evaluated within the context of the Planning Board Criteria to determine if the project has any *potential* adverse transportation impacts. Exceeding one or more of the Criteria is indicative of a *potentially* adverse impact on the City's transportation network. However, the Planning Board will consider mitigation efforts, their anticipated effectiveness, and other information that identifies a reduction in adverse transportation impacts.

The Planning Board Criteria consider the project's vehicular trip generation, impact to intersection level of service and queuing, and increase of volume on residential streets. In addition, pedestrian and bicycle conditions are considered. A discussion of the Criteria set forth by the Planning Board is presented in the final section of this TIS and the Planning Board Criteria Performance Summary is presented below.

Planning Board Permit Number: _____

Project Name: Ames Street Residences

Total Data Entries = 119

Total Number of Criteria Exceedences = 0

a. Project Vehicle Trip Generation

Time Period	Build	Exceeds Criterion
Weekday Daily	848	N
AM Peak	48	N
PM Peak	76	N

b. Level of Service (VLOS) at Signalized Intersections

Intersection	AM Peak Hour			PM Peak Hour		
	Existing	Build	Exceeds Criterion?	Existing	Build	Exceeds Criterion?
Broadway / Galileo Galilei Way	E	F	N	E	E	N
Main Street / Vassar Street / Galileo Galilei Way	C	C	N	C	C	N
Main Street / Ames Street	C	C	N	C	C	N
Broadway / Ames Street	C	C	N	D	D	N
Broadway / Third Street	E	E	N	E	E	N

c. Traffic on Residential Streets

There are no Residential Streets in the study area

d. Lane Queue (for signalized intersections critical lane)

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criterion?	Existing	Build	Exceeds Criterion?
Broadway / Galileo Galilei Way (Signalized)	EBL	4	4	N	5	5	N
	EBT	6	6	N	7	7	N
	WBL	4	4	N	6	6	N
	WBT	6	6	N	8	8	N
	NBL	2	2	N	4	4	N
	NBT	3	3	N	7	7	N
	SBL	4	4	N	3	3	N
	SBT	11	11	N	7	7	N
Main Street / Galileo Galilei Way (Signalized)	SBR	6	7	N	5	5	N
	EBL	2	2	N	6	6	N
	EBT	4	4	N	4	5	N
	WBL	2	3	N	2	2	N
	WBT	5	4	N	3	3	N
	NBT	4	4	N	7	7	N
	SBL	1	1	N	1	1	N
Main Street / Ames Street (Signalized)	SBT	5	6	N	8	8	N
	SBR	4	5	N	6	6	N
	EBT	6	6	N	8	9	N
	WBT	2	2	N	2	3	N
	NBT	6	6	N	6	6	N
Broadway / Ames Street (Signalized)	SBT	2	2	N	5	4	N
	SBR	3	3	N	4	3	N
	EBT	7	3	N	8	8	N
	WBL	3	2	N	3	3	N
	WBT	12	11	N	15	15	N
Broadway / Third Street (Signalized)	NBL	3	3	N	3	4	N
	NBR	1	1	N	1	1	N
	EBL	6	6	N	7	7	N
	EBT	2	2	N	7	8	N
	WBT	15	15	N	8	9	N
	SBL	4	n/a	N	12	n/a	N
	SBT	n/a	5	N	n/a	14	N
	SBR	4	3	N	4	3	N

e. Pedestrian and Bicycle Facilities

Signalized Intersections

Intersection	Crosswalk	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceed Criterion?	Existing	Build	Exceeds Criterion?
Galileo Galilei Way at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	D	D	N	D	D	N
	South	D	D	N	D	D	N
Vassar Street at Main Street	East	C	C	N	C	C	N
	West	C	C	N	C	C	N
	North	C	C	N	B	B	N
	South	C	C	N	B	B	N
Ames Street at Main Street	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	C	C	N	C	C	N
	South	C	C	N	C	C	N
Ames Street at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	South	C	C	N	C	C	N
Third Street at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	C	C	N	C	C	N

Sidewalk and Bicycle Facilities

Adjacent Street	Link (between)	Sidewalks or Walkways Present?	Exceeds Criteria?	Bicycle Facilities or Right of Ways Present?	Exceeds Criteria?
Ames Street	Main Street and Broadway	Y	N	Y	N
Broadway	Ames Street and Third Street	Y	N	Y	N

CITY OF CAMBRIDGE

Special Permit Transportation Impact Study (TIS)

Planning Board Permit Number: _____

PROJECT NAME: Ames Street Residences
 Address: 77 Ames Street, Cambridge MA
 Owner/Developer Name: BP Cambridge Center Residential, LLC
 Contact Person: David Stewart
 Contact Address: 800 Boylston Street, Suite 1900, Boston, MA 02199
 Contact Phone: (617) 236-3407

SIZE:
 ITE sq. ft.: 280 residential rental units and 16,000 square feet retail
 Zoning sq. ft.: N/A
 Land Use Type: Residential and Retail

PARKING:
 Existing Parking Spaces: 844 Use: Parking Garage
 New Parking Spaces: 840 Use: Parking Garage
 Net Increase Parking Spaces (-40)
 Date of Parking Registration Approval: N/A

TRIP GENERATION:

	Daily	AM Peak Hour	PM Peak Hour
Total Trips	3,122	176	282
Vehicle	848	48	76
Transit	998	57	90
Pedestrian	880	48	80
Bicycle	308	18	28
Other	88	5	8

MODE SPLIT (PERSON TRIPS): RESIDENTIAL & (RETAIL)
 Vehicle: 32.0% (31.0%) Bicycle: 10.0% (8.0%)
 Transit: 30.0% (30.0%) Pedestrian: 25.0% (29.0%)
 Other: 3.0% (2.0%)

TRANSPORTATION CONSULTANT:

Company Name: Vanasse Hangen Brustlin, Inc.
 Contact Name: Sean M. Manning, P.E., PTOE
 Phone: 617.728.7777

Date of Building Permit Approval: _____



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Transportation Impact Study

This Transportation Impact Study (TIS) for the proposed Ames Street Residences (the Project) describes existing and future transportation conditions in the study area in accordance with current City of Cambridge *Guidelines for Transportation Impact Study*. The study area for the TIS includes Broadway, Main Street, Galileo Galilei Way, Ames Street, and Third Street and comprises seven study-intersections, including the site driveways, as previously shown in **Figure E**.

This section includes inventories of physical and operational conditions in the study area including roadways, intersections, crosswalks, sidewalks, on-street and off-street parking, transit facilities, and land uses. Transportation data that were collected and compiled are presented, including automatic traffic recorder counts, intersection turning movement counts, pedestrian and bicycle counts, vehicle crash data, and transit service data.

1. Inventory of Existing Conditions

a. Roadways

The site is located on the east side of Ames Street between Broadway to the north and Main Street to the south. Ames Street runs north/south from Memorial Drive to Broadway. Broadway runs southeast/northwest to the north of the project site. Main Street runs east/west to the south of the project site. **Figure C**, previously presented, shows the roadway network surrounding the Project site.

b. Intersections

The project study area includes five signalized intersection and two unsignalized intersections at the garage driveways, previously mentioned in the Project Overview. The five (5) signalized intersections are illustrated in **Figures 1.b.1 through 1.b.5**.

c. Parking

A portion of the site is currently occupied by the Cambridge Center East Garage which was constructed as part of the Cambridge Center Master Plan to accommodate parking needs for the area. The garage contains 844 spaces and is currently used by tenant employees who lease monthly parking and some area



transient parkers (visitors). The basement level of the garage is reserved specifically for Marriott Hotel valet use.

Figure 1.c presents existing on-street parking regulations in the area. Ames Street provides on-street 1-hour metered parking as does parts of Main Street near the project site. Broadway is a no stopping zone near the project site.

d. Transit Services

Figure 1.d illustrates existing Massachusetts Bay Transportation Authority (MBTA) services and the Charles River Transportation Management Association's (CRTMA) EZ Ride in the study area. The site is located within a 1/10th of a mile of Kendall Square and one mile of Central Square MBTA Red Line stations, providing service to/from Alewife to the northeast and downtown Boston, with connections to both Braintree and Ashmont to the south. The Red Line connects with the Green Line at Park Street and the Orange Line and Silver Line at Downtown Crossing. Connections to all southern commuter rail lines and the Silver Line are made at South Station. In addition, the Fitchburg commuter rail line connects with the Red Line at Porter Square.

The MBTA operates 4 bus routes in the study area, including the following:

64: Oak Square - University Park, Cambridge or Kendall/MIT via North Beacon St.

This route connects Oak Square to University Park, Cambridge, and Kendall Station. The bus travels through the project study area along Broadway to Kendall/MIT station providing service between Central Square and Kendall.

68: Harvard/Holyoke Gate - Kendall/M.I.T. via Broadway

This route connects Harvard Square and Kendall / MIT, travelling along Broadway, ending at Kendall/MIT Station.

85: Spring Hill - Kendall/M.I.T. Station via Summer St. & Union Sq.

Route 85 is a local route connecting Spring Hill, Summer Street, Union Square and Kendall / MIT. The southern section of this route, serving Kendall Square, traveling along Broadway is within the project study area where it runs along the same route as the CT2 to Kendall / MIT.

CT2: Sullivan Square Station - Ruggles Station via Kendall/MIT Station

Route CT2 is a limited stop, cross-town route that operates between Sullivan Square and Ruggles Station. This route utilizes Main Street and Broadway to pass through Kendall/MIT station in the project study area.

In addition, the Charles River Transportation Management Association (TMA) operates the *EZRide* shuttle service between North Station, Lechmere, Kendall



Square, University Park, and Cambridgeport. The shuttle thereby provides connections to the Green Line at Lechmere Station and the northern MBTA commuter rail services, as well as the Green Line and Orange Line, at North Station

e. Land Use

Figure 1.e illustrates land uses in the area surrounding the site. The neighborhood is largely characterized by institutional and office land use to the south and west, although there is a hotel building abutting the east side of the project site as well as northwest of the site. Ground floor retail and restaurant land uses can be found along Broadway and Main Street.

2. Data Collection

a. ATR Counts

Automatic traffic recorder counts were performed in October 2010 as part of the Kendall Square Main Street Project at the location of Ames Street, north of Main Street for a total of 48-hours. Further, these counts were compared to recent counts conducted in April 2014 to demonstrate that current traffic volumes within the study area are substantially different than conditions prior to the construction of the Longfellow Bridge. This comparative analysis indicated that current volumes in the study area do not accurately represent typical conditions for the following reasons:

- Ongoing construction activity has resulted in shifts in westbound traffic resulting in lower volume on Broadway and Main east of Galileo Galilei Way.
- Traffic volumes are significantly higher along Galileo Galilei Way westbound to get around Bridge construction.
- Overall traffic volume at Galileo Galilei Way intersections with Broadway and Main are significantly higher because of diverted traffic.

Based on these new counts and their comparison to the most recent counts available that represent typical traffic conditions in the area (2010 counts), it is clear that the use of these new data would not provide a reflective means to assess and quantify the true transportation impacts of the proposed Ames Street Residences Project. Longfellow Bridge construction is expected to continue for several more years, making it a challenge to obtain current, typical traffic information for this area of Cambridge. As such, 2010 counts that were conducted by the City of Cambridge as part of the Kendall Square Planning Study were used to support the development of the TIS for this Project.



A traffic volume summary for the ATR is presented in **Tables 2.a.1 and 2.a.2**. These data, representing the averages of data collected over two weekdays illustrate the daily variations of traffic demands and the directional flow of traffic over the course of an average weekday. Count data sheets are included in the Appendix

**Table 2.a.1
Existing (October 2010)
Traffic Volume Summary**

Location	Daily ^a	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Volume ^b	K ^c	Peak Direction	Volume ^b	K ^c	Peak Direction
Ames Street <i>north of Main Street</i>	5,534	428	7.7 %	54.2 % SB	544	9.8 %	52.2 % SB

- a vehicles per day
- b vehicles per peak hour
- c percentage of daily traffic that occurs during the peak hour

**Table 2.a.2
Existing (October 2010)
Average Daily Traffic Summary ^a**

Hour Commencing	Ames Street, <i>north of Main Street</i>	
	Northbound	Southbound
12:00	18	19
1:00	14	9
2:00	4	7
3:00	3	7
4:00	4	17
5:00	23	40
6:00	89	115
7:00	128	198
8:00	196	233
9:00	180	217
10:00	133	158
11:00	140	163
12:00	148	168
13:00	165	161
14:00	127	188
15:00	157	189
16:00	167	216
17:00	275	284
18:00	220	215
19:00	138	127
20:00	109	96
21:00	91	83
22:00	60	58



<u>23:00</u>	<u>39</u>	<u>30</u>
Total	2,625	2,991

a vehicles per hour, both directions

As requested in the TP&T TIS Scoping Letter dated April 14, 2014, Average Weekday Traffic Volumes at five locations within Kendall Square have been charted from 1994 to May 2013 in **Figures 2.b.1 through 2.b.5**. The data presented is part of the Kendall Square Urban Renewal Area 2013 *Traffic Count Program and Trip Generation Analysis*. The five locations include:

- Main Street, near MBTA station (Figure 2.b.1)
- Broadway, east of mid-block (Figure 2.b.2)
- Binney Street, west of Third Street (Figure 2.b.3)
- Third Street, north of Broadway (Figure 2.b.4)
- Vassar Street, west of Main Street (Figure 2.b.5)

b. Pedestrian and Bicycle Counts

Twelve-hour pedestrian and bicycle counts were performed in October 2010 between 7:30 AM and 7:30 PM along Ames Street between Broadway and Main Street. The counts were taken as part of the Kendall Square Main Street Project in conjunction with the ATR counts reported in the previous section. The 12-hour pedestrian counts data are summarized in Table 2.b.1

Table 2.b.1
Existing 12-Hour Pedestrian Volumes (October 2010)
Ames Street between Broadway and Main Street

Start Time	Northbound	Southbound
7:30	117	135
8:30	144	183
9:30	129	188
10:30	135	153
11:30	190	285
12:30	309	252
13:30	235	199
14:30	214	182
15:30	197	154
16:30	166	195
17:30	210	210
18:30	181	164

Twelve-hour bicycle counts were conducted at the same time and location as the pedestrian counts, and these results are presented in Table 2.b.2.



Table 2.b.2
Existing 12-Hour Bicycle Volumes (October 2010)
Ames Street between Broadway and Main Street

Start Time	Northbound	Southbound
7:30	9	19
8:30	16	70
9:30	6	41
10:30	10	42
11:30	11	31
12:30	12	16
13:30	11	16
14:30	12	9
15:30	12	13
16:30	38	26
17:30	41	27
18:30	33	22

In addition, peak hour pedestrian and bicycle turning movement counts at study-area intersection were performed on April 9, 2014, as discussed in the following section. Counts from 2014 were used for Pedestrians and Bicyclists since these were higher than TMC counts conducted during 2010.

c. Intersection Turning Movement Counts

Manual turning movement counts, including pedestrians and bicycles, were conducted at the signalized study intersections, on October 28, 2010 as part of the Kendall Square Study. Due to the construction and closure of the Longfellow bridge accurate area turning movement counts for April or May 2014 would not reflect typical traffic conditions and therefore the October 2010 counts are used for vehicular volumes. Vehicular traffic volumes were grown at 0.5 percent per year over 3.5 years to provide April 2014 analysis year volumes.

The Cambridge Center East Garage intersection turning movement counts were conducted on May 15, 2013 as part of the FST Kendall Square Urban Renewal Area 2013 *Traffic Count Program and Trip Generation Analyses*. These volumes are assumed to be accurate for April 2014 analysis year as garage volumes are more stable year to year than roadway network volumes.

The results of these counts indicate that the peak hours for vehicular traffic in the study area are between 8:15 – 9:15 AM and 5:00 -6:00 PM on weekdays. The detailed turning movement counts are provided in the Appendix.



The AM and PM peak hour vehicle, pedestrian and bicycle turning movements are presented in **Figures 2.c.1&2**, **Figures 2.c.3&4** and **Figures 2.c.5&6**, respectively.

Heavy vehicles were also identified in the TMCs and details are provided in the Appendix. The results indicate that during the peak hours, heavy vehicles make up between one and thirteen percent of all vehicles at the study intersection during the morning peak and approximately one to three percent during the evening peak.

d. Traffic Crash Analysis

Study-area crash data were obtained from MassDOT records for the three-year period from January 2009 through December 2011 (the most recent data available). Analysis of the crash data is summarized in **Table 2.d**, and includes the calculated crash rates (number of reported crashes per million entering vehicles) based on the evening peak traffic volumes. A detailed summary by crash type is presented in the Appendix.

Table 2.d
MassDOT Crash Analysis (2009 – 2011)

Location	Total Crashes (3-year period)	Crashes Involving Pedestrians	Crashes Involving Bicycles	Calculated Crash Rate
Broadway/Galileo Galilei Way (Signalized)	22	2	3	0.74
Main Street/Galileo Galilei Way (Signalized)	20	1	4	0.92
Main Street/Ames Street (Signalized)	7	0	0	0.56
Broadway/Ames Street (Signalized)	7	0	2	0.53
Broadway/Third Street (Signalized)	14	2	1	0.56
Ames Street/Cambridge Center East Garage Entrance/Exit (Unsignalized)	0	0	0	0.00
Broadway/Cambridge Center East Garage Entrance/Exit (Unsignalized)	4	0	1	0.22

Source: MassDOT data

The calculated crash rate for the signalized intersection of Main Street/Galileo Galilei Way is 0.92. The calculated rate is above the District 6 average of 0.76 for signalized locations. The other signalized intersections, Broadway / Galileo Galilei Way, Main Street/ Ames Street, Broadway/ Ames Street, and Broadway/Third Street have calculated crash rates below the District 6 average. At the unsignalized intersections only Broadway/Cambridge Center East Garage Entrance/Exit had crashes resulting in a crash rate of 0.22 which is well below the District 6 average of 0.58 for unsignalized intersections. Types of crash varied between angled, head-on, and rear-end to sideswipes and single vehicle crashed. All of the crashes reported were either non-fatal injuries or caused only property



damage. A total of sixteen (16) collisions involved a non-motorist, such as a biker or pedestrian, with none of the crashes involving a fatality.

e. Public Transportation

Daily weekday and Saturday ridership as well as operating hours and peak-hour headway data is provided in **Table 2.e.1** for bus routes 64, 68, 85, CT2 and for the Red Line. The four bus routes provide service along Broadway and at the Kendall/MIT station near the site and the red line servicing the Kendall/MIT station.

Table 2.e.1
MBTA Services

Route	Origin/Destination	Hours of Operation	Weekday Ridership	Peak Hour Headways
Route 64	Oak Square/ University Park	6:35AM-6:37PM	1,977	~ 20 min.
Route 68	Harvard/ Kendall-MIT	5:42AM-12:57AM	475	~ 30 min.
Route 85	Spring Hill/ Kendall-MIT	5:45AM-7:34PM	589	30-40 min.
Route CT2 (747)	Sullivan/ Ruggles	6:35AM-7:37PM	2,823	~ 20 min.
Red Line	Alewife/ Ashmont-Braintree	5:16AM-12:30AM	14,784*	9 min.(for each branch)

Source: MBTA Official Public Transit System Map, 2010 Blue Book/ Bus Ridership Data Fall 2012

*Weekday Boardings at Kendall Square Station

Bus boarding and alighting volumes were obtained for the stop at Main Street and Kendall Station, the closest stop to the Ames Street Residences TIS. The data for the bus stops are summarized in **Table 2.e2**.



**Table 2.e.2
Bus Boarding and Alighting Counts**

Inbound	Route	AM Peak Hour		PM Peak Hour		Daily	
		# of Buses	Persons	# of Buses	Persons	# of Buses	Persons
Boarding	CT2	<u>3</u>	<u>28</u>	<u>3</u>	<u>53</u>	<u>30</u>	<u>228</u>
	Total	3	28	3	53	30	228
Alighting	64	3	46	2	6	15	122
	85	2	76	1	6	22	223
	CT2	<u>3</u>	<u>45</u>	<u>3</u>	<u>10</u>	<u>30</u>	<u>151</u>
	Total	10	189	8	31	90	616
Outbound	Route	# of Buses	Persons	# of Buses	Persons	# of Buses	Persons
Boarding	64	3	21	2	37	15	145
	68	2	5	1	13	23	98
	85	1	4	2	66	22	223
	CT2	<u>3</u>	<u>11</u>	<u>3</u>	<u>19</u>	<u>32</u>	<u>122</u>
	Total	9	41	8	135	92	588
Alighting	CT2	<u>3</u>	<u>35</u>	<u>3</u>	<u>45</u>	<u>32</u>	<u>270</u>
	Total	3	35	3	45	32	270

Source: Massachusetts Bay Transportation Authority, Fall 2012

The EZRide, operated by the Charles River TMA, provides shuttle service between North Station, Kendall Square and Cambridgeport during weekday morning and evening. Service is provided at 8-minute headways in each direction between 6:20 – 10:20AM and 3:00 – 7:24PM. Stops for the EZRide are located on Main Street at the MBTA Kendall Square station

3. Project Traffic

a. Mode Share and Average Vehicle Occupancy

Mode-share for residential and retail trips is based on the City of Cambridge's Kendall Square Central Square Planning Study (K2C2). The mode splits are presented in **Table 3.a**. The national Average Vehicle Occupancy (AVO) of 1.13 for residential and 1.78 for retail are assumed based on the 2009 National Household Travel Survey. The local AVO characteristics are based on 2006-2010 American Community Survey data for the project location (Census tract 3524). A local AVO of 1.26 for residential and 1.20 for retail are assumed.



**Table 3.a
Mode-Share**

Mode	Residential	Retail
Automobile	32.0 %	31.0 %
Transit	30.0 %	30.0 %
Bicycle	10.0 %	8.0 %
Walk	25.0 %	29.0 %
Other	3.0 %	2.0 %

Source: Enhanced TDM mode share 2010-2013 City of Cambridge Kendall Square-Central Square Planning Study

b. Trip Generation

Trip generation estimates were developed based on Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition) rates for Apartment (LUC 220) and Retail (Shopping Center-LUC 820).

ITE vehicle-trips were converted to person-trips by application of the national AVO for residential and retail while local AVOs were used to convert to vehicle-trips, in accordance with the TP&T scoping letter.

The resulting project trip generation by mode for the proposed project is summarized in **Table 3.b.1**.

**Table 3.b.1
Project Trip Generation by Mode**

		Vehicle Trips			Transit Trips			Bike			Walk			Other		
		Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak
Residential	Entering	267	8	32	316	10	38	105	3	13	263	8	32	32	1	4
	Exiting	<u>267</u>	<u>33</u>	<u>17</u>	<u>316</u>	<u>39</u>	<u>21</u>	<u>105</u>	<u>13</u>	<u>7</u>	<u>263</u>	<u>32</u>	<u>17</u>	<u>32</u>	<u>4</u>	<u>2</u>
	Total	534	41	49	632	49	59	210	16	20	526	40	49	64	5	6
Retail	Entering	157	4	13	183	5	15	49	1	4	177	5	15	12	0	1
	Exiting	<u>157</u>	<u>3</u>	<u>14</u>	<u>183</u>	<u>3</u>	<u>16</u>	<u>49</u>	<u>1</u>	<u>4</u>	<u>177</u>	<u>3</u>	<u>16</u>	<u>12</u>	<u>0</u>	<u>1</u>
	Total	314	7	27	366	8	31	98	2	8	354	8	31	24	0	2
Total	Entering	424	12	45	499	15	53	154	4	17	440	13	47	44	1	5
	Exiting	<u>424</u>	<u>36</u>	<u>31</u>	<u>499</u>	<u>42</u>	<u>37</u>	<u>154</u>	<u>14</u>	<u>11</u>	<u>440</u>	<u>35</u>	<u>33</u>	<u>44</u>	<u>4</u>	<u>3</u>
	Total	848	48	76	998	57	90	308	18	28	880	48	80	88	5	8

Estimates based on ITE 9th Edition LUC 220 (Apartments – 280 units) and LUC 820 (Shopping Center – 16.0 ksf)

Daily trip generation in "trips per day"

Peak hour trip generation in "trips per hour"



As shown in **Table 3.b.1**, the project is expected to generate approximately 48 new vehicle trips during the weekday morning and 76 trips during the weekday evening peak hours.

As requested by TP&T in their Scoping Letter, a vehicle trip rate comparison was conducted to verify the AM and PM peak hour ITE trip rates with actual observed rates at a comparable residential building. Through discussions with the TP&T Department the approved location of 303 Third Street, a residential building with 482 units and 531 garage parking spaces, was selected for observations. Morning, 7:30 AM – 9:30 AM, and evening, 4:30 PM – 6:30 PM peak period counts were conducted on Tuesday, April 29, 2014. **Table 3.b.2** provides the observed trip rate data for the comparable residential development, 303 Third Street.

Table 3.b.2
303 Third Street Trip Rate Data

	AM Peak Hour			PM Peak Hour		
	Trips	Trip Rate (trip/unit)	ITE Trip Rate*	Trips	Trip Rate (trips/unit)	ITE Trip Rate*
Entering	16	0.03	0.10	42	0.09	0.40
Exiting	61	0.13	0.41	18	0.04	0.22

VHB Observation 4/29/2014
*Land Use Code 220 Apartment

Assessment of actual vehicle trips generated by 303 Third Street shows that the ITE trip rates used to calculate the Ames Street Residences project generated trips is very conservative. During both morning and evening peak periods, the rate of entering and exiting traffic at 303 Third Street is substantially lower (3-4 times lower) than what would result using standard ITE trip rates.

c. Site Access

As shown in **Figure D.1**, all vehicle access to the East Garage would be accommodated from the existing entrance on Broadway. Egress would be provided via the existing Broadway exit, and supported with an additional new egress-only drive that would connect the garage back to Ames Street (just north of 5 Cambridge Center).

The existing loading dock at the west edge of the East Garage that serves 5 Cambridge Center would be relocated to support the construction of the Project. Its new location would be positioned along the southwest face of the garage with access/egress via Ames Street. This drive would serve the dual purpose of access/egress for the loading dock and egress only for the East Garage. The new dock will include four bays, including a dedicated trash compactor and three



additional service bays. This dock would serve both the existing 5 Cambridge Center facility and the proposed Ames Street Residences.

Enhancing and promoting sustainable transportation is also an important objective for the City of Cambridge and changes to Ames Street support Cambridge’s policies to promote improved pedestrian and bicycle infrastructure within the City. As currently planned, the existing 4-lane Ames Street would be reconfigured to support implementation of dedicated bicycle infrastructure along the corridor between Main Street and Broadway. Current plans call for a buffered 2-way cycle track along the east side of Ames Street with on-street parking separating bike travel from vehicle travel. Additionally, the pedestrian sidewalk along the east side of Ames Street would be widened considerably, from its current width of 11 - 14 feet to approximately 15.5 feet. To support these changes, Ames Street would be narrowed to two travel lanes (one lane for each direction of travel). These changes would also require adjustments to sidewalks, accessible ramps, and traffic signalization at the intersections of Ames Street/Main Street and Ames Street/Broadway. The proposed reconfiguration of Ames Street, including its future geometric condition, is illustrated in **Figure D.5**.

An alternate Ames Street layout, as illustrated in **Figure D.6**, has been proposed in addition to the City of Cambridge layout. The alternate layout proposes bicycle lanes as opposed to a cycle track.

Project-generated traffic was distributed through the study area based on the Kendall Square Central Square (K2C2) Critical Sums Analysis – Trip Distribution Report, Sub-Area 2 Map (August 2012). The distributions are presented in **Table 3.d**.

Table 3.d
Vehicular Trip Distribution

Trip Assignment	Residential	Retail
Main Street (To/From West)	21%	18%
Vassar Street	14%	5%
Ames Street (To/From South)	7%	9%
Broadway (To/From Southeast)	14%	24%
Third Street	26%	32%
Broadway (To/From Northwest)	18%	12%

Source: K2C2 Critical Sums Analysis – Trip Distribution Report Sub –Area Maps, August 2012.

The percentage distribution of residential and retail trips is shown in **Figure 3.d.1**, and the resulting project generated vehicle trips are shown in **Figure 3.d.2&3**.



All site trips will be routed to the Cambridge Center East Garage entrance along Broadway. Although there is on-street metered parking available for retail customers, this option is not always available and therefore the conservative assumption was made that all patrons will use the garage. Residents and retail customers exiting the site will choose the exit most suited to their trip destination.

d. Servicing and Deliveries

The residential component of the proposed mixed-use project will generate limited numbers of delivery trips over the course of a typical day. Typical deliveries will include mail and trash collection for the building as a whole.

Although it is expected that deliveries for the retail component will be relatively limited, in light of the limited amount of retail space, deliveries will be scheduled for off-peak traffic periods. Property management staff will be assigned to oversee operations and manage the scheduling.

Trash will be managed and contained within a single location on the ground level of the site. Typically, residential trash will be picked up two times per week, but additional pick up may be scheduled if needed for the retail component.

All delivery vehicles will be staged on-site at the relocated loading bays, using the new alleyway between the project site and 5 Cambridge Center. The loading dock is sized to fit a single unit truck.

4. Background Traffic

In accordance with the TP&T Scope, background traffic growth reflecting regional growth was assumed to occur at 0.5 percent per year for five years to the 2019 future year condition. In addition, trips associated with specific planned projects in the area of the project site have been incorporated into the future 2019 analysis, as follows:

- Broad Institute Expansion
- Courthouse Redevelopment
- 17 Cambridge Center (BioGen)
- 300 Massachusetts Avenue
- Novartis R&D Expansion at 181 Massachusetts Avenue
- 650 Main Street Office/R&D Development Project
- North Point - Parcel N and One and Two Earhart
- Maple Leaf at 23 East Street (assumed no trips in Project Study Area)



- 1 Education Street (assumed no trips in Project Study Area)
- 159 First Street (included in Bent Street Development TIS)
- 22 Water Street
- Bent Street Development
- Alexandria Center at Kendall Square (Binney Street Project)

5. Traffic Analysis Scenarios

Traffic networks were developed, in accordance with the TIS Guidelines, for the following scenarios:

a. Existing (2014) Condition

The existing condition analysis is based on existing vehicle, bicycle and pedestrian counts at the study area intersections (see Section 2).

b. Build (2014) Condition

The build condition assumes full occupancy of 280 residential units and 16,000 SF of ground-floor retail. Project-generated traffic (see Section 3) was added to the study area to create the 2014 build networks shown in **Figure 5.b.1&2**. As part of the Ames Street Residence construction, the existing Garage entrance along Ames Street will be eliminated and vehicles will only be able to exit onto Ames Street with the project in place. Volume shifts to account for this change are reflected in the build condition. As requested in the TP&T TIS Scoping Letter, the new connection at the Broadway and Third Street intersection to Main Street has been implemented into the build condition.

c. Future (2019) Condition with Cycle Track

Traffic volumes for this scenario include future background growth and other developments (as described above), as well as project trips, and off-site roadway improvements are presented in **Figures 5.d.1 and 5.d.2**.

The City of Cambridge will be redesigning Ames Street in conjunction with the project and these changes to Ames Street are reflected in the Future (2019) Condition with Cycle Track. Ames Street at the northbound approach with Broadway will be a shared left and right turn lane. Ames Street at the southbound approach with Main Street will be one general purpose lane. These changes are to accommodate the addition of a two-way cycle track along the stretch of Ames Street from Main Street to Broadway on the east side.

Bicycle signal timings were implemented in this condition to allow for protected bicycle movements for the Ames Street cycle track. At the intersection of Broadway and Ames Street a bicycle phase of 24 seconds (7 seconds green time, 3



seconds yellow time, and 14 seconds red time) was implemented. At the intersection of Main Street and Ames Street a bicycle phase of 28 seconds (7 seconds green time, 3 seconds yellow time, and 14 seconds red time) was implemented. The bicycle phasing times were estimated based on the MUTCD – Interim Approval for Optimal Use of a Bicycle Signal Face issued by the FHWA on December 24, 2013. Due to the signal coordination along the Main Street and Broadway corridors, the intersection offsets were optimized to account for the retimings.

d. Future (2019) Condition with Buffered Bike Lanes

Traffic volumes for this scenario include future background growth and other developments (as described above), as well as project trips, and off-site roadway improvements are presented in **Figures 5.d.1 and 5.d.2**.

An alternative Ames Street design has been analyzed for the future condition with buffered bike lanes. Ames Street will approach Broadway in the northbound direction with two lanes, one left-turn and one right-turn lane, with a bike lane in the middle. Ames Street in the southbound approach will contain two lanes, one right-turn only and one thru/left-turn, with a bike lane between the two lanes.



6. Vehicle Capacity Analysis

Synchro 7 software is used to determine the vehicle level of service (VLOS) for the seven study intersections. Synchro software is based on the 2000 Highway Capacity Manual.

Results for the 2014 Existing, 2014 Build, Future (2019) Condition with Cycle Track, and Future (2019) Condition with Buffered Bike Lanes conditions are shown in **Tables 6.a.1** and **Table 6.a.2** for the AM and PM peak hours, respectively.



**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



during the AM and PM peak hours. The intersection of Broadway and Galileo Galilei Way operates at an overall VLOS E during both the morning and evening peak hour and with the addition of the proposed project trips (8 morning trips and 12 evening trips), the VLOS degrades to a VLOS F during the morning peak hour and maintains an overall VLOS E during the evening peak hour. Broadway and Ames Street operates at an overall VLOS C during the existing and build morning conditions and VLOS D during the existing and build evening conditions.

Broadway at Third Street operates at an overall VLOS E during the morning and evening peak hours under existing and build conditions.

The two analyzed future conditions, Cycle Track and Buffered Bike Lane operate at similar VLOS except at the intersections of Main Street and Ames Street and Broadway and Ames Street. This is due to the differences in the roadway concepts illustrated in **Figures D.5 and D.6**. The future condition with a two-way Cycle Track along Ames Street between Broadway and Main Street degrades the two intersections to an overall VLOS F for the morning and evening peak hours. The cycle track requires the addition of a bicycle phase which takes away green time from the vehicle movements, degrading the VLOS for all approaches.

The future condition with Buffered Bike Lanes allows for the phasing and timings at these two intersections to remain the same through all conditions.

During the morning peak hour the Cambridge Center East garage driveway exiting onto Broadway operates at VLOS E under existing and build conditions and during the evening peak hour the driveway operates at VLOS F under existing and build conditions. Under future conditions the driveway approach operates at a VLOS F for both morning and evening peak hours. This is due to the heavy volumes heading eastbound on Broadway allowing very few gaps for vehicles to exit the garage.

The garage driveway approaching Ames Street operates at VLOS C under all analyzed conditions during the morning peak hour. The approach operates at VLOS D during the evening peak under existing conditions, and with the addition of 16 project trips degrades to a VLOS E during the build condition.

7. Queue Analysis

Queue analysis was performed in conjunction with the level-of-service analysis. **Table 7.a.1 and 7.a.2** present results for the modeled average queues for each scenario for the AM Peak and PM Peak hours, respectively.



Table 7.a.1: Intersection Queue Analysis - AM Peak Hour

<u>Intersection</u>	<u>Approach</u>	<u>Modeled¹</u>	<u>Build¹</u>	<u>Future with Cycle Track²</u>	<u>Future with Buffered Bike Lanes²</u>
Broadway / Galileo Galilei Way (Signalized)	EBL	4	4	5	5
	EBT	6	6	7	7
	WBL	4	4	5	5
	WBT	6	6	3	7
	NBL	2	2	2	2
	NBT	3	3	4	4
	SBL	4	4	5	5
	SBT	11	11	19	19
SBR	6	7	9	9	
Main Street / Galileo Galilei Way (Signalized)	EBL	2	2	4	4
	EBT	4	4	5	5
	WBL	2	3	1	3
	WBT	5	4	1	6
	NBT	4	4	4	4
	SBL	1	1	1	1
	SBT	5	6	3	5
SBR	4	5	11	7	
Main Street / Ames Street (Signalized)	EBT	6	6	16	7
	WBT	2	2	3	2
	NBT	6	6	11	7
	SBT	2	2	10	2
SBR	3	3	n/a	5	
Broadway / Ames Street (Signalized)	EBT	7	3	12	8
	WBL	3	2	4	3
	WBT	12	11	18	14
	NBL	3	3	11	3
	NBR	1	1	n/a	1
Broadway / Third Street (Signalized)	EBL	6	6	9	9
	EBT	2	2	1	2
	WBT	15	15	18	18
	SBL	4	n/a	n/a	n/a
	SBT	n/a	5	6	6
SBR	4	3	5		

1= 2014

2 = 2019

n/a – Lane group does not exist in the analyzed condition



Table 7.a.2: Intersection Queue Analysis - PM Peak Hour

<u>Intersection</u>	<u>Approach</u>	<u>Modeled¹</u>	<u>Build¹</u>	<u>Future with Cycle Track²</u>	<u>Future with Buffered Bike Lane²</u>
Broadway / Galileo Galilei Way (Signalized)	EBL	5	5	7	7
	EBT	7	7	7	7
	WBL	6	6	7	7
	WBT	8	8	9	9
	NBL	4	4	4	4
	NBT	7	7	9	9
	SBL	3	3	4	3
	SBT	7	7	10	9
Main Street / Galileo Galilei Way (Signalized)	SBR	5	5	9	9
	EBL	6	6	13	13
	EBT	4	5	6	6
	WBL	2	2	1	2
	WBT	3	3	1	4
	NBT	7	7	8	8
	SBL	1	1	1	1
Main Street / Ames Street (Signalized)	SBT	8	8	4	9
	SBR	6	6	3	7
	EBT	8	9	18	12
	WBT	2	3	4	3
	NBT	6	6	11	7
Broadway / Ames Street (Signalized)	SBT	5	4	15	5
	SBR	4	3	n/a	4
	EBT	8	8	12	9
	WBL	3	3	2	3
	WBT	15	15	25	20
Broadway / Third Street (Signalized)	NBL	3	4	20	4
	NBR	1	1	n/a	2
	EBL	7	7	10	9
	EBT	7	8	7	9
	WBT	8	9	9	9
1	SBL	12	n/a	n/a	n/a
	SBT	n/a	14	18	18
	SBR	4	3	6	6

1 = 2014

2 = 2019

n/a - Lane group does not exist in the analyzed condition

The queue analysis results presented in the above tables corresponds to the level of service analyses conducted for the study area intersections. Accurate queue observations could not be observed as the counts used are dated October 2010 and grown to 2014 volumes.

8. Residential Street Volume Analysis

All streets in the study area have less than one-third abutting residential land use, and therefore no residential street analysis is presented.



9. Parking Analysis

As requested in the TP&T TIS Scoping Letter, a parking study has been conducted for the Kendall Square Urban Renewal Area Cambridge Center East, West, and North Garages. The study includes a shared parking analysis that quantifies existing and proposed parking activity in all three Cambridge Center Garages using existing parking data. Hourly parking data were collected as part of the Kendall Square Urban Renewal Area, 2013 Traffic Count Program and Trip Generation Analyses conducted by Fay, Spofford, & Thorndike (FST) Engineers. Occupancy counts were conducted the week of May 13, 2013 to May 17, 2013 and are compiled in the Appendix. The parking needs of the proposed Ames Street Residences building will be met in the Cambridge Center East Garage.

a. Existing Parking Data

As previously noted, Kendall Square Urban Renewal area contains three shared parking garages for employees, residents, and visitors to the area totaling 2,748 parking spaces.

Cambridge Center East Garage which contains a total of 844 parking spaces is a commercial parking facility that provides parking for tenant employees who lease monthly parking and transient parkers. The basement level of the garage is reserved for Marriott Hotel valet use.

Cambridge Center West Garage, the smallest of the three, containing 734 parking spaces for monthly and transient parkers.

Cambridge Center North Garage is the largest of the three parking facilities containing 1,170 for monthly and transient parkers.

Table 9.a.1 presents the existing daytime and nighttime peak occupancy of each garage. None of the parking garages are currently over capacity based on the average weekday observations in May 2013.

Table 9.a.1
Existing Parking Supply and Peak Hour Occupancy

Garage	Parking Supply	Daytime Peak Hour Demand	Daytime Demand/Capacity	Overnight Peak Hour Demand	Overnight Demand/Capacity
Cambridge Center East Garage	844	668	79%	69	8%
Cambridge Center West Garage	734	507	69%	57	8%
Cambridge Center North Garage	1,170	971	83%	109	9%
Total	2,748	2,146	78%	235	9%

Source: FST Kendall Square Urban Renewal Area
2013 Traffic Count Program and Trip Generation Analyses



Note from **Table 9.a.1** that collectively, the three Cambridge Center Garages generally operate at approximately 78 percent of their capacity during weekdays (mid-day). Overnight, demand reduces considerably, with only demand registering at about 9 percent of total capacity. Specifically, the East Garage tends to yield similar ratios of demand versus capacity as all three garages combined – with availability both during the day and overnight.

b. Ames Street Residences Project Parking Demand

The Cambridge Center East Garage, which occupies a portion of the site, will accommodate the parking needs of the project. The garage will undergo renovations through the construction of the Ames Street Residences and a portion of the garage will be demolished, resulting in a loss of approximately 40 spaces, thereby reducing the capacity to 804 spaces. Although these spaces will be lost, the garage will be able to accommodate the 140 spaces required the new development with very minimal impact to existing operations. This is due mostly to the fact that this project will generate primarily residential parking demand, whose peak demand characteristic occurs overnight when overall Cambridge Center parking demands are very low.

The estimated parking demand for the project is based on the Kendall Square Central Square (K2C2) parking requirements of 0.5 spaces per 1000 sf of retail development and 0.5 spaces per unit for residential developments. The estimated project parking demand is shown in **Table 9.b.1**.

Table 9.b.1
Ames Street Residences Parking

Use	Size	Parking Ratio	Parking Demand
Residential	280 units	0.5	140
<u>Retail Space</u>	<u>16.0 KSF</u>	<u>0.5</u>	<u>8</u>
Total	-	-	148

This analysis estimates that when the building is fully occupied, 140 residences and 8 employees or visitors of the retail will park in the Cambridge Center East Garage. This is a conservative estimate due to the proximity of Kendall Square station although according to 2006-2010 American Community Survey data for the project location (Census tract 3524) about 50% of all households own or have a car available for them to use. It is assumed that during the daytime peak demand all retail employees/customers will be parked in the garage as well as a portion of the residents. Residential daytime parking demand was determined via an assessment of other similar residential uses, including 303 Third Street in Cambridge and other similar residential developments in Boston, including 1330 Boylston Street and Trilogy, both of which are located in the Fenway. Based on



these reviews, we believe that about 50 percent of all residential vehicles would exit the facility during the week during the day by the time the garage reaches peak occupancy (which tends to occur at about 11:30 AM). Therefore a total of approximately 70 vehicles associated with the Project would be parking in the Cambridge Center Garage during the daytime peak. Overnight parking demand for the Project was estimated to be 100 percent, or 140 vehicles; no overnight parking will be needed for retail and all 140 parking spaces would be utilized by residents of the Project. **Table 9.b.2** shows the peak daytime and nighttime parking demand of the Ames Street Residences.

Table 9.b.2
Ames Street Residences Parking Demand

Garage	Daytime Parking Demand	Overnight Parking Demand
Residences	70	140
Retail	0	0
Total	78	140

c. Future Area Wide Parking Demand

In order to estimate the impacts of the Ames Street Residences' parking demand on the parking supply, an understanding of the future parking needs within Kendall Square has also been studied and quantified. Future developments proposing to use the Cambridge Center garages to fulfill parking needs are listed below.

- **Broad Institute Expansion** - Located at 75 Ames Street, directly across the street from Ames Street Residences, the development is approximately 246,000 sf of research and development and approximately 4,000 sf of ground floor retail/restaurant space. The project is estimated to generate 652 daily vehicle trips (326 entering, 326 exiting), 88 morning peak hour vehicle trips (72 entering, 16 exiting), and 82 evening peak hour vehicle trips (14 entering, 68 exiting). It is assumed that all vehicle trips will be using the Cambridge Center West Garage for their on-site parking.
- **17 Cambridge Center (BioGen)** - Located at 17 Cambridge Center, the developments is approximately 169,000 sf of office and research and development space with a daycare on the first floor. The project is estimated to generate 394 daily vehicle trips (197 entering, 197 exiting), 59 morning peak hour vehicle trips (49 entering, 10 exiting), and 52 evening peak hour vehicle trips (8 entering, 44 exiting). It is assumed



that all vehicle trips will be using the Cambridge Center North Garage for their parking.

Table 9.c.1 and 9.c.2 show the future daytime and overnight parking demand of the three Cambridge Center garages to reflect the full utilization by the developments without the Ames Street Residences. Peak parking demands were generated by establishing parking rates based on the amount of total square footage in these buildings and comparing those programmatic summaries to other uses that are currently accommodated within these same parking facilities.

**Table 9.c.1
Future Parking Supply and Peak Hour Occupancy – Daytime Peak**

Garage	Parking Supply	Existing Demand	Broad Institute Expansion	17 Cambridge Center (BioGen)	Total Demand	Daytime Peak Occupancy
Cambridge Center East Garage	844	668	0	0	668	79%
Cambridge Center West Garage	734	507	150	0	657	90%
<u>Cambridge Center North Garage</u>	<u>1,170</u>	<u>971</u>	<u>0</u>	<u>90</u>	<u>1,061</u>	<u>91%</u>
Total	2,748	2,146	150	90	2,386	87%

**Table 9.c.2
Future Parking Supply and Peak Hour Occupancy – Overnight Peak**

Garage	Parking Supply	Existing Demand	Broad Institute Expansion	17 Cambridge Center (BioGen)	Total Demand	Nighttime Peak Occupancy
Cambridge Center East Garage	844	69	0	0	69	8%
Cambridge Center West Garage	734	57	0	0	57	8%
<u>Cambridge Center North Garage</u>	<u>1,170</u>	<u>109</u>	<u>0</u>	<u>0</u>	<u>109</u>	<u>9%</u>
Total	2,748	235	0	0	235	9%

Tables 9.c.3 and 9.c.4 show the impacts of the Ames Street Residences parking demand, presented in the previous section, on the future parking within Kendall Square.



**Table 9.c.3
Ames Street Residences Parking Impacts – Daytime Peak**

Garage	Parking Supply	Future Area Wide Parking Demand	Ames Street Parking Demand	Total Future Parking Demand	AM Peak Hour Occupancy
Cambridge Center East Garage	804	668	78	746	93%
Cambridge Center West Garage	734	657	0	657	90%
<u>Cambridge Center North Garage</u>	<u>1170</u>	<u>1,061</u>	<u>0</u>	<u>1,061</u>	<u>91%</u>
Total	2,708	2,386	78	2,451	91%

**Table 9.c.4
Ames Street Residences Parking Impacts – Nighttime Peak**

Garage	Parking Supply	Future Area Wide Parking Demand	Ames Street Parking Demand	Total Future Parking Demand	AM Peak Hour Occupancy
Cambridge Center East Garage	804	69	140	209	26%
Cambridge Center West Garage	734	57	0	57	8%
<u>Cambridge Center North Garage</u>	<u>1170</u>	<u>109</u>	<u>0</u>	<u>109</u>	<u>9%</u>
Total	2,708	235	140	375	14%

As shown in **Tables 9.c.3 and 9.c.4**, anticipated parking demand generated by the Project is expected to impact only the East Garage. With the Project fully occupied, the East Garage is expected to operate on weekdays with a demand that is representative of about 91 percent of total capacity. During the evening, the overnight demand will still be quite low, running at about 26 percent of total capacity. The West and North Garages typical operations would not be directly impacted by the implementation of the proposed Ames Street Residences Project.

10. Transit Analysis

The Project is expected to generate 57 new transit trips (15 entering, 42 exiting) during the AM peak-hour and 91 new transit trips (54 entering, 37 exiting) during the PM peak hour.

Based on the 2006 – 2010 American Community Survey data from this location, it is expected that approximately 39% of residents who use transit will use subway or railway and 61% will use bus to commute to work. Data shows that persons using transit to travel for work/retail purposes in this area will have an 81%/19% split between subway/railway and bus services. The resulting



assignment of project transit trips is presented in **Table 10.a**, which indicates that during the peak hour commute the Project will result in approximately 25 – 48 trips on the Red Line and approximately 32 – 42 trips by bus.

Table 10.a
Project Transit Trip Assignment

		Morning Peak			Evening Peak		
		In	Out	Total	In	Out	Total
Residential	Subway (Red Line)	4	15	19	14	8	22
	<u>Buses (all)</u>	<u>6</u>	<u>24</u>	<u>30</u>	<u>24</u>	<u>13</u>	<u>37</u>
	Total	10	39	49	38	21	59
Retail	Subway (Red Line)	4	2	6	12	13	25
	<u>Buses (all)</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>6</u>
	Total	5	3	8	15	16	31
Total	Subway (Red Line)	8	17	25	26	21	47
	<u>Buses (all)</u>	<u>7</u>	<u>25</u>	<u>32</u>	<u>27</u>	<u>16</u>	<u>43</u>
	Total	15	42	57	53	37	90

The Red Line is accessible at Kendall Square station within ¼ mile of the Project site. All residents and retail patrons/employees taking the subway are assumed to use the Kendall Square station. With a combined Red Line headway of 4.5 minutes, equivalent to just over 13 trains per peak hour direction, the project would be expected to add an average of less than 1 rider per train during the morning peak and approximately 1 rider during the evening peak if trips are distributed evenly between inbound and outbound trains.

The impacts of project trips to Red Line volume/capacity operations during the peak hours are presented in **Table 10.b**. The addition of project trips is expected to result on only minor changes in volume/capacity ratios, confirming that there will be no real impact to the Red Line. It is important to note that this analysis may not represent true peak hour experiences due to the lack of availability of 2013 data and the inability to measure the bunching of trains and irregularity of arrivals throughout the peak hours.



Table 10.b
Red Line Capacity Analysis – Peak Load/Peak Direction

Segment	Capacity	AM Peak					PM Peak				
		Existing Ridership	Existing V/C	Project Trips	Build Ridership	Build V/C	Existing Ridership	Existing V/C	Project Trips	Build Ridership	Build V/C
Entering Kendall (inbound)	13,026	9,524	0.73	4	9,528	0.73	4,033	0.31	13	4,046	0.31
Exiting Kendall (Inbound)	13,026	8,514	0.65	9	8,523	0.65	5,469	0.42	10	5,479	0.42
Entering Kendall (outbound)	13,026	4,784	0.37	4	4,788	0.37	8,094	0.62	13	8,107	0.62
Exiting Kendall (outbound)	13,026	3,120	0.24	8	3,128	0.24	8,821	0.68	11	8,832	0.68

Source: MBTA Capacity/Ridership Data

Each bus route operates with approximately 25-minute headways during the peak hours, together providing service every 6-7 minutes along Main Street. Distribution of the new transit trips between the four bus routes over the course of the hour will result in up to one additional inbound (towards Kendall Square) rider per bus and two additional outbound riders per bus during the AM peak. During the evening peak, there will be two additional inbound riders and one to two additional outbound riders per bus. The addition of project trips is expected to result in unnoticeable changes in volume/capacity ratios, confirming that there will be no real impact to the bus routes.

11. Pedestrian Analysis

Pedestrian volumes are presented previously in Section 2.c, and are shown in **Figure 2.c.3&4**.

The results of pedestrian level-of-service (PLOS) analysis at intersection crosswalks are presented in **Table 11.a** for signalized intersections during both the morning and evening peak conditions. Equations 18-5 from the Highway Capacity Manual 2000 have been used to determine the delays at signalized intersections in the study area.

Pedestrian level-of-service at signalized intersections is dictated by the portion of the signal cycle dedicated to pedestrian crossings. Accordingly, increasing pedestrian volumes does not alter pedestrian level of service at signalized intersections, and no changes in PLOS are projected under build or future conditions except at the intersection of Third Street at Broadway which is to be redesigned to connect Third Street to Main Street in the southbound direction. It is assumed that the walk time and cycle length at this intersection will not change from existing conditions and therefore PLOS will remain consistent. The presence of concurrent pedestrian phases results in good PLOS at most locations.



Within and around the Project site, pedestrian facilities will be designed to meet appropriate safety and accessibility standards.

Table 11.a
Signalized Intersection - Pedestrian Level of Service Summary

Intersection	Crosswalk	AM Peak Hour				PM Peak Hour			
		Existing 2014	Build 2014	Future with CT 2019	Future BBL 2019	Existing 2014	Build 2014	Future with CT 2019	Future with BBL 2019
Galileo Galilei Way at Broadway	East	D	D	D	D	D	D	D	D
	West	D	D	D	D	D	D	D	D
	North	D	D	D	D	D	D	D	D
	South	D	D	D	D	D	D	D	D
Vassar Street at Main Street	East	C	C	C	C	C	C	C	C
	West	C	C	C	C	C	C	C	C
	North	C	C	C	C	B	B	B	B
	South	C	C	C	C	B	B	B	B
Ames Street at Main Street	East	D	D	D	D	D	D	D	D
	West	D	D	D	D	D	D	D	D
	North	C	C	C	C	C	C	C	C
	South	C	C	C	C	C	C	C	C
Ames Street at Broadway	East	D	D	D	D	D	D	D	D
	West	D	D	D	D	D	D	D	D
	South	C	C	D	C	C	C	D	C
Third Street at Broadway	East	D	D	D	D	D	D	D	D
	West	D	D	D	D	D	D	D	D
	North	C	C	C	C	C	C	C	C

12. Bicycle Analysis

The project site is well-served by several bicycle facilities in the study area. Ames Street, Broadway, Galileo Galilei Way, and Main Street provide dedicated bicycle lanes. The City has plans to incorporate a multi-use path and a cycle track within the study area along Galileo Galilei Way and Binney Street. The Proponent will work with the City to determine the best design for Ames Street as the Project progresses. Three Hubway bicycle stations are located within the study area. A 25 space Hubway station is located south along Vassar Street near the intersection of Main Street / Vassar Street at Galileo Galilei Way. Two stations are located near the Kendall/MIT Redline station. One on the northern side of Main Street with 19 bike spaces available and the other near the intersection of Broadway and Third Street with 15 available bike spaces.



Conflicting vehicle turning movements at the study area intersections are presented previously in **Figure 2.c.4&5**. These volumes are summarized in **Table 12.a** for Existing 2014, Build 2014, and Future 2019 conditions.

Table 12.a
Conflicting Bicycle/Vehicle Movements at Study Intersections

Intersection	Time Period	Bicycle Direction	Existing Peak Hour Bicycle Volume	Conflicting Vehicle Movements					
				Existing 2014		Build 2014		Future 2019	
				Right Turn ^a	Left Turn ^b	Right Turn ^a	Left Turn ^b	Right Turn ^a	Left Turn ^b
Galileo Galilei Way at Broadway	AM	EB	321	85	115	85	115	87	130
		WB	18	20	140	20	140	22	187
		NB	24	80	130	80	130	83	143
		SB	36	170	65	170	65	204	69
	PM	EB	27	65	150	65	150	67	171
		WB	230	25	160	25	160	30	185
		NB	20	95	85	95	85	104	116
		SB	25	130	130	130	130	209	142
Vassar Street at Main Street	AM	EB	87	55	75	55	80	56	89
		WB	9	45	125	45	125	46	189
		NB	39	115	30	116	30	130	32
		SB	67	275	60	275	60	413	62
	PM	EB	26	50	60	50	63	51	69
		WB	65	30	265	30	265	31	394
		NB	49	175	30	180	30	193	35
		SB	50	200	60	200	60	268	62
Ames Street at Main Street	AM	EB	107	50	10	50	17	54	17
		WB	15	30	90	30	94	41	121
		NB	1	20	60	20	49	21	53
		SB	34	115	80	105	80	149	98
	PM	EB	45	60	10	60	25	73	26
		WB	42	55	40	55	54	58	65
		NB	19	20	70	20	59	21	71
		SB	6	105	55	97	55	125	59
Ames Street at Broadway	AM	EB	247	105	215	70	175	91	256
		WB	16	0	0	0	0	0	0
		NB	3	115	0	150	0	203	139
		SB	16	85	145	80	102	110	0
	PM	WB	164	0	0	0	0	0	127
		NB	10	200	0	223		289	164
Third Street at Broadway	AM	EB	199	0	0	45	0	46	0
		WB	19	375	195	375	205	422	277
		SB	1	160	0	123	0	209	0
		EB	20	0	0	85	0	87	0
	PM	WB	159	185	260	185	269	207	325
		SB	1	165	0	134	0	223	0

a Advancing volume
b Opposing volume



Currently, there are no bicycle parking accommodations on the project site. As shown previously on the site plans (**Figures D.3.1&2**), 296 secured bicycle parking spaces will be located 2 bike rooms accessible by residents and retail employees. This supply meets the zoning requirement of 1.05 bicycle space for each residential unit and 0.1 bicycle spaces per 1,000 sf of retail space.

On the ground level along the perimeter of the site on Ames Street, 38 spaces for short term bicycle parking will be provided in the vicinity of the residential and retail entrances. This supply meets the zoning requirement of 0.6 bicycle spaces per every 1000 sf. of retail and 0.1 spaces per residential unit.

13. Transportation Demand Management Plan

The project proponent will support a program of transportation demand management (TDM) actions to reduce automobile trips generated by the project. The goal of the project's TDM plan is to reduce the use of single occupant vehicles (SOVs) by encouraging carpooling and vanpooling, bicycle commuting and walking, and increased use of the area's public transportation system by residents.

The following TDM programs will be implemented as part of the proposed project to encourage residents to use alternatives to SOV travel:

- The proponent will contact a car sharing provider (such as Zipcar) to determine the feasibility of establishing a car share program for tenants and will provide parking spaces on site for at least one car share vehicle, subject to demand.
- The proponent will join a local Transportation Management Association (TMA) if one is established in the area.
- The proponent will designate a transportation coordinator to oversee all transportation matters for the project, including vehicular operations, servicing and loading, parking and the TDM programs. The transportation coordinator will act as the contact and liaison for the City of Cambridge, the TMA and the tenants of the project.
- The proponent will make available transit maps, schedules and other information relevant to commuting options in the residential building lobby.



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Planning Board Special Permit Criteria

Consistent with Section IV, “Guidelines for Presenting Information to the Planning Board” of the City of Cambridge “Transportation Impact Study Guidelines,” Sixth Revision dated November 28, 2011; this section presents a summary of potential impacts to the transportation network as a result of the proposed project.

According to the guidelines, exceeding one or more of the criteria shall be indicative of a *potentially* adverse impact on City’s transportation network; however, the Planning Board will consider mitigation efforts, their anticipated effectiveness, and other information that identifies a reduction in adverse traffic impacts.

Criterion A - Project Vehicle Trip Generation

Table A-1 presents the project vehicle trip generation criterion. Project vehicle trip generation is based on ITE trip rates, adjusted for local mode split and vehicle occupancy rates as discussed previously.

Table A-1
Project Vehicle Trip Generation

Time Period	Criteria (trips)	Build	Exceeds Criterion?
Weekday Daily	2,000	848	No
Weekday AM Peak Hour	240	48	No
Weekday PM Peak Hour	240	76	No

The project is not expected to exceed the criteria for project vehicle trip generation established by the Planning Board under the Build program.



Criterion B - Vehicular LOS at Signalized Intersections

The criteria for a project's impact to traffic operations at signalized intersections are summarized in Table B-1 below. These criteria are evaluated for each signalized study-area intersection and presented in Tables B-2.

Table B-1
Criterion: Vehicular Level of Service

Existing	With Project
VLOS A	VLOS C
VLOS B, C	VLOS D
VLOS D	VLOS D or 7% roadway volume increase
VLOS E	7% roadway volume increase
VLOS F	5% roadway volume increase

Table B-2
Vehicular Level of Service

Intersection	AM Peak Hour				PM Peak Hour			
	Existing Condition	Build Condition	Traffic Increase	Exceeds Criterion?	Existing Condition	Build Condition	Traffic Increase	Exceeds Criterion?
Broadway / Galileo Galilei Way	E	F	0.4%	N	E	E	0.5%	N
Main Street / Galileo Galilei Way / Vassar Street	C	C	1.0%	N	C	C	1.3%	N
Main Street / Ames Street	C	C	0.9%	N	C	C	-1.1%	N
Broadway / Ames Street	C	C	0.2%	N	D	D	-0.5%	N
Broadway / Third Street	E	E	1.1%	N	E	E	1.7%	N

Project-induced vehicle level-of-service criteria are not exceeded for any intersection.

Criterion C – Traffic on Residential Streets

This criterion considers the increase of traffic on residential streets generated by the proposed project. The threshold for this criterion is dependent on the existing street volume and the amount of residential land use frontage. None of the study-area roadways analyzed have first floor residential frontage comprising more than 1/3 of the total street frontage. Accordingly none of the segments exceed the criteria of vehicles on residential streets.



Criterion D – Lane Queue

The criteria for a project’s impact to queues at signalized intersections are summarized in Table D-1 below. These criteria are evaluated for each lane group at study-area signalized intersections and presented in Table D-2.

Table D-1
Criterion: Vehicular Queues at Signalized Intersections

Existing	With Project
Under 15 vehicles	Under 15 vehicles, or 15+ vehicles with an increase of 6 vehicles
15 or more vehicles	Increase of 6 vehicles

Table D-2: Length of Vehicle Queues at Signalized Intersections

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criterion?	Existing	Build	Exceeds Criterion?
Broadway / Galileo Galilei Way (Signalized)	EBL	3	4	N	5	5	N
	EBT	6	6	N	7	7	N
	WBL	4	4	N	6	6	N
	WBT	6	6	N	8	8	N
	NBL	2	2	N	4	4	N
	NBT	3	3	N	7	7	N
	SBL	4	4	N	3	3	N
	SBT	11	11	N	7	7	N
Main Street / Galileo Galilei Way (Signalized)	SBR	6	7	N	5	5	N
	EBL	2	2	N	6	6	N
	EBT	3	4	N	4	5	N
	WBL	2	3	N	2	2	N
	WBT	5	4	N	3	3	N
	NBT	4	4	N	6	7	N
	SBL	1	1	N	1	1	N
Main Street / Ames Street (Signalized)	SBT	5	6	N	8	8	N
	SBR	4	5	N	6	6	N
	EBT	6	6	N	9	9	N
	WBT	2	2	N	2	3	N
	NBT	6	6	N	6	6	N
Broadway / Ames Street (Signalized)	SBT	2	2	N	5	4	N
	SBR	3	3	N	4	3	N
	EBT	7	3	N	8	8	N
	WBL	3	2	N	3	3	N
	WBT	12	11	N	14	15	N
Broadway / Third Street (Signalized)	NBL	3	3	N	3	4	N
	NBR	1	1	N	1	1	N
	EBL	6	6	N	7	7	N
	EBT	2	2	N	7	8	N
	WBT	15	15	N	8	9	N
	SBL	4	n/a	N	12	n/a	N
	SBT	n/a	5	N	n/a	14	N
	SBR	4	3	N	4	3	N



While some increases in vehicle queuing at study intersections will result from the additional trips generated by the proposed project under the Build analysis, the lane queue criterion is not exceeded in any instance.

Criterion E – Pedestrian and Bicycle Facilities

The pedestrian and bicycle criterion has the following three components:

a. Pedestrian Delay

Pedestrian delay is a measure of the pedestrian crossing delay on a crosswalk during the peak hour as determined by the pedestrian level of service analysis in the HCM 2000.

Table E-1 presents the indicators for this criterion. **Table E-2** presents the evaluation of PLOS criteria for each crosswalk at study area intersections under Existing 2011 and Build 2011 conditions.

Table E- 1
Criterion: Pedestrian Level-of-Service Indicators

Existing	With Project
PLOS A	PLOS A
PLOS B	PLOS B
PLOS C	PLOS C
PLOS D	PLOS D or increase of 3 seconds
PLOS E, F	PLOS D



**Table E-2
Pedestrian Level-of-Service Summary**

Intersection	Crosswalk	AM Peak Hour			PM Peak Hour		
		Existing 2014	Build 2014	Exceed Criterion?	Existing 2014	Build 2014	Exceeds Criterion?
Galileo Galilei Way at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	D	D	N	D	D	N
	South	D	D	N	D	D	N
Vassar Street at Main Street	East	C	C	N	C	C	N
	West	C	C	N	C	C	N
	North	C	C	N	B	B	N
	South	C	C	N	B	B	N
Ames Street at Main Street	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	C	C	N	C	C	N
	South	C	C	N	C	C	N
Ames Street at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	South	C	C	N	C	C	N
Third Street at Broadway	East	D	D	N	D	D	N
	West	D	D	N	D	D	N
	North	C	C	N	C	C	N

The PLOS criteria are not exceeded during the AM and PM peak hours under Build conditions.

b. Safe Pedestrian Facilities

The project site is well connected to existing pedestrian sidewalks along surrounding streets providing access to the proposed development. The new proposed alleyway, shown in **Figure D**, will accommodate pedestrians and provide a cut-through to Main Street.

Within the project site, pedestrian facilities will be designed to meet appropriate safety and accessibility standards.

c. Safe Bicycle Facilities

As shown in **Figure 12**, the area around the project is well-served by several multi-use/bicycle paths and bicycle lanes. Multi-use/bicycle paths are distinguished by their physical separation from vehicular traffic and by the various types of modes that utilize them. Bike lanes are located on all the study area roadways within the study area. A protected cycle track is planned on the northbound side of Galileo Galilei Way within the study area. The City of



Cambridge has proposed a two way cycle track with the redesign of Ames Street to one lane in each direction between Main Street and Broadway. The Proponent will work with the City to determine the best design for Ames Street as the Project progresses.

Currently there is no bicycle parking accommodations on the project site. The proposed residential development will include 1.05 bicycle space for every residential unit (294 spaces) and 0.1 bicycle spaces per 1,000 sf of retail (2 spaces) to be located within two bike storage rooms, one located within the building and one located on the ground floor of the parking garage. Short term bicycle parking (38 spaces) will be provided in the vicinity of the residential lobby and retail entrances.

Table E-3 summarizes the presence of pedestrian and bicycle facilities for all street adjacent to the Project site.

**Table E-3
Pedestrian and Bicycle Facilities**

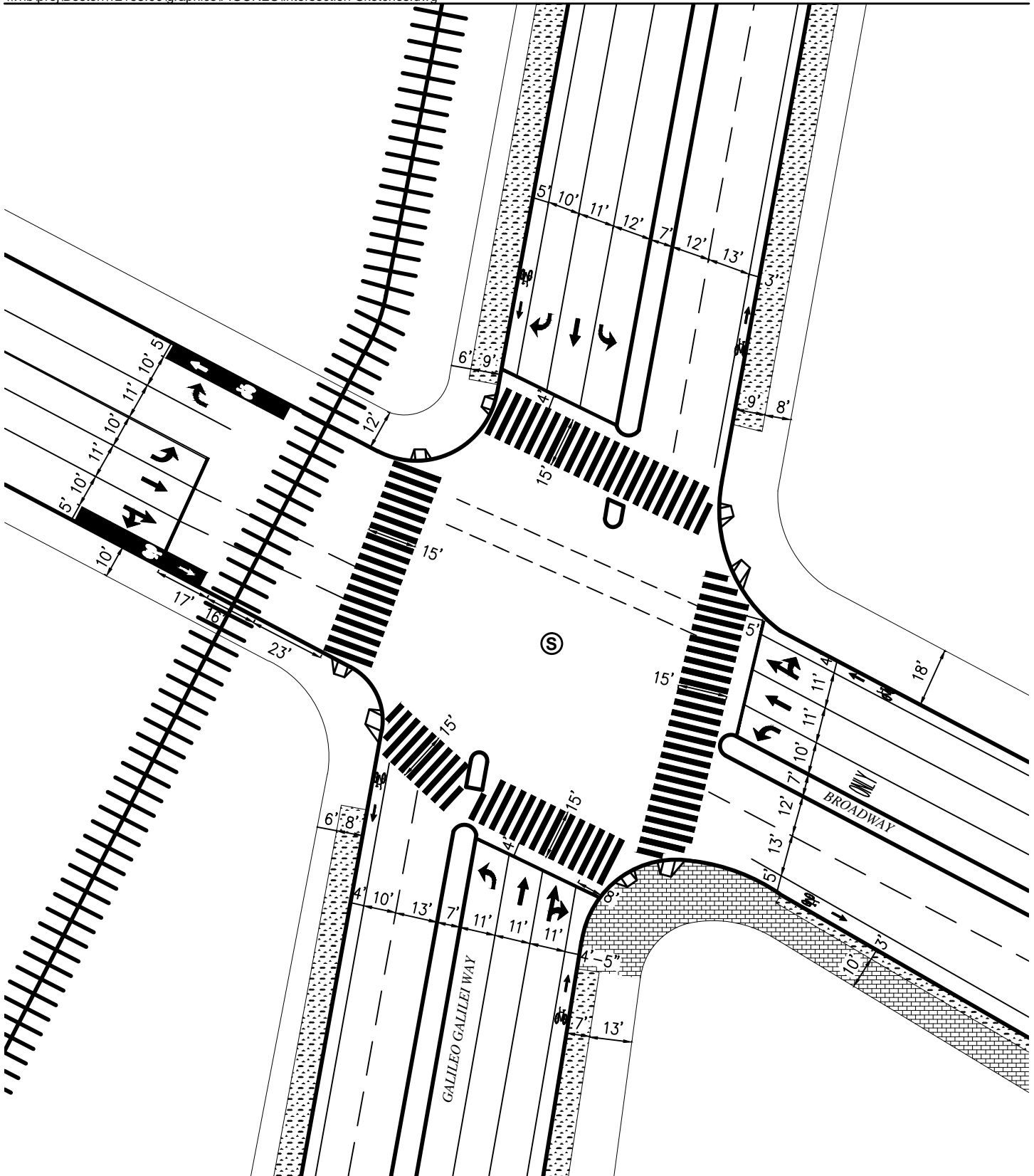
Adjacent Street	Link (between)	Sidewalks or Walkways Present?	Exceeds Criteria	Bicycle Facilities or Right of Ways Present?	Exceeds Criteria
Ames Street	Main Street and Broadway	Y	N	Y	N
Broadway	Ames Street and Third Street	Y	N	Y	N



TIS Figures



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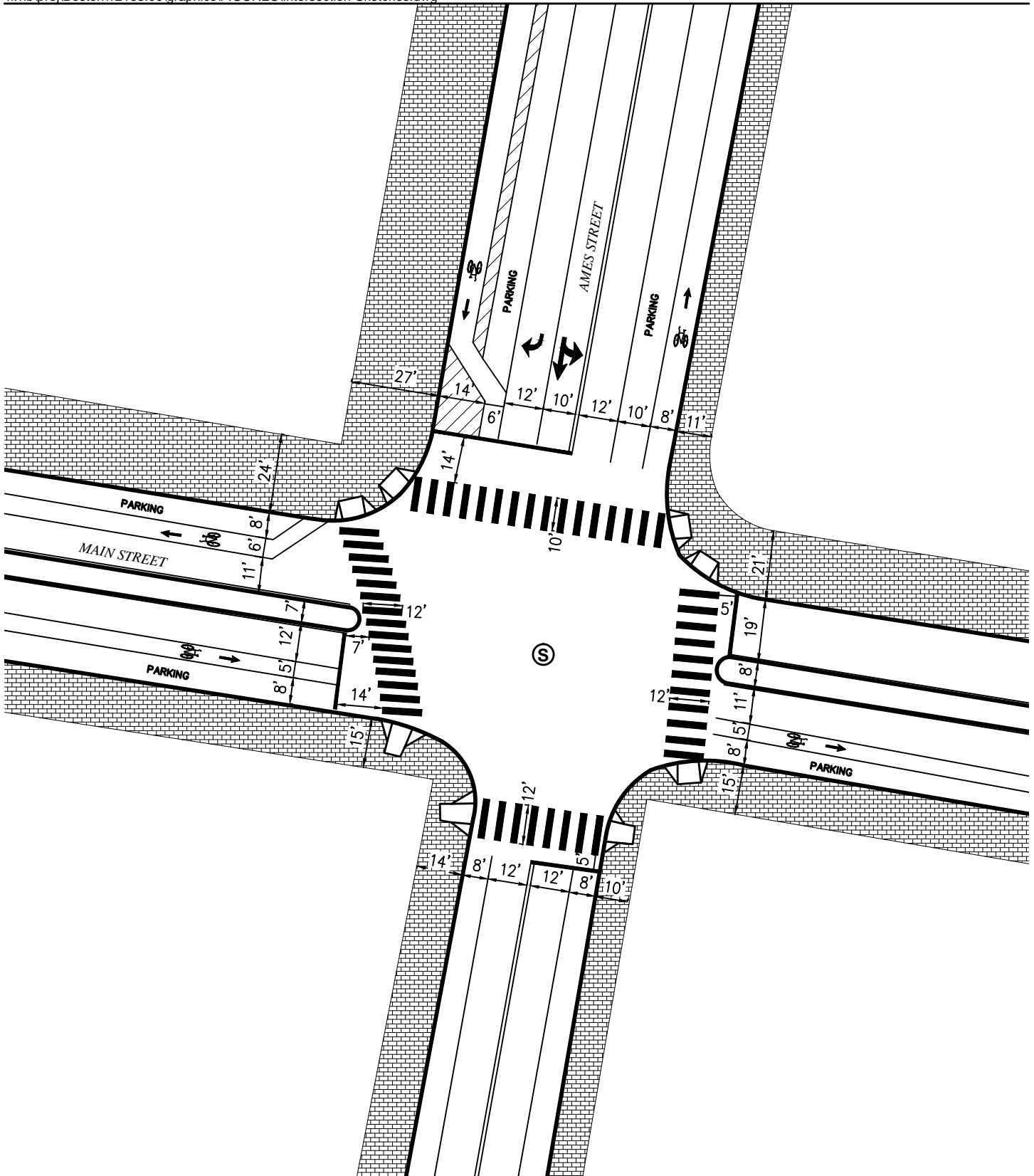


Vanasse Hangen Brustlin, Inc.

Existing Condition Intersection Geometry Figure 1.b.1
Broadway at Galileo Galilei Way



Ames Street Residences
Kendall Square, Cambridge MA

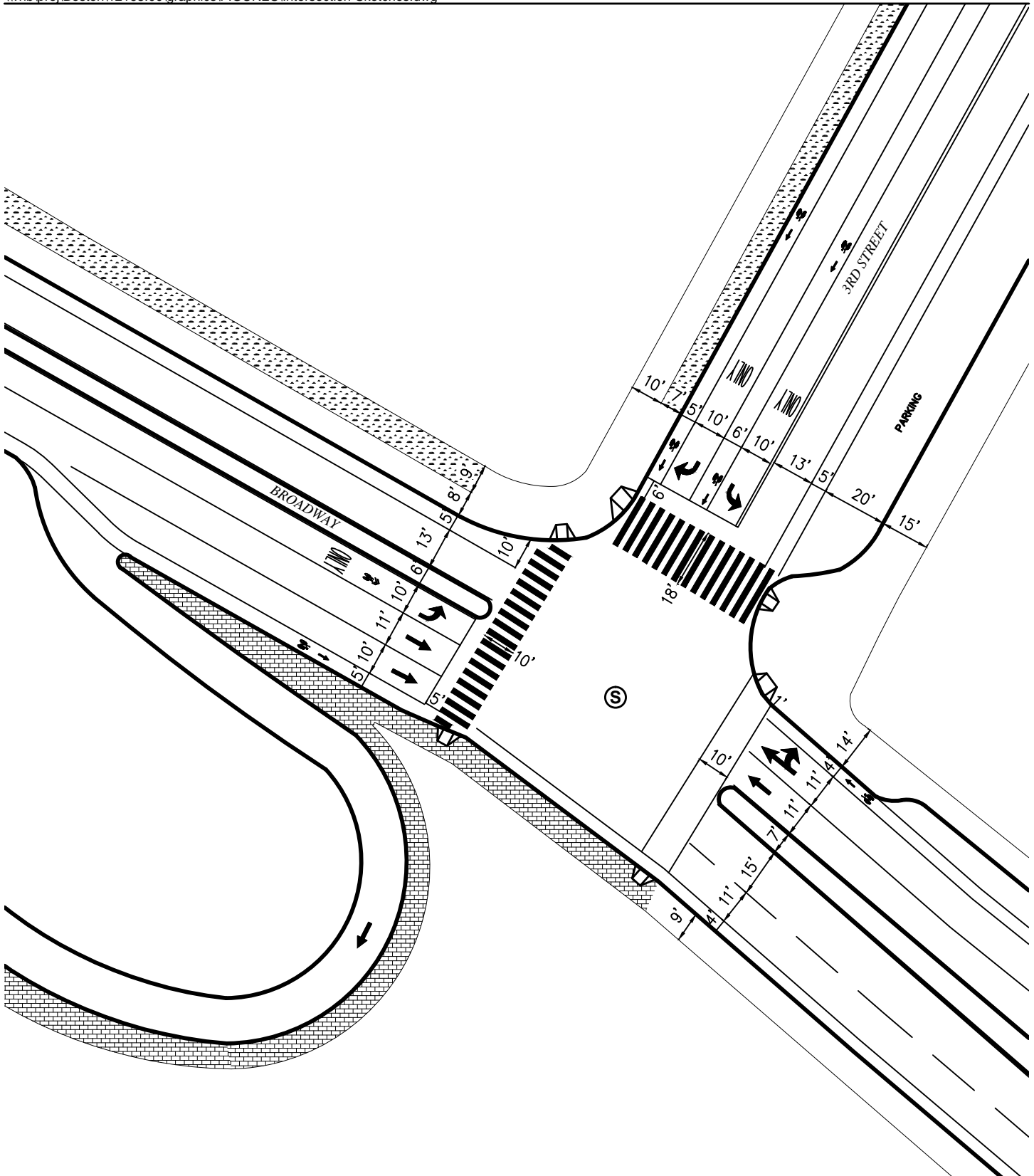


Vanasse Hangen Brustlin, Inc.

Existing Condition Intersection Geometry Figure 1.b.3
Main Street at Ames Street



Ames Street Residences
Kendall Square, Cambridge MA

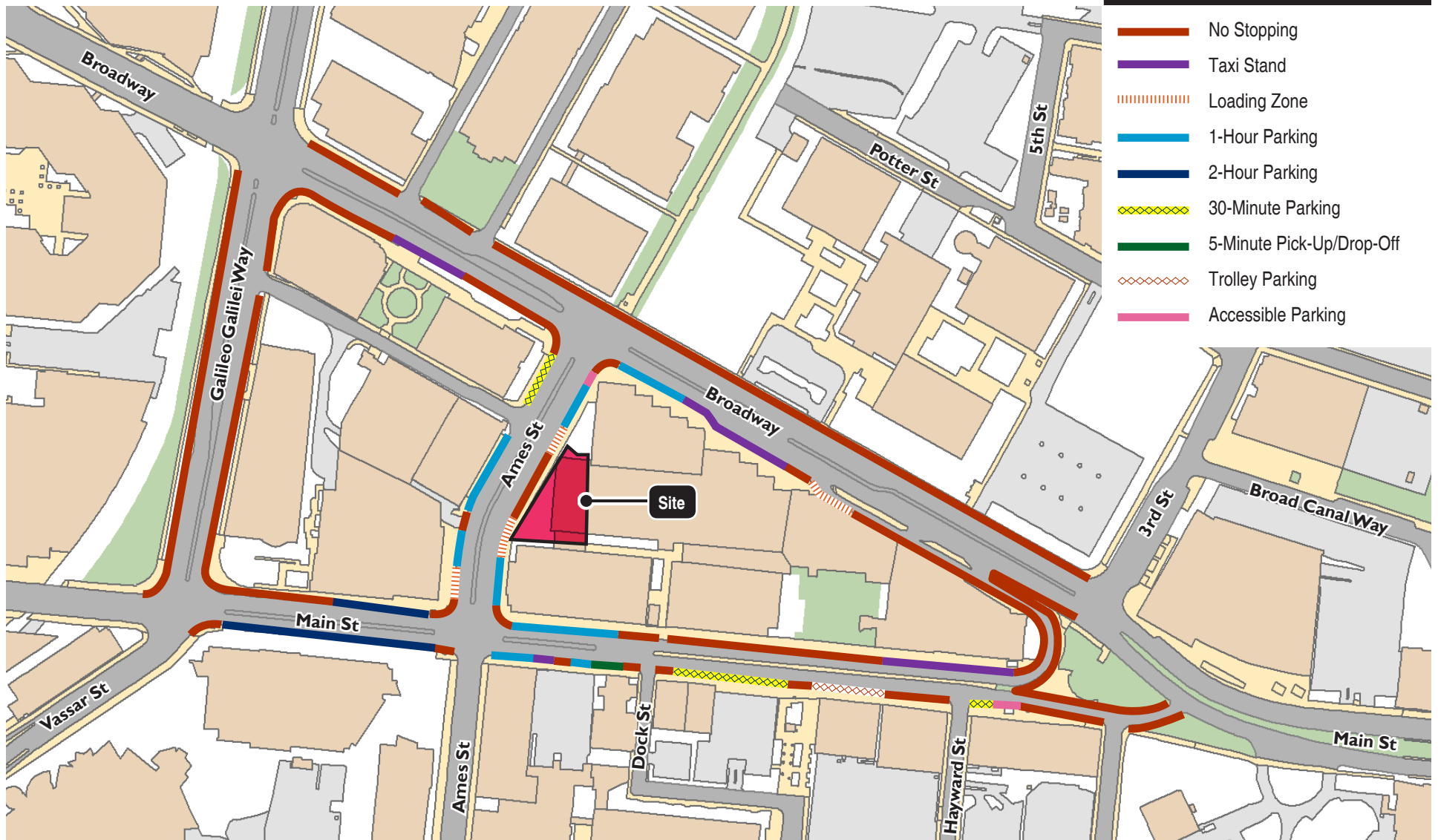


Vanasse Hangen Brustlin, Inc.

Existing Condition Intersection Geometry Figure 1.b.5
Broadway at Third Street



Ames Street Residences
Kendall Square, Cambridge MA



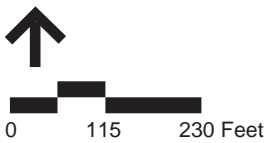
Source: City of Cambridge GIS

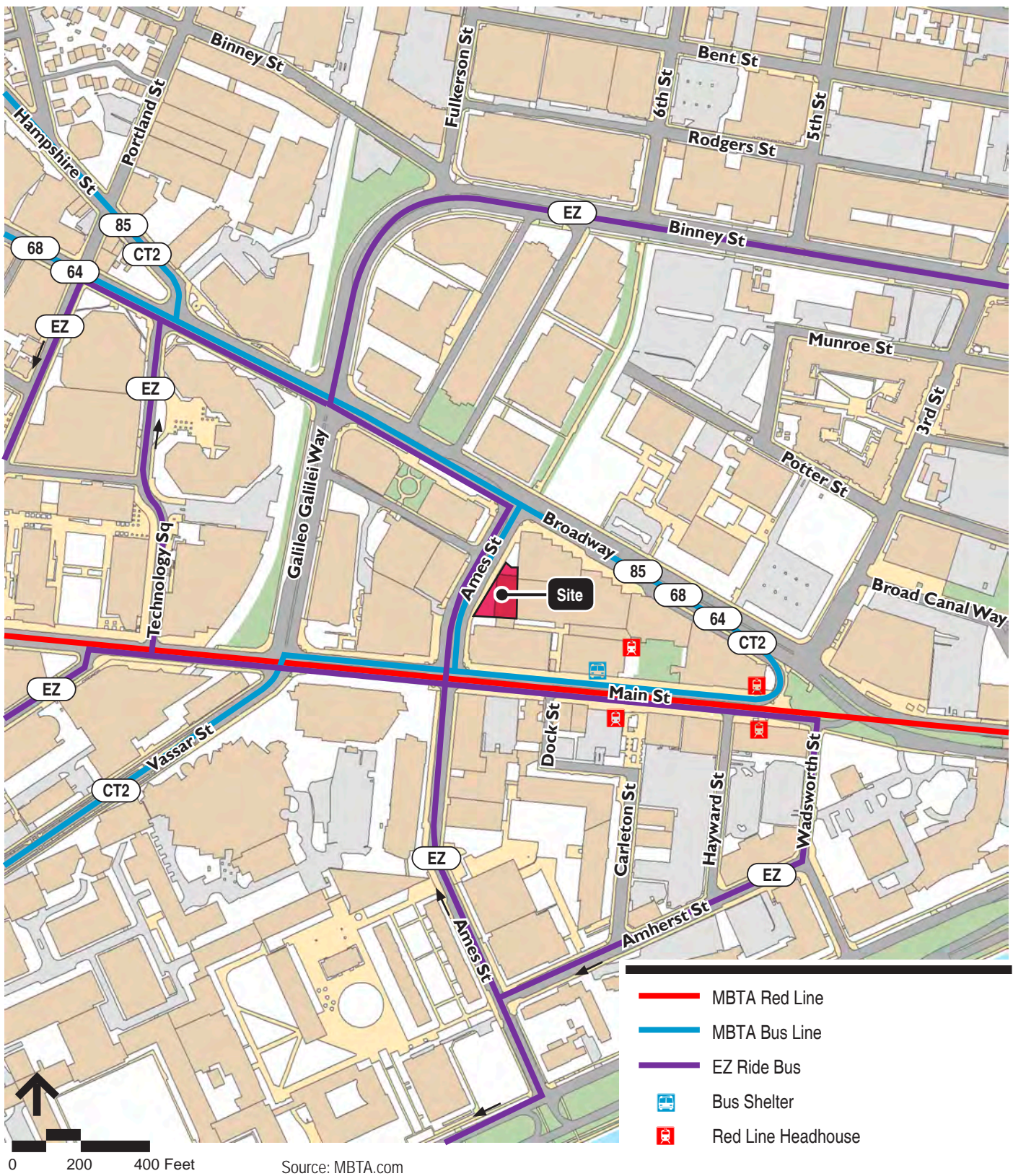
Vanasse Hangen Brustlin, Inc.

Figure 1.c

Existing On-Street Parking Regulations

Ames Street Residences
Kendall Square, Cambridge, MA





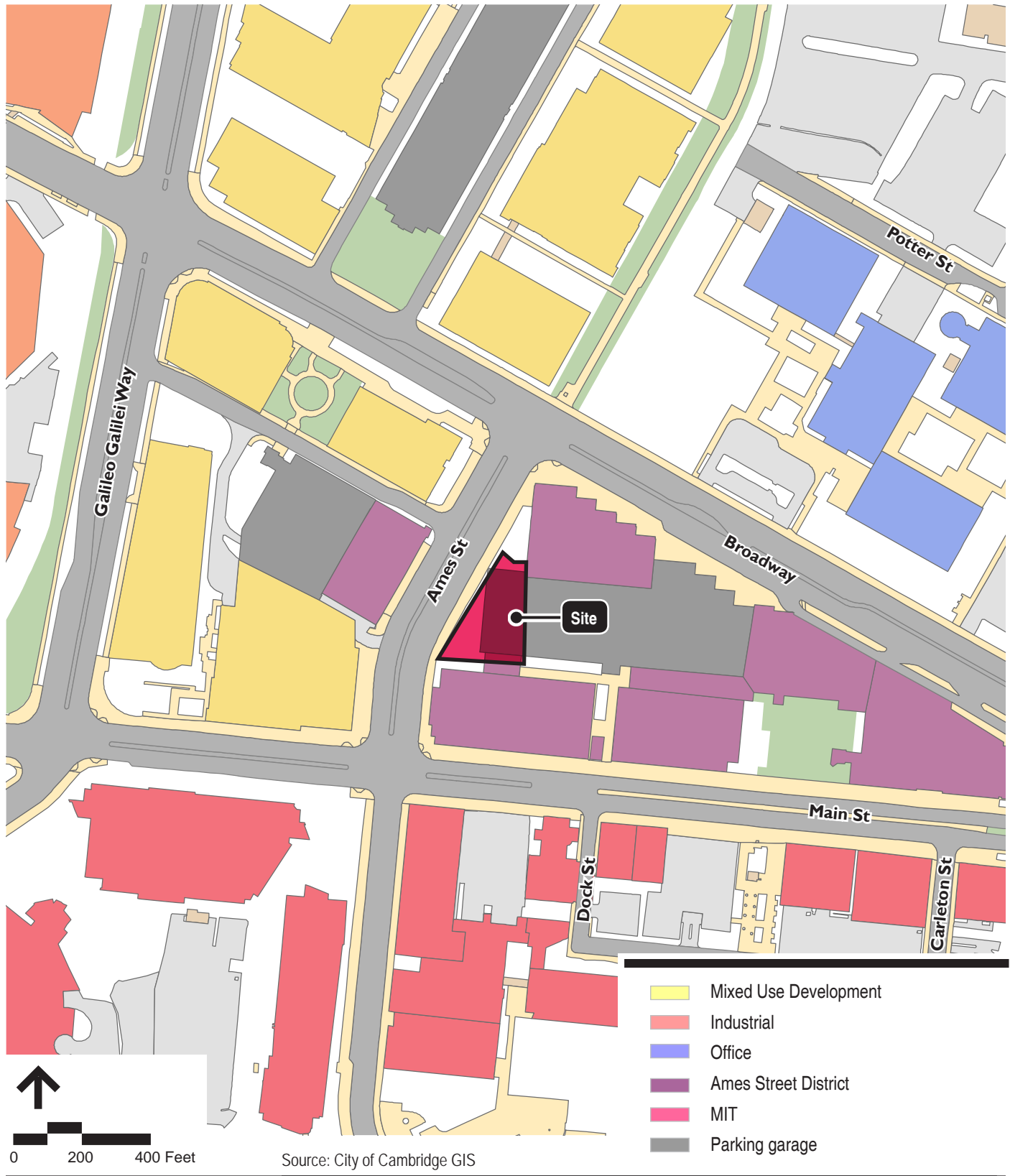
Source: MBTA.com

Vanasse Hangen Brustlin, Inc.

Public Transit Service

Figure 1.d

Ames Street Residences
Kendall Square, Cambridge, MA



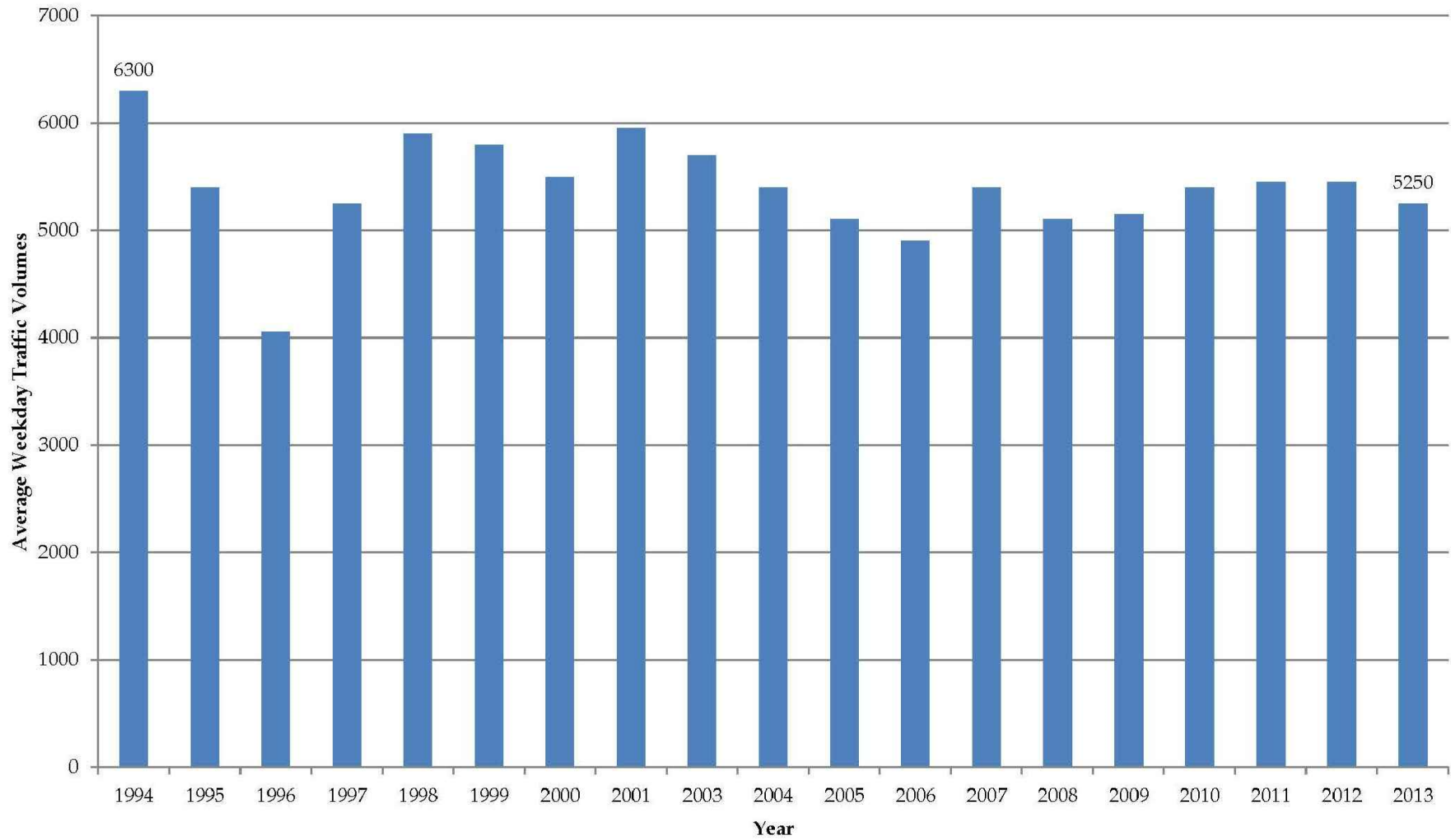
Vanasse Hangen Brustlin, Inc.

Land Use

Figure 1.e

Ames Street Residences
Kendall Square, Cambridge, MA

Figure 2.b.1
Main Street, near MBTA station



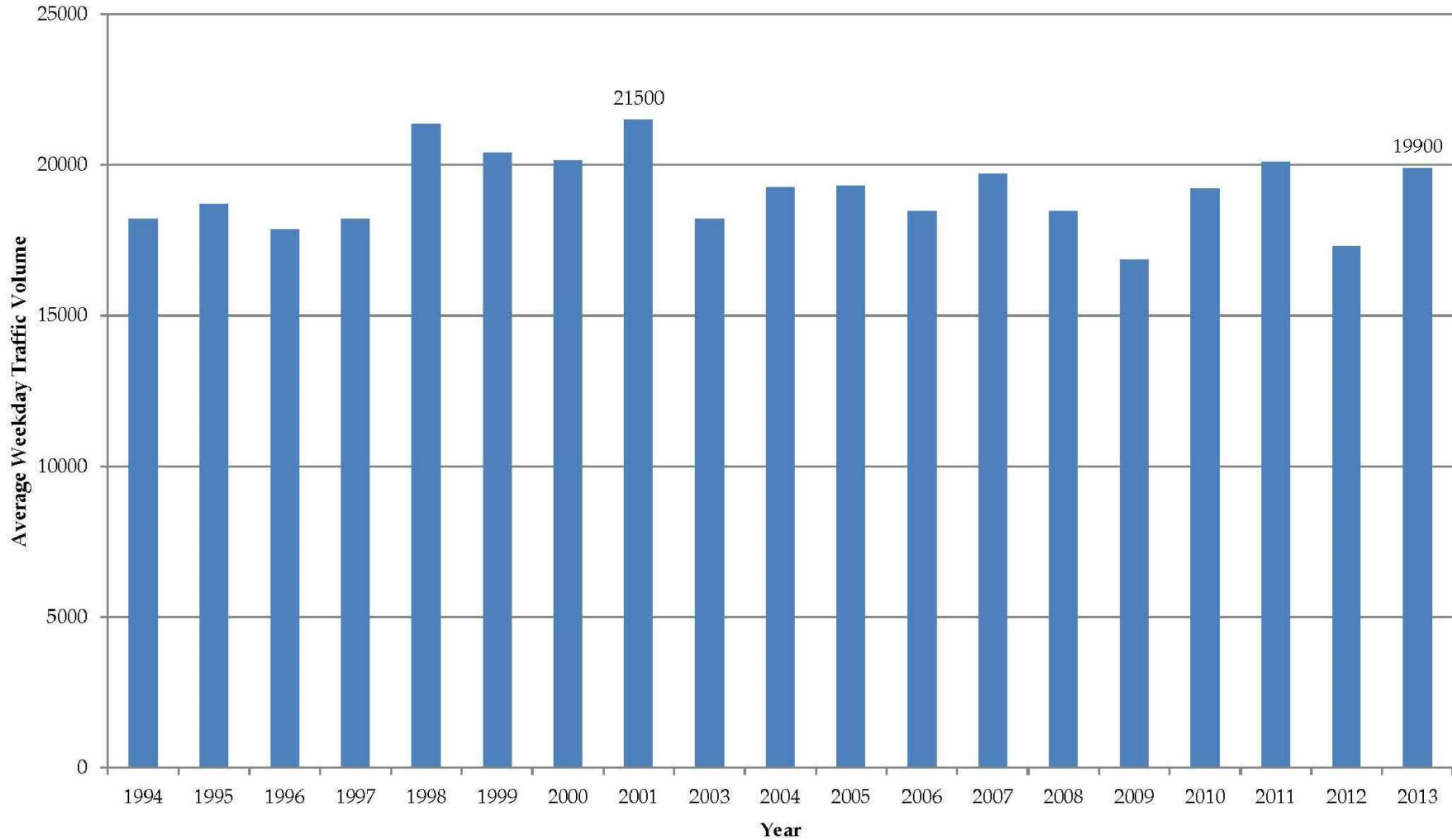
Vanasse Hangen Brustlin, Inc.

Source: Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1

Figure 2.b.1
Main Street (near MBTA station)

Ames Street Residences
Kendall Square, Cambridge MA

Figure 2.b.2 Broadway, east of mid-block



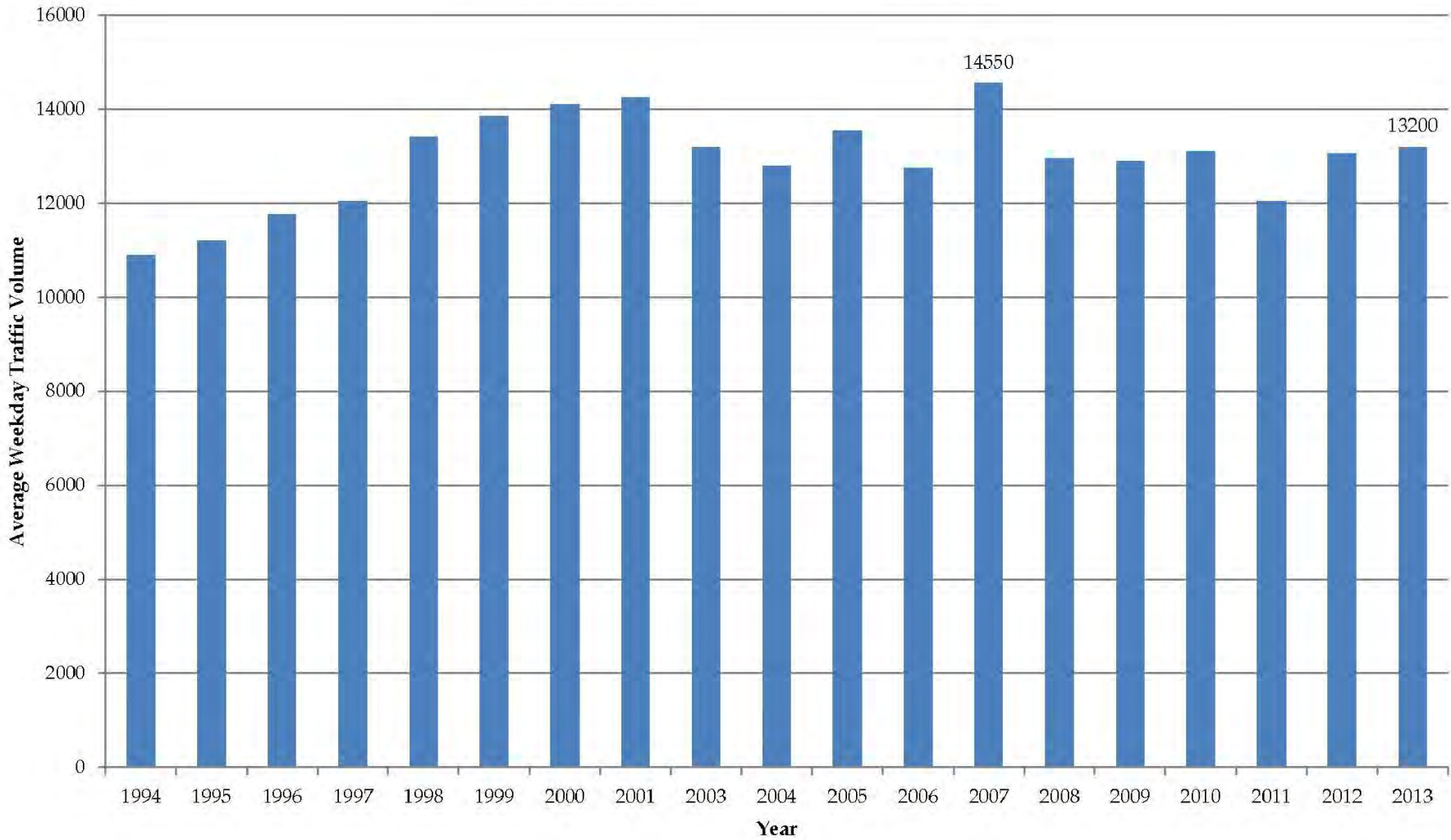
Vanasse Hangen Brustlin, Inc.

Source: Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1

Figure 2.b.2
Broadway (east of mid-block)

Ames Street Residences
Kendall Square, Cambridge MA

Figure 2.b.3
Binney Street, west of Third Street



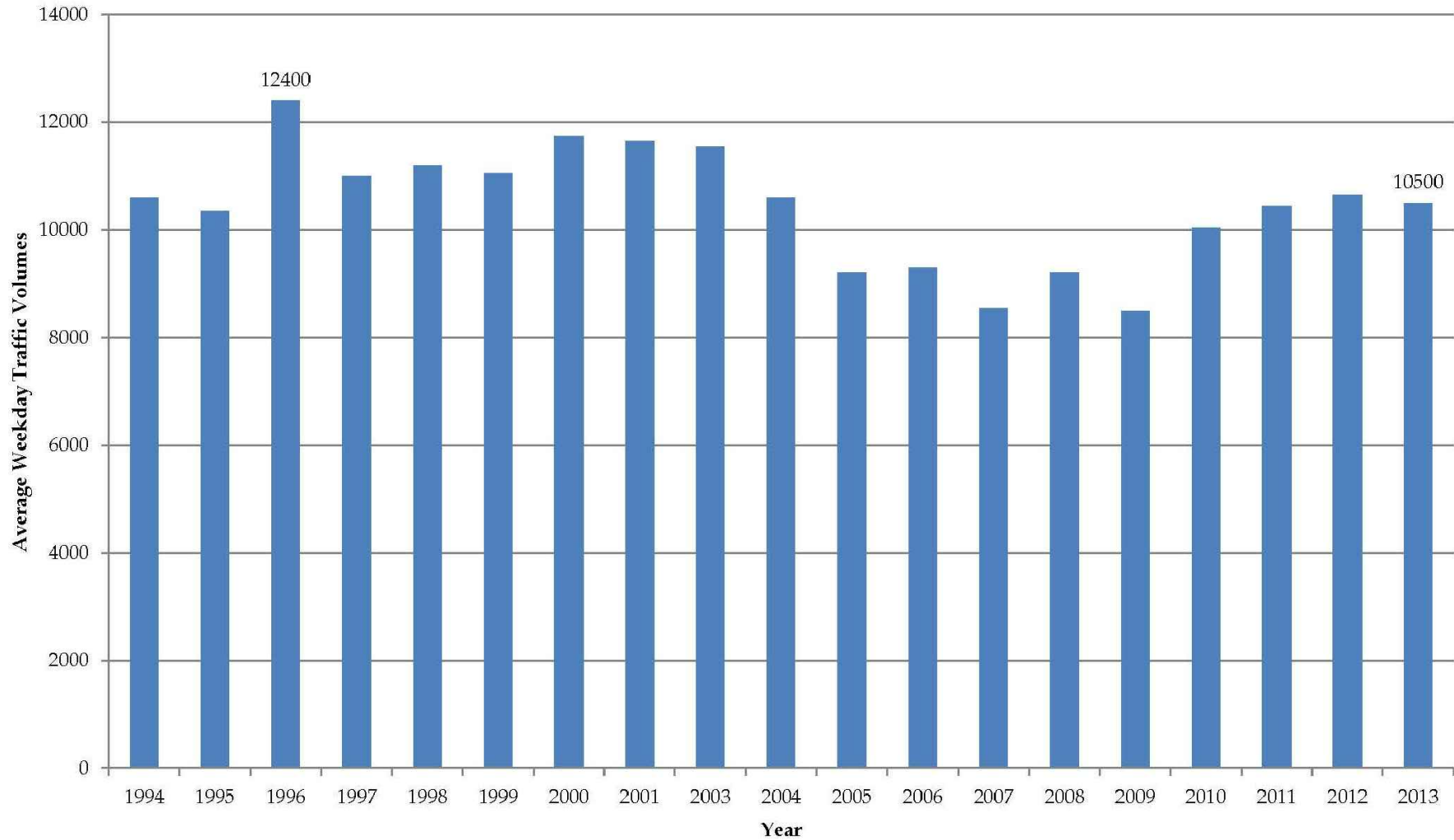
Vanasse Hangen Brustlin, Inc.

Source: Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1

Figure 2.b.3
Binney Street (west of Third Street)

Ames Street Residences
Kendall Square, Cambridge MA

Figure 2.b.4 Third Street, north of Broadway



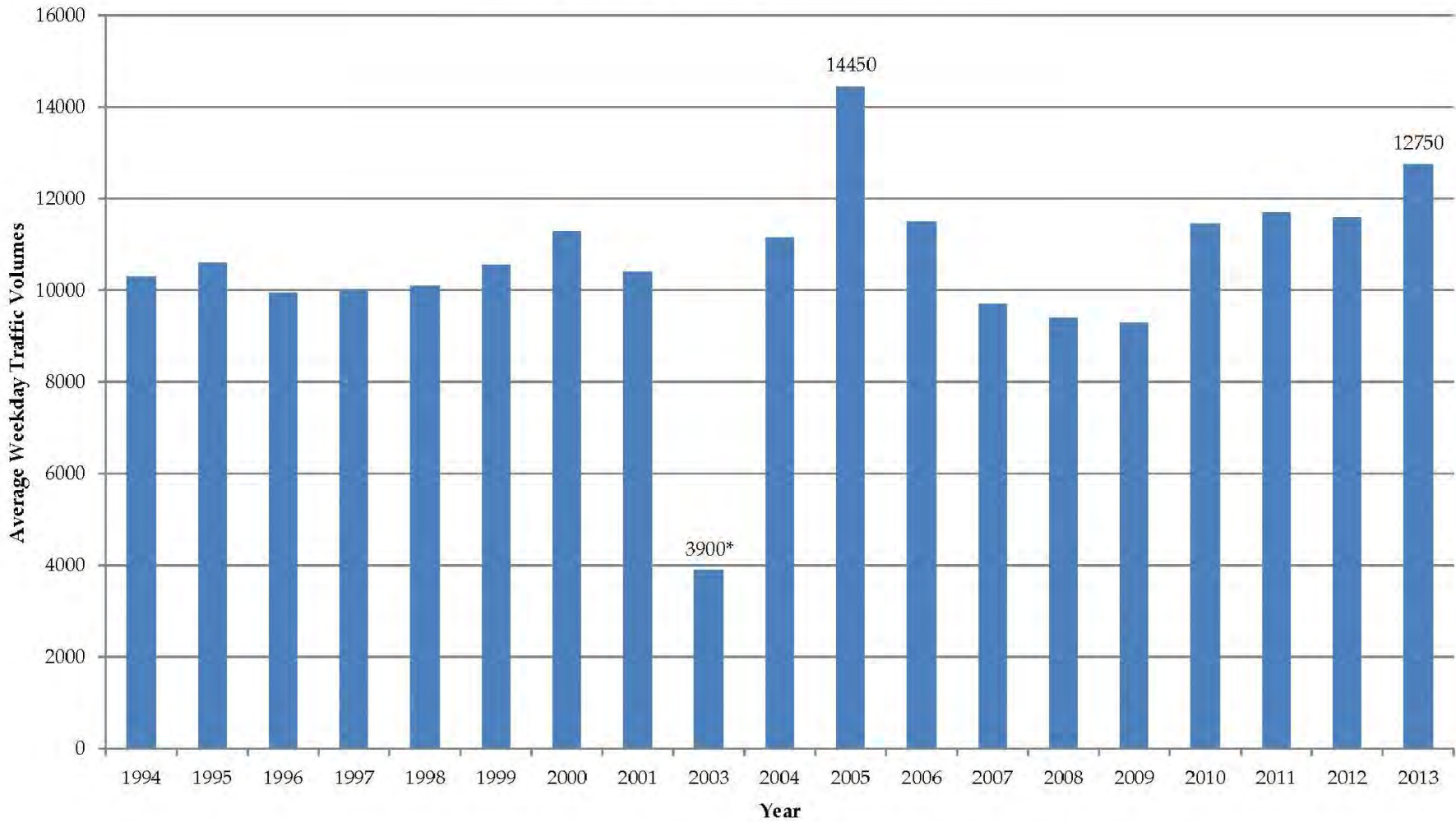
Vanasse Hangen Brustlin, Inc.

Source: Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1

Figure 2.b.4
Third Street (north of Broadway)

Ames Street Residences
Kendall Square, Cambridge MA

Figure 2.b.5 Vassar Street, west of Main Street



Vanasse Hangen Brustlin, Inc.

Source: Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1

Figure 2.b.5
Vassar Street (west of Main Street)

Ames Street Residences
Kendall Square, Cambridge MA

*Roadway under reconstruction during 2003 count program; count represents 1-way traffic



Note: Vehicle Traffic Counts conducted on 10/26/2010 grown by 0.5% to 2014 volumes



2014 Existing Condition
Traffic Volumes
AM Peak Hour (8:15 - 9:15 AM)

Figure 2.c.1

Ames Street Residences
Kendall Square, Cambridge MA



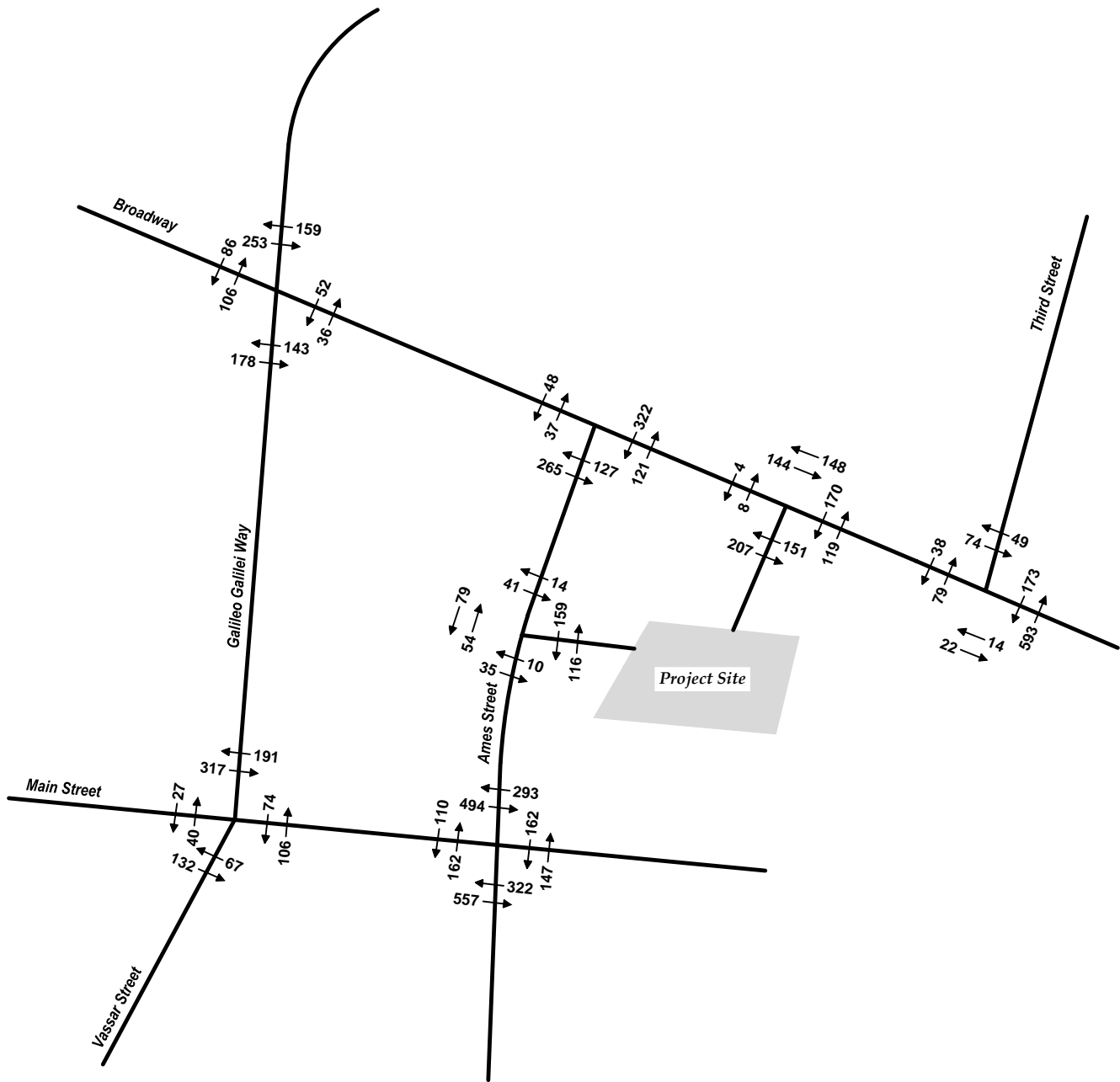
Note: Vehicle Traffic Counts conducted on 10/26/2010 grown by 0.5% to 2014 volumes



2014 Existing Condition
Traffic Volumes
PM Peak Hour (5:00 - 6:00 PM)

Figure 2.c.2

Ames Street Residences
Kendall Square, Cambridge MA



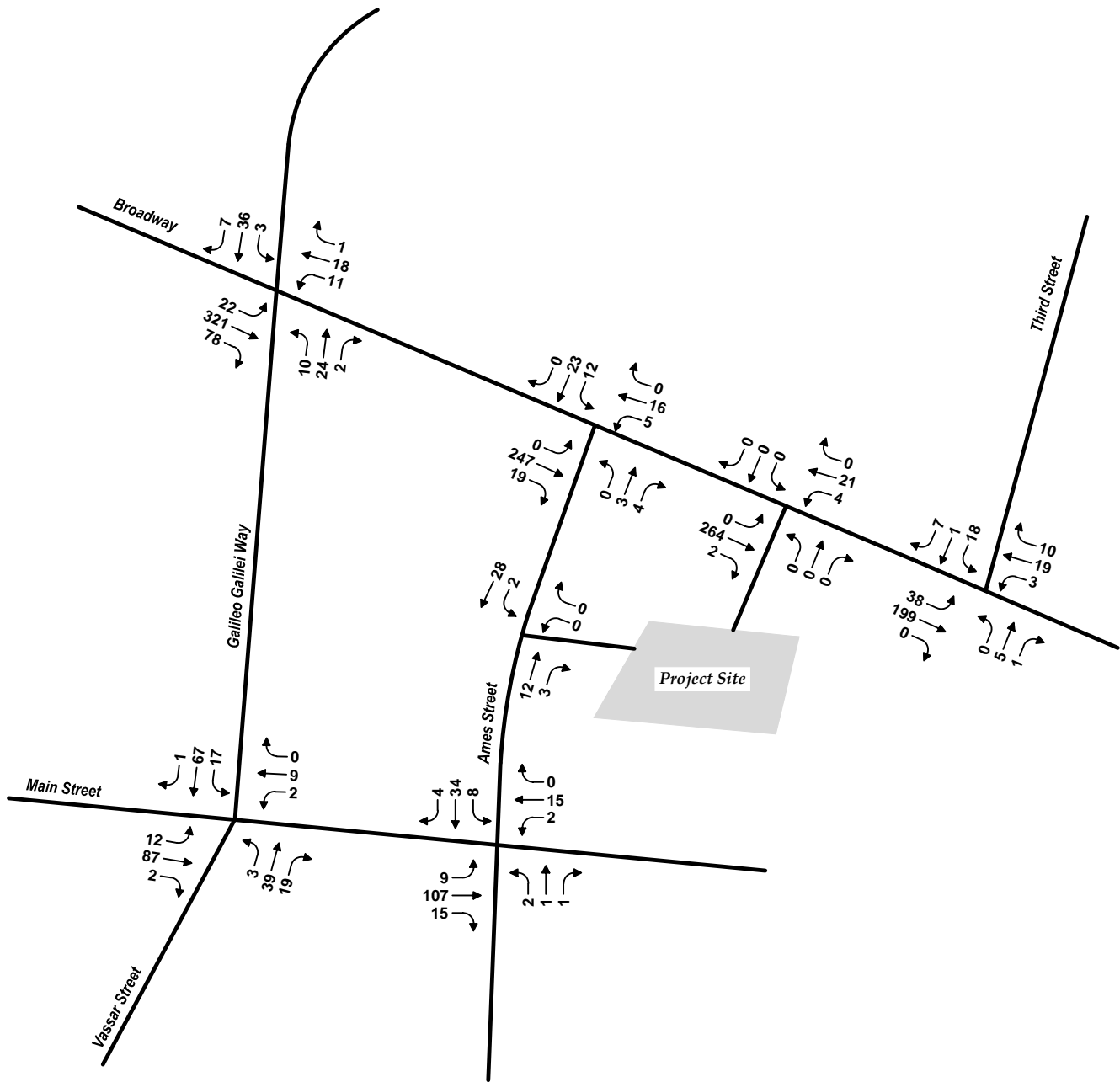
Note: Pedestrian Counts conducted on 4/9/2014



2014 Existing Condition
 Pedestrian Volumes
 PM Peak Hour (5:00 - 6:00 PM)

Figure 2.c.4

Ames Street Residences
 Kendall Square, Cambridge MA



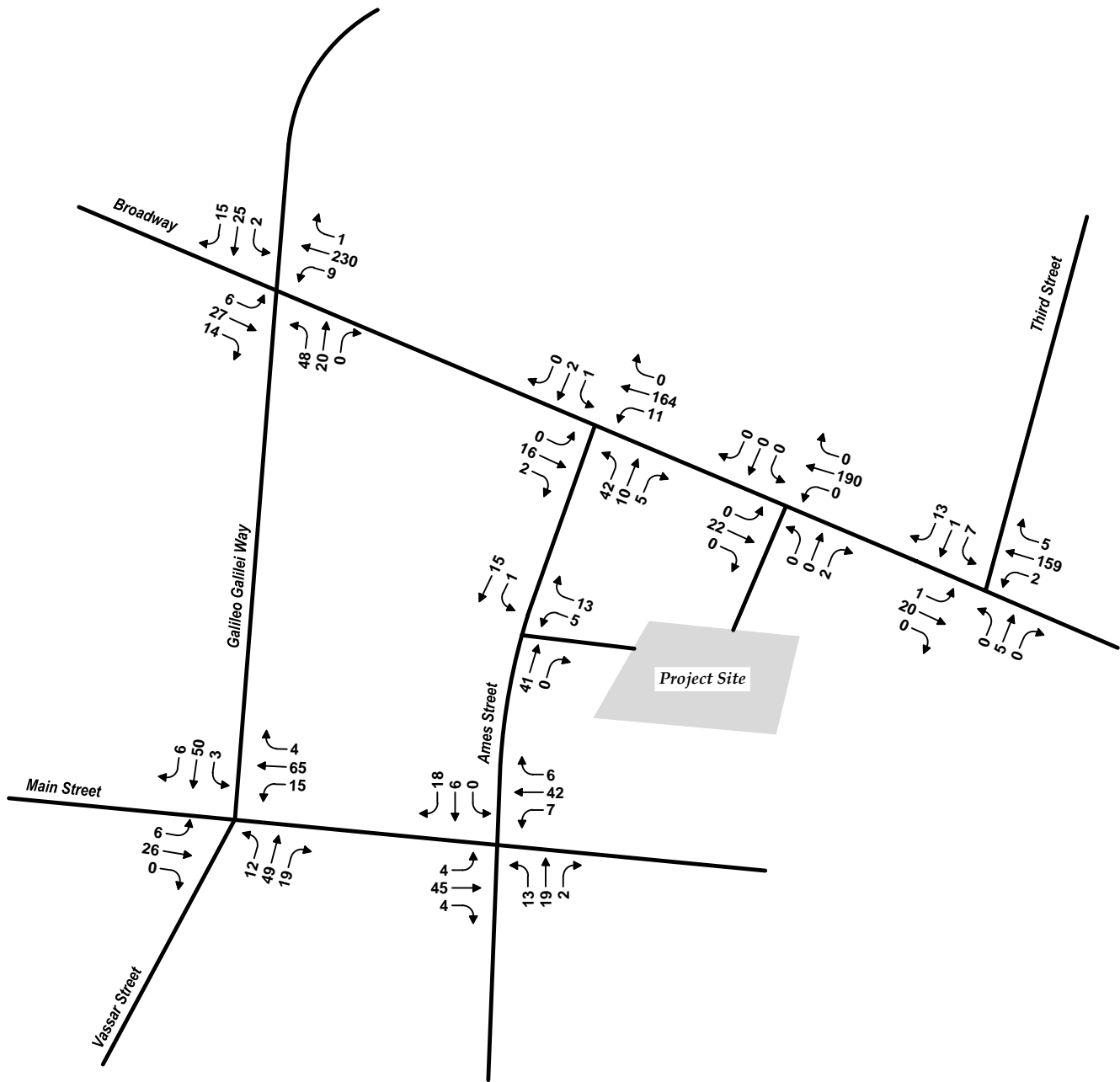
Note: Bicycle Counts conducted on 4/9/2014



2014 Existing Condition
Bicycle Volumes
AM Peak Hour (8:15 - 9:15 AM)

Figure 2.c.5

Ames Street Residences
Kendall Square, Cambridge MA



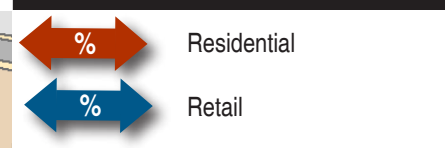
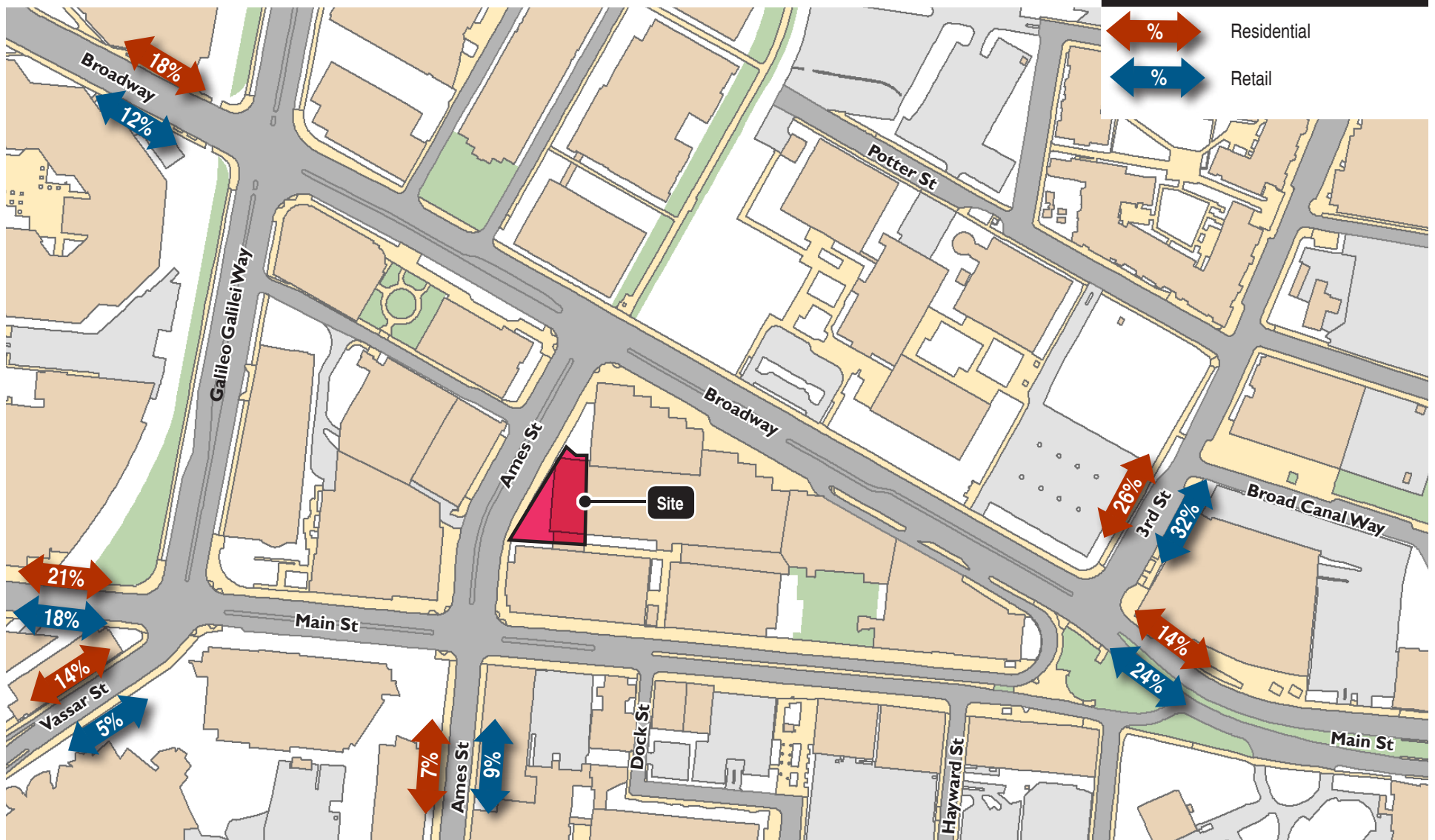
Note: Bicycle Counts conducted on 4/9/2014



2014 Existing Condition
Bicycle Volumes
PM Peak Hour (5:00 - 6:00 PM)

Figure 2.c.6

Ames Street Residences
Kendall Square, Cambridge MA



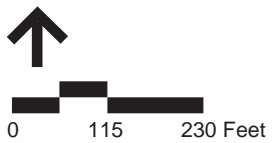
Source: City of Cambridge GIS

Vanasse Hangen Brustlin, Inc.

Figure 3.d.1

Trip Distribution

Ames Street Residences
Kendall Square, Cambridge, MA





Project Generated Trips
Traffic Volumes
PM Peak Hour (5:00 - 6:00 PM)

Figure 3.d.3

Ames Street Residences
Kendall Square, Cambridge MA



2014 Build Condition
Traffic Volumes
AM Peak Hour (8:15 - 9:15 AM)

Figure 5.b.1

Ames Street Residences
Kendall Square, Cambridge MA



2014 Build Condition
Traffic Volumes
PM Peak Hour (5:00 - 6:00 PM)

Figure 5.b.2

Ames Street Residences
Kendall Square, Cambridge MA



2019 Future Condition
 Traffic Volumes
 AM Peak Hour (8:15 - 9:15 AM)

Figure 5.d.1

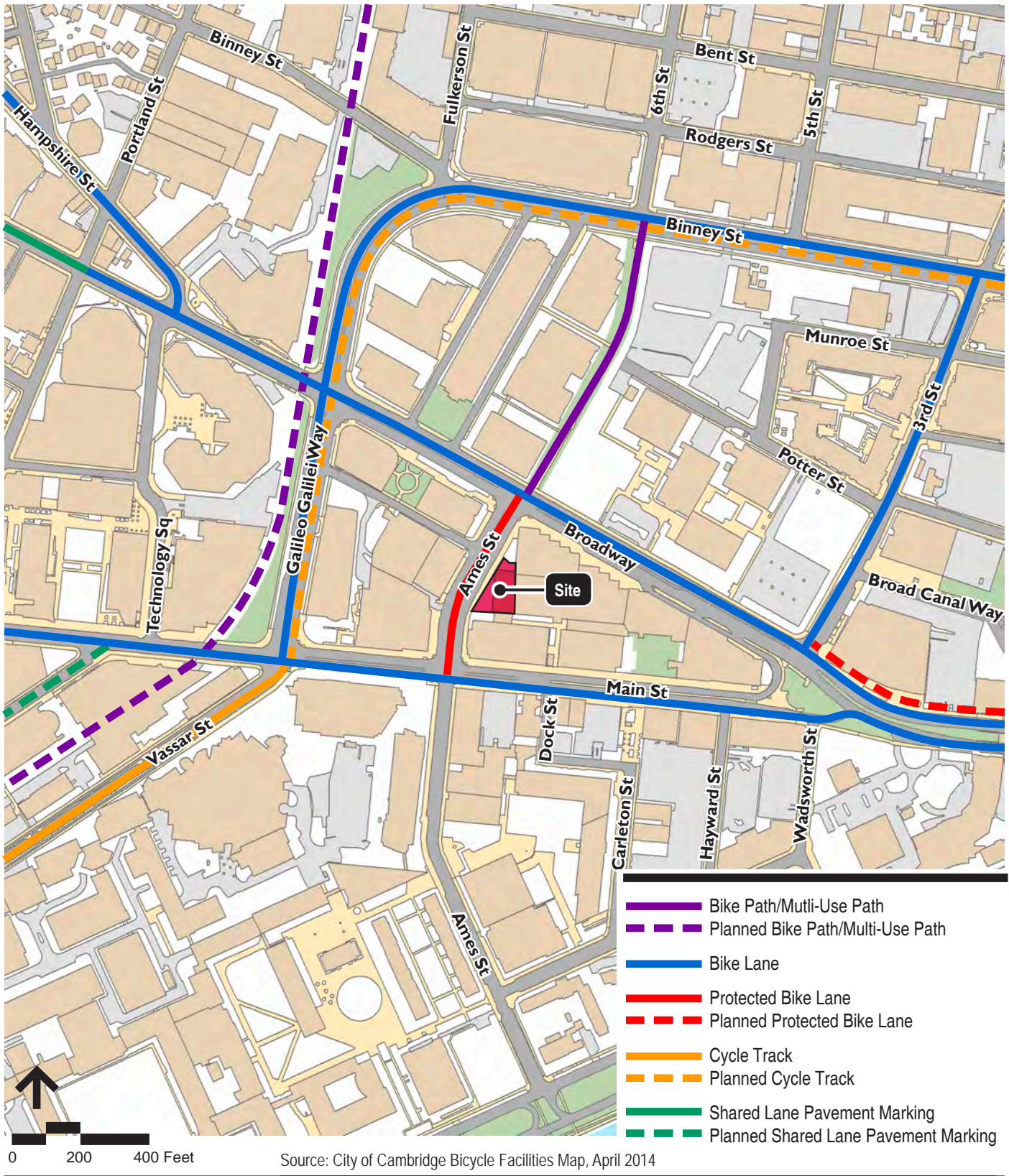
Ames Street Residences
 Kendall Square, Cambridge MA



2019 Future Condition
Traffic Volumes
PM Peak Hour (5:00 - 6:00 PM)

Figure 5.d.2

Ames Street Residences
Kendall Square, Cambridge MA



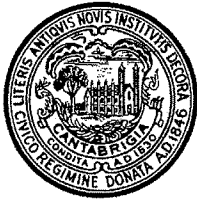
Vanasse Hangen Brustlin, Inc.

Bicycle Facilities

Figure 12

Ames Street Residences
Kendall Square, Cambridge, MA

Ames Street Residences
Transportation Impact Study
Technical Appendix
Scoping Letter



CITY OF CAMBRIDGE
Traffic, Parking and Transportation
344 Broadway
Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Susan E. Clippinger, Director
Brad Gerratt, Deputy Director

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

April 14, 2014

Mr. Sean M. Manning
Vanasse Hangen Brustlin, Inc.
99 High Street, 10th Floor
Boston, MA 02110-2354

RE: Ames Street Residential Project

Dear Sean,

We have received your March 20, 2014 request for a Transportation Impact Study (TIS) scope for the proposed Ames Street Residences (280 units) by Boston Properties. Based on staff review, the scope for this study is approved as follows:

- The TIS shall comply with the Cambridge Traffic, Parking and Transportation Department's TIS Guidelines.
- Provide site plans of existing and proposed conditions. Include sidewalks on both sides of Ames Street.
- Although there is ongoing construction of the Longfellow Bridge, you should collect peak hour turning movement counts (TMC) for vehicles, bicycles, and pedestrians at the following study area intersections and compare to counts conducted in 2010 prior to the Longfellow Bridge construction. We will work with you to determine what data should be used for the TIS 2014 existing conditions.
 1. Ames Street at Broadway
 2. Ames Street at Main Street
 3. Broadway at Third Street
 4. Main Street at Vassar Street Galileo Galilei Way
 5. Broadway at Galileo Galilei Way
 6. Ames Street at Cambridge Center East Garage
 7. Broadway at Cambridge Center East Garage
- The TIS should use the existing Average Weekday Traffic Volumes in the Kendall Square Urban Renewal 2013 Traffic Count Program and Trip Generation Analysis, Table 1. Show the data should in a chart from 1994 to May 2013 for each of the five locations including:
 1. Main Street, near MBTA station
 2. Broadway, east of mid-block
 3. Binney Street, west of Third Street
 4. Third Street, north of Broadway
 5. Vassar Street, west of Main Street
- As proposed in your scoping letter, you may use the ATR counts on Ames Street, north of Main Street, from the Kendall Square study conducted in October 2010.

- As proposed in your scoping letter, you may use the existing AM, PM and Saturday Midday bicycle counts conducted in May 2013 from the Kendall Square Urban Renewal Area 2013 Traffic Count Program and Trip Generation Analysis at the following locations:
 - A. Main Street between Ames Street and Hayward Street
 - B. Broadway between Ames Street and Third Street
- As proposed in your scoping letter, you may use the ITE Land Use Code 220 (Apartments) and Shopping Center (LUC 820) for trip generation. You may also use the national Average Vehicle Occupancy (AVO) rates of 1.13 residential and 1.78 for retail, and a local AVO rate of 1.26 and 1.20 respectively. Document the AVO sources in the Appendix.
- As proposed in your scoping letter, you may use the enhanced transportation demand management (TDM) mode splits for residential and retail trips based on the Kendall Square Planning Study (K2C2 Planning Study). The TIS should also indicate what enhanced TDM measures are proposed to be implemented to achieve the vehicle mode shares.

Land Use	Vehicle	Transit	Walk	Bike	Other
Residential	32%	30%	25%	10%	3%
Retail	31%	30%	29%	8%	2%

Source: Enhanced TDM mode shares from the 2010-2013 City of Cambridge Kendall Square-Central Square Planning Study.

- The TIS should compare AM and PM peak hour ITE trip rates with actual observed rates at a comparable residential building in the area. The location should be approved by TP&T.
- You may use the trip distribution from your scoping request letter, however, for residential use, Ames Street and Wadsworth Street should have 7% exiting from Ames Street to Memorial Drive and 7% arriving from Wadsworth. For Retail use 9% exiting Ames Street to Memorial Drive and 9% entering from Wadsworth Street.
- As you proposed in your scoping request letter, the 5-year future condition traffic analysis shall include a general background growth rate of 0.5% per year.
- The 5-year future network should include other projects identified for the area and approved by TP&T. The Build and 5-year future conditions should include the Broadway/Third Street intersection which includes the Third Street to Main Street connection.
- Determine crash data for the three most recent years available for study area intersections. Pedestrian and bicycle crashes should be shown separately.
- The Cambridge Center East, West and North garages are pooled parking for all buildings in the Kendall Square Urban Renewal area. The TIS must show the existing daytime and nighttime parking utilization, committed parking for projects not yet built or fully occupied, and parking needed for the propose project both during the day and at night.
 - You may use vehicle occupancy counts of the East, West and North garages conducted for the Kendall Square Urban Renewal 2013 Traffic Count and Trip Generation Analysis by FST Engineering conducted during the week of May 13 through May 19, 2013 and/or updated data.
 - Show what the existing daytime and nighttime peak parking utilization is for each garage.
 - Show what the future parking needs will be for buildings not yet built or fully occupied, such as the Broad Institute Expansion and 300 Binney Street (17 Cambridge Center).
 - Show what the daytime and nighttime parking demands will be for the proposed residential project. You may use the 2008-2012 American Community Survey data to determine the average

residential vehicle ownership. Show the number of parking spaces the residents will need during the daytime and nighttime. All data sources shall be documented in the Appendix.

- The TIS should propose a shared parking strategy and document how the parking for the project will be met and managed (garage access, shared spaces, etc.).
- The TIS should provide a detailed bicycle parking layout plan, including the type of proposed bicycle racks.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Susan E. Clippinger". The signature is fluid and cursive, with a prominent initial "S" and "E".

Susan E. Clippinger, Director

cc: Adam Shulman, TP&T

Ames Street Residences
Transportation Impact Study
Technical Appendix
ATR Count Data

Transportation Data Corporation
 Mario Perone, mperone1@verizon.net
 t. (781) 587-0086 f. (781) 587-0189

Ames Street
 north of Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

04047Cclass

Start Time	Bikes	Cats & Trailers	2 Axle Long	2 Axle Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	5 Axle Double	6 Axle Multi	6 Axle Multi	Total
10/27/10	1	12	6	0	0	0	0	0	0	0	0	19
01:00	0	10	6	0	0	0	0	0	0	0	0	16
02:00	0	0	4	0	0	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	11	9	3	0	1	0	0	0	0	0	24
06:00	0	32	26	12	12	0	0	1	0	0	0	83
07:00	0	47	38	18	19	0	0	3	0	0	0	125
08:00	1	125	35	14	25	5	0	0	0	0	0	205
09:00	3	86	39	11	25	1	0	1	1	0	0	167
10:00	1	57	29	7	19	1	0	0	0	0	0	114
11:00	2	76	37	12	11	1	0	0	0	0	0	138
12:PM	2	61	44	9	10	2	0	0	0	0	0	128
13:00	3	58	42	10	19	2	0	0	0	0	0	138
14:00	2	67	46	12	13	0	0	0	0	0	0	132
15:00	3	83	53	10	17	0	0	1	0	0	0	167
16:00	6	151	57	12	16	0	0	2	0	0	0	244
17:00	3	107	52	10	12	0	0	2	0	0	0	186
18:00	3	82	35	3	8	0	0	2	0	0	0	133
19:00	1	56	28	0	0	0	0	0	0	0	0	85
20:00	0	42	15	1	0	0	0	0	0	0	0	58
21:00	0	44	16	1	0	0	0	0	0	0	0	65
22:00	0	20	16	0	0	0	0	0	0	0	0	37
23:00	0	20	16	0	0	0	0	0	0	0	0	37
Total	34	1291	677	154	226	13	0	18	1	0	0	2414
Percent	1.4%	53.5%	28.0%	6.4%	9.4%	0.5%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
AM Peak	09:00	08:00	08:00	07:45	08:00	08:00	08:00	07:00	09:00	08:00	08:00	08:00
PM Peak	17:00	17:00	17:00	15:00	14:00	13:00	14:00	14:00	14:00	13:00	13:00	17:00
Vol.	6	451	57	12	19	2	2	3	1	0	0	244

Start Time	Bikes	Cats & Trailers	2 Axle Long	2 Axle Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	5 Axle Double	6 Axle Multi	6 Axle Multi	Total
10/27/10	1	12	6	0	0	0	0	0	0	0	0	19
01:00	0	10	6	0	0	0	0	0	0	0	0	16
02:00	0	0	4	0	0	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	11	9	3	0	1	0	0	0	0	0	24
06:00	0	32	26	12	12	0	0	1	0	0	0	83
07:00	0	47	38	18	19	0	0	3	0	0	0	125
08:00	1	125	35	14	25	5	0	0	0	0	0	205
09:00	3	86	39	11	25	1	0	1	1	0	0	167
10:00	1	57	29	7	19	1	0	0	0	0	0	114
11:00	2	76	37	12	11	1	0	0	0	0	0	138
12:PM	2	61	44	9	10	2	0	0	0	0	0	128
13:00	3	58	42	10	19	2	0	0	0	0	0	138
14:00	2	67	46	12	13	0	0	0	0	0	0	132
15:00	3	83	53	10	17	0	0	1	0	0	0	167
16:00	6	151	57	12	16	0	0	2	0	0	0	244
17:00	3	107	52	10	12	0	0	2	0	0	0	186
18:00	3	82	35	3	8	0	0	2	0	0	0	133
19:00	1	56	28	0	0	0	0	0	0	0	0	85
20:00	0	42	15	1	0	0	0	0	0	0	0	58
21:00	0	44	16	1	0	0	0	0	0	0	0	65
22:00	0	20	16	0	0	0	0	0	0	0	0	37
23:00	0	20	16	0	0	0	0	0	0	0	0	37
Total	34	1291	677	154	226	13	0	18	1	0	0	2414
Percent	1.4%	53.5%	28.0%	6.4%	9.4%	0.5%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
AM Peak	09:00	08:00	08:00	07:45	08:00	08:00	08:00	07:00	09:00	08:00	08:00	08:00
PM Peak	17:00	17:00	17:00	15:00	14:00	13:00	14:00	14:00	14:00	13:00	13:00	17:00
Vol.	6	451	57	12	19	2	2	3	1	0	0	244

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 Mario Perone, mperone1@verizon.net
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Ames Street
 north of Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

04047Cclass

Start Time	Bikes	Cats & Trailers	2 Axle Long	2 Axle Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	5 Axle Double	6 Axle Multi	6 Axle Multi	Total
10/27/10	1	12	6	0	0	0	0	0	0	0	0	19
01:00	0	10	6	0	0	0	0	0	0	0	0	16
02:00	0	0	4	0	0	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	11	9	3	0	1	0	0	0	0	0	24
06:00	0	32	26	12	12	0	0	1	0	0	0	83
07:00	0	47	38	18	19	0	0	3	0	0	0	125
08:00	1	125	35	14	25	5	0	0	0	0	0	205
09:00	3	86	39	11	25	1	0	1	1	0	0	167
10:00	1	57	29	7	19	1	0	0	0	0	0	114
11:00	2	76	37	12	11	1	0	0	0	0	0	138
12:PM	2	61	44	9	10	2	0	0	0	0	0	128
13:00	3	58	42	10	19	2	0	0	0	0	0	138
14:00	2	67	46	12	13	0	0	0	0	0	0	132
15:00	3	83	53	10	17	0	0	1	0	0	0	167
16:00	6	151	57	12	16	0	0	2	0	0	0	244
17:00	3	107	52	10	12	0	0	2	0	0	0	186
18:00	3	82	35	3	8	0	0	2	0	0	0	133
19:00	1	56	28	0	0	0	0	0	0	0	0	85
20:00	0	42	15	1	0	0	0	0	0	0	0	58
21:00	0	44	16	1	0	0	0	0	0	0	0	65
22:00	0	20	16	0	0	0	0	0	0	0	0	37
23:00	0	20	16	0	0	0	0	0	0	0	0	37
Total	34	1291	677	154	226	13	0	18	1	0	0	2414
Percent	1.4%	53.5%	28.0%	6.4%	9.4%	0.5%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
AM Peak	09:00	08:00	08:00	07:45	08:00	08:00	08:00	07:00	09:00	08:00	08:00	08:00
PM Peak	17:00	17:00	17:00	15:00	14:00	13:00	14:00	14:00	14:00	13:00	13:00	17:00
Vol.	6	451	57	12	19	2	2	3	1	0	0	244

Start Time	Bikes	Cats & Trailers	2 Axle Long	2 Axle Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	5 Axle Double	6 Axle Multi	6 Axle Multi	Total
10/27/10	1	12	6	0	0	0	0	0	0	0	0	19
01:00	0	10	6	0	0	0	0	0	0	0	0	16
02:00	0	0	4	0	0	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	11	9	3	0	1	0	0	0	0	0	24
06:00	0	32	26	12	12	0	0	1	0	0	0	83
07:00	0	47	38	18	19	0	0	3	0	0	0	125
08:00	1	125	35	14	25	5	0	0	0	0	0	205
09:00	3	86	39	11	25	1	0	1	1	0	0	167
10:00	1	57	29	7	19	1	0	0	0	0	0	114
11:00	2	76	37	12	11	1	0	0	0	0	0	138
12:PM	2	61	44	9	10	2	0	0	0	0	0	128
13:00	3	58	42	10	19	2	0	0	0	0	0	138
14:00	2	67	46	12	13	0	0	0	0	0	0	132

Ames Street
 north of Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

04047Cclass

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	6 Axle Double	6 Axle Multi	>6 Axle Multi	Total
10/26/10	0	15	0	0	0	0	0	0	0	0	0	21
01:00	0	6	2	0	0	0	0	0	0	0	0	8
02:00	0	3	1	0	0	0	0	0	0	0	0	6
03:00	0	3	3	0	2	0	0	0	0	0	0	8
04:00	0	5	7	1	2	0	0	0	0	0	0	16
05:00	0	15	16	0	1	0	0	0	0	0	0	41
06:00	4	72	30	4	7	0	0	0	0	0	0	117
07:00	1	125	33	8	15	1	0	1	185	0	0	185
08:00	2	163	50	6	24	1	0	4	0	0	0	250
09:00	4	132	48	2	26	1	0	1	0	0	0	214
10:00	2	90	34	2	19	1	0	1	0	0	0	150
11:00	1	100	44	4	15	3	0	2	0	0	0	169
12 PM	2	101	46	4	14	0	0	3	0	0	0	170
13:00	4	93	32	2	6	0	1	0	0	0	0	138
14:00	4	99	51	3	22	0	0	5	0	1	0	185
15:00	2	124	39	6	21	0	0	2	0	0	0	195
16:00	2	149	31	0	19	0	0	1	0	0	0	202
17:00	4	211	40	0	19	0	0	0	0	0	0	274
18:00	2	144	42	0	17	0	0	0	0	0	0	186
19:00	4	87	14	1	7	0	0	0	0	0	0	113
20:00	0	71	17	0	0	0	0	0	0	0	0	88
21:00	0	62	9	0	1	0	0	0	0	0	0	72
22:00	0	48	9	0	1	0	0	0	0	0	0	58
23:00	0	183	60	3	0	1	0	1	0	0	0	248
AM Peak	1.4%	183	60	3	248	7	0	20	0	2	0	230
Percent	0.7%	66.8%	21.3%	1.6%	8.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Vol.	10,000	17,000	11,000	700	11,000	4,000	1,000	10,000	10,000	10,000	10,000	100,000
PM Peak	13:00	17:00	14:00	15:00	14:00	13:00	14:00	14:00	15:00	14:00	14:00	17:00
Vol.	4	211	51	6	22	1	1	5	1	1	1	274

Ames Street
 north of Main Street
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 Client: McM/P. Viveiros

04047Cclass

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axle Double	6 Axle Double	6 Axle Multi	>6 Axle Multi	Total
10/27/10	0	12	4	0	0	0	0	0	0	0	0	17
01:00	0	6	2	0	0	0	0	0	0	0	0	10
02:00	0	4	2	0	0	0	0	0	0	0	0	7
03:00	0	2	3	0	0	0	0	0	0	0	0	5
04:00	0	10	6	0	0	1	0	0	0	0	0	18
05:00	0	16	4	0	2	1	0	0	0	0	0	23
06:00	0	61	29	5	15	0	0	1	0	0	0	111
07:00	1	118	46	9	15	0	0	3	0	0	0	182
08:00	2	147	41	5	17	0	0	1	0	0	0	213
09:00	0	140	47	5	20	1	0	5	0	0	0	218
10:00	3	97	41	3	18	1	0	2	0	0	0	165
11:00	3	81	49	5	14	0	0	3	0	0	0	165
12 PM	3	97	44	2	19	0	0	0	0	0	0	164
13:00	2	112	41	5	24	0	0	0	0	0	0	189
14:00	2	112	44	2	27	0	0	2	0	0	0	182
15:00	0	116	43	2	19	0	0	2	0	0	0	229
16:00	1	165	41	2	20	0	0	0	0	0	0	232
17:00	1	214	56	0	20	0	0	1	0	0	0	292
18:00	2	116	46	0	18	0	0	0	0	0	0	188
19:00	0	82	20	0	8	0	0	0	0	0	0	138
20:00	0	71	19	0	2	0	0	0	0	0	0	104
21:00	1	71	19	0	3	0	0	1	0	0	0	94
22:00	0	44	10	0	3	0	0	0	0	0	0	57
23:00	0	203	64	5	49	4	0	23	0	0	0	309
AM Peak	0.7%	66.8%	21.3%	1.6%	8.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Vol.	10,000	17,000	11,000	700	11,000	4,000	1,000	10,000	10,000	10,000	10,000	100,000
PM Peak	12:00	17:00	17:00	13:00	14:00	14:00	14:00	14:00	14:00	14:00	14:00	17:00
Vol.	3	214	56	3	27	1	1	5	1	1	1	282
Grand Total	63	3972	1251	92	514	11	1	43	1	2	0	5582
Percent	1.1%	66.7%	21.0%	1.5%	8.6%	0.2%	0.0%	0.7%	0.0%	0.0%	0.0%	100.0%

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Ames Street
 north of Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

04047Cvolume
 Site Code: Y-10492.41

Start Time	26-Oct-10 Tue		NB		Hour Totals		SB		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	11	31	6	45	3	48	3	45	9	93	9	93
12:15	3	30	3	48	3	48	3	48	6	96	6	96
12:30	2	33	6	45	6	45	6	45	12	90	12	90
12:45	3	34	6	32	3	32	3	32	9	64	9	64
01:00	8	38	3	30	3	30	3	30	11	68	11	68
01:15	4	33	4	32	4	32	4	32	8	64	8	64
01:30	2	23	1	38	1	38	1	38	3	41	3	41
01:45	2	36	0	38	0	38	0	38	2	36	2	36
02:00	0	38	3	51	3	51	3	51	6	89	6	89
02:15	1	34	1	42	1	42	1	42	2	26	2	26
02:30	1	35	0	40	0	40	0	40	1	42	1	42
02:45	2	32	2	53	2	53	2	53	4	139	4	139
03:00	0	42	1	47	1	47	1	47	2	44	2	44
03:15	1	27	2	43	2	43	2	43	3	31	3	31
03:30	0	34	2	58	2	58	2	58	4	47	4	47
03:45	0	30	3	47	3	47	3	47	6	84	6	84
04:00	0	40	1	50	1	50	1	50	2	16	2	16
04:15	1	32	5	49	5	49	5	49	6	55	6	55
04:30	2	50	4	69	4	69	4	69	8	118	8	118
04:45	1	46	4	168	4	168	4	168	8	118	8	118
05:00	5	74	6	89	6	89	6	89	12	244	12	244
05:15	5	54	6	77	6	77	6	77	12	244	12	244
05:30	6	68	13	77	13	77	13	77	19	151	19	151
05:45	10	49	16	59	16	59	16	59	26	246	26	246
06:00	14	50	16	60	16	60	16	60	30	270	30	270
06:15	15	49	27	49	27	49	27	49	42	378	42	378
06:30	23	43	33	44	33	44	33	44	56	488	56	488
06:45	31	45	42	44	42	44	42	44	83	187	83	187
07:00	32	40	45	40	45	40	45	40	118	197	118	197
07:15	33	42	48	28	48	28	48	28	203	114	203	114
07:30	27	28	51	24	51	24	51	24	203	114	203	114
07:45	35	23	59	22	59	22	59	22	133	133	133	133
08:00	54	25	52	24	52	24	52	24	127	127	127	127
08:15	41	27	52	24	52	24	52	24	127	127	127	127
08:30	56	18	78	19	78	19	78	19	205	86	205	86
08:45	54	16	69	24	69	24	69	24	205	86	205	86
09:00	48	19	53	21	53	21	53	21	168	65	168	65
09:15	40	19	48	17	48	17	48	17	168	65	168	65
09:30	41	15	57	22	57	22	57	22	214	72	214	72
09:45	39	12	56	12	56	12	56	12	214	72	214	72
10:00	30	23	31	11	31	11	31	11	171	64	171	64
10:15	29	14	51	17	51	17	51	17	171	64	171	64
10:30	36	15	31	16	31	16	31	16	150	58	150	58
10:45	30	13	37	14	37	14	37	14	150	58	150	58
11:00	32	9	47	8	47	8	47	8	115	65	115	65
11:15	37	11	43	12	43	12	43	12	115	65	115	65
11:30	38	12	39	4	39	4	39	4	139	38	139	38
11:45	38	16	1205	1725	1205	1725	1205	1725	169	30	169	30
Total	907	1517	1205	1725	1205	1725	1205	1725	169	30	169	30
Percent	37.4%	62.6%	41.1%	58.9%	41.1%	58.9%	41.1%	58.9%	39.4%	60.6%	39.4%	60.6%

ADT

ADT 5,526

ADT 5,526

Transportation Data Corporation
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Ames Street
 north of Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

04047Cvolume
 Site Code: Y-10492.41

Start Time	27-Oct-10 Wed		NB		Hour Totals		SB		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	7	41	12	47	0	39	1	39	12	47	12	47
12:15	0	36	1	34	0	34	1	34	1	39	1	39
12:30	6	34	2	35	6	34	2	35	8	69	8	69
12:45	3	37	3	148	3	148	3	148	17	165	17	165
01:00	4	33	5	40	4	40	5	40	9	73	9	73
01:15	1	42	2	44	1	44	2	44	3	44	3	44
01:30	3	41	1	49	3	49	1	49	4	44	4	44
01:45	3	49	2	51	3	49	2	51	5	100	5	100
02:00	3	30	2	42	3	42	2	42	5	72	5	72
02:15	0	26	3	45	0	45	3	45	3	45	3	45
02:30	1	42	2	48	1	48	2	48	3	45	3	45
02:45	0	29	0	55	0	55	0	55	7	190	7	190
03:00	1	42	1	48	1	48	1	48	2	48	2	48
03:15	0	47	0	44	0	44	0	44	5	183	5	183
03:30	3	31	2	48	3	48	2	48	5	183	5	183
03:45	0	37	4	157	4	157	4	157	8	229	8	229
04:00	1	37	2	56	1	56	2	56	3	52	3	52
04:15	0	46	0	40	0	40	0	40	8	58	8	58
04:30	0	46	4	3	4	3	4	3	18	229	18	229
04:45	2	44	4	80	4	80	4	80	8	71	8	71
05:00	4	80	2	68	4	80	2	68	10	81	10	81
05:15	7	78	7	78	7	78	7	78	12	70	12	70
05:30	7	49	20	275	7	49	20	275	20	80	20	80
05:45	14	65	27	57	14	65	27	57	28	64	28	64
06:00	14	65	27	57	14	65	27	57	30	50	30	50
06:15	33	48	33	48	33	48	33	48	33	38	33	38
06:30	21	50	21	50	21	50	21	50	51	50	51	50
06:45	34	41	27	32	34	41	27	32	54	33	54	33
07:00	26	43	22	22	26	43	22	22	129	138	129	138
07:15	26	43	22	22	26	43	22	22	129	138	129	138
07:30	34	32	34	32	34	32	34	32	192	139	192	139
07:45	34	32	34	32	34	32	34	32	214	104	214	104
08:00	51	27	56	31	51	27	56	31	53	25	53	25
08:15	51	27	56	31	51	27	56	31	62	26	62	26
08:30	61	31	61	31	61	31	61	31	62	26	62	26
08:45	55	16	45	19	55	16	45	19	91	94	91	94
09:00	36	21	45	12	36	21	45	12	192	219	192	219
09:15	42	14	45	12	42	14	45	12	192	219	192	219
09:30	30	23	40	13	30	23	40	13	166	57	166	57
09:45	40	10	38	10	40	10	38	10	150	60	150	60
10:00	42	16	44	6	42	16	44	6	117	117	117	117
10:15	24	6	32	7	24	6	32	7	7	7	7	7
10:30	40	8	40	8	40	8	40	8	39	4	39	4
10:45	35	9	1153	1899	35	9	1153	1899	156	29	156	29
11:00	951	1636	951	1636	951	1636	951	1636	2104	3695	2104	3695
Total	951	1636	951	1636	951	1636	951	1636	2104	3695	2104	3695
Percent	35.9%	64.1%	37.8%	62.2%	35.9%	64.1%	37.8%	62.2%	36.9%	63.1%	36.9%	63.1%
Grand Total	1853	3213	2358	3624	1853	3213	2358	3624	4216	6837	4216	6837
Percent	36.6%	63.4%	38.4%	60.6%	36.6%	63.4%	38.4%	60.6%	38.1%	61.9%	38.1%	61.9%

ADT

ADT 5,526

ADT 5,526

Ames Street Residences
Transportation Impact Study
Technical Appendix
12-Hour Pedestrian and Bicycle Counts

Kendall Square - Main Street Project - Cambridge, MA

Pedestrian / Bicycle Count Worksheet

Count Location: Ames Street between Broadway and Main Street
Street Direction: North - South
Count Date: 10/28/2011
Weather: Warm/Clear

Interval Start	Bicycle Volumes		Pedestrian Volumes		
	Northbound	Southbound	Northbound	Southbound	Crossing Street
7:30 AM	3	4	20	29	53
7:45 AM	1	7	32	30	72
8:00 AM	3	4	35	26	64
8:15 AM	2	4	30	47	90
8:30 AM	7	11	31	31	129
8:45 AM	5	22	38	50	80
9:00 AM	3	22	40	36	83
9:15 AM	1	15	35	66	61
9:30 AM	2	8	29	61	61
9:45 AM	2	12	40	42	73
10:00 AM	2	9	33	44	48
10:15 AM	0	12	27	41	32
10:30 AM	4	13	24	35	32
10:45 AM	2	14	30	42	27
11:00 AM	3	2	43	33	27
11:15 AM	1	13	38	43	21
11:30 AM	3	3	28	55	40
11:45 AM	3	10	60	65	38
12:00 PM	1	7	35	80	88
12:15 PM	4	11	67	85	76
12:30 PM	4	6	80	74	100
12:45 PM	2	3	84	72	98
1:00 PM	2	5	77	64	94
1:15 PM	4	2	68	42	70
1:30 PM	5	4	63	46	63
1:45 PM	2	5	71	61	53
2:00 PM	3	3	49	49	61
2:15 PM	1	4	52	43	61
2:30 PM	2	1	75	31	46
2:45 PM	2	3	54	59	50
3:00 PM	6	2	38	42	44
3:15 PM	2	3	47	50	42
3:30 PM	5	7	53	45	40
3:45 PM	2	1	48	43	49
4:00 PM	3	1	37	29	55
4:15 PM	2	4	59	37	79
4:30 PM	7	7	34	41	87
4:45 PM	10	4	38	33	80
5:00 PM	11	8	35	60	103
5:15 PM	10	7	59	61	82
5:30 PM	9	7	57	54	80
5:45 PM	8	11	61	49	78
6:00 PM	11	4	47	55	85
6:15 PM	13	5	45	52	71
6:30 PM	3	7	58	47	64
6:45 PM	9	7	35	41	42
7:00 PM	12	3	54	48	50
7:15 PM	9	5	34	28	34

Ames Street Residences
Transportation Impact Study
Technical Appendix
TMC Count Data

October 2010 TMC Counts

Transportation Data Corporation
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N/S: Third Street/U-Turn to Main WB
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047E
 Site Code : Y1049241
 Start Date : 10/28/2010
 Page No : 1

Start Time	Groups: Principal Cus. & Ped. - Tracks & Bikes												Intr. Total							
	Third Street From North				Broadway From East				Broadway From West											
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds								
07:30 AM	20	0	34	18	48	113	59	155	0	0	0	0	11	71	31	31	206	328	514	
07:45 AM	20	0	34	34	107	268	0	316	0	0	0	0	20	145	66	71	439	714	1153	
Total	40	0	68	52	155	268	0	316	0	0	0	0	20	145	66	71	439	714	1153	
08:00 AM	34	0	35	12	75	166	0	186	0	0	0	0	19	80	42	50	248	451	699	
08:15 AM	34	0	42	22	73	206	0	236	0	0	0	0	16	88	52	79	282	484	766	
08:30 AM	44	0	34	22	93	162	0	330	0	0	0	0	16	93	62	99	451	504	955	
08:45 AM	45	0	37	24	99	151	0	241	0	0	0	0	10	0	78	39	74	339	460	799
Total	161	0	148	80	360	652	0	1026	0	0	0	0	49	339	192	300	1406	1901	3307	
09:00 AM	32	0	34	13	81	156	0	248	0	0	0	0	14	77	40	45	296	434	710	
09:15 AM	37	0	25	17	70	144	0	185	0	0	0	0	8	76	52	54	266	412	678	
Grand Total	270	0	275	102	618	1220	0	1785	0	0	0	0	91	637	350	470	2417	3461	5878	
Approach %	49.5	0	50.5	0	33.6	66.4	0	1785	0	0	0	0	8.4	59.1	32.5	0	41.1	58.9	0	
Cars & Peds	264	0	288	0	615	1212	0	1984	0	0	0	0	86	627	339	466	0	0	5716	
% Cars & Peds	97.8	0	97.7	0	97.9	98.4	0	98.4	0	0	0	0	94.2	98.0	98.0	96.6	0	0	97.6	
Tracks & Bikes	6	0	7	80.2	99	3	8	0	0	0	0	0	5.5	1.0	1.1	3.4	0	0	162	
% Tracks & Bikes	2.2	0	2.5	19.8	0.5	0.7	0	3.6	0	0	0	0	5.5	1.6	3.1	3.4	0	0	2.8	

Start Time	Broadway From East												U-Turn to Main Street WB From South				Broadway From West				Intr. Total
	Third Street From North				Broadway From East				U-Turn to Main Street WB From South				Broadway From West								
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:30 AM	69	75	166	0	241	0	0	0	0	0	0	0	19	80	42	141	451				
08:00 AM	34	0	42	22	73	206	0	236	0	0	0	0	4	88	49	141	486				
08:15 AM	44	0	34	22	93	162	0	265	0	0	0	0	16	93	62	171	504				
08:30 AM	46	0	37	24	99	151	0	250	0	0	0	0	10	78	39	127	460				
Total	195	75	380	66	860	622	0	1012	0	0	0	0	49	339	192	580	1901				
% Cars & Peds	87.5	0.0	88.1	0.0	95.1	90.9	0.0	95.1	0.0	0.0	0.0	0.0	6.4	58.4	33.1	58.0	94.3				
% Cars & Peds	156	0	146	302	358	649	0	1007	0	0	0	0	46	337	186	569	1878				
% Cars & Peds	96.9	0	98.6	97.7	99.4	99.5	0	99.5	0	0	0	0	93.9	99.4	96.9	98.1	98.8				
Tracks & Bikes	5	0	2	7	2	3	0	5	0	0	0	0	3	2	6	11	23				
% Tracks & Bikes	3.1	0	1.4	2.3	0.6	0.5	0	0.5	0	0	0	0	6.1	0.6	3.1	1.9	1.2				

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S: Main Street (Right Turn Only)
 E/W: Main Street/Broadway EB
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047D
 Site Code : Y1049241
 Start Date : 10/28/2010
 Page No : 1

Start Time	Groups: Principal Cus. & Ped. - Tracks & Bikes												Intr. Total						
	Main Street (To Longfellow Bridge) From East				Main Street (RT Only) From South				Broadway (EB Only) From West										
	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right							
07:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	117	0	0	0	117	156	185
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	117	0	0	0	117	156	185
Total	1	0	0	0	0	0	0	0	0	0	0	0	234	0	0	0	234	312	372
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	123	0	0	0	123	170	206
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	120	0	0	0	120	155	188
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	117	0	0	0	117	157	185
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	117	0	0	0	117	157	185
Total	0	0	0	0	0	0	0	0	0	0	0	0	481	0	0	0	481	728	960
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	107	0	0	0	107	168	202
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	102	0	0	0	102	160	194
Grand Total	100	0	0	0	100	0	0	0	0	0	0	0	99.9	0	0	0	369	1368	1728
Approach %	0.1	0	0	0	32.6	0	0	0	0.1	67.3	0	0	0	0	0	0	20.8	79.2	0
Cars & Peds	100	0	0	0	428	0	0	0	30.8	0	0	0	98.2	0	0	0	0	0	1440
% Cars & Peds	100	0	0	0	95.3	0	0	0	98.2	0	0	0	98.2	0	0	0	0	0	83.3
Tracks & Bikes	0	0	0	0	4.7	0	0	0	69.2	0	0	0	1.8	0	0	0	0	0	16.7
% Tracks & Bikes	0	0	0	0	4.7	0	0	0	69.2	0	0	0	1.8	0	0	0	0	0	16.7

Start Time	Main Street (To Longfellow Bridge) From East												Main Street (RT Only) From South				Broadway (EB Only) From West				Intr. Total
	Third Street From North				Broadway From East				U-Turn to Main Street WB From South				Broadway From West								
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:30 AM	69	75	166	0	241	0	0	0	0	0	0	0	19	80	42	141	451				
08:00 AM	34	0	42	22	73	206	0	236	0	0	0	0	4	88	49	141	486				
08:15 AM	44	0	34	22	93	162	0	265	0	0	0	0	16	93	62	171	504				
08:30 AM	46	0	37	24	99	151	0	250	0	0	0	0	10	78	39	127	460				
Total	195	75	380	66	860	622	0	1012	0	0	0	0	49	339	192	580	1901				
% Cars & Peds	87.5	0.0	88.1	0.0	95.1	90.9	0.0	95.1	0.0	0.0	0.0	0.0	6.4	58.4	33.1	58.0	94.3				
% Cars & Peds	156	0	146	302	358	649	0	1007	0	0	0	0	46	337	186	569	1878				
% Cars & Peds	96.9	0	98.6	97.7	99.4	99.5	0	99.5	0	0	0	0	93.9	99.4	96.9	98.1	98.8				
Tracks & Bikes	5	0	2	7	2	3	0	5	0	0	0	0	3	2	6	11	23				
% Tracks & Bikes	3.1	0	1.4	2.3	0.6	0.5	0	0.5	0	0	0	0	6.1	0.6	3.1	1.9	1.2				

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N/S: Ames Street
 E/W: Main Street
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047C
 Site Code : Y1049241
 Start Date : 10/26/2010
 Page No : 1

Start Time	Ames Street												Main Street												
	From North						From East						From South						From West						
	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	
07:30 AM	24	6	18	111	5	4	2	1	26	3	19	14	57	8	45	13	17	213	159	372	213	159	372	176	404
07:45 AM	24	6	18	111	5	4	2	1	26	3	19	14	57	8	45	13	17	213	159	372	213	159	372	176	404
Total	48	12	36	222	10	8	4	52	6	38	28	36	114	13	32	26	36	426	318	744	426	318	744	352	808
08:00 AM	26	7	16	127	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448	
08:15 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448	
08:30 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448	
08:45 AM	35	6	14	124	8	8	7	62	7	33	24	87	4	40	22	25	298	208	506	208	158	366	208	506	
Total	112	36	62	575	25	26	23	205	26	144	78	320	41	192	97	108	1178	843	2021	843	644	1487	843	2021	
09:00 AM	26	6	14	151	6	14	0	29	7	34	19	95	13	49	10	41	329	197	526	197	147	344	197	526	
09:15 AM	24	6	14	130	10	8	0	48	2	31	13	105	4	66	13	34	315	191	506	191	141	292	191	506	
Grand Total	210	59	129	1097	53	66	31	242	140	641	77	402	146	219	2263	1566	3829	1566	1191	2757	1566	3829			
Approach %	52.8	14.8	32.4	40.8	50.8	8.5	7.5	58.6	33.9	12.3	64.3	23.4	9.3	3.3	1.7	1.7	9.3	11.7	11.7	11.7	11.7	11.7			
Total %	13.4	3.8	8.2	3.4	4.2	0.7	2	15.5	8.9	4.9	25.7	9.3	3.3	1.7	1.7	1.7	9.3	11.7	11.7	11.7	11.7	11.7			
Car & Ped	205	56	122	987	51	65	11	31	241	133	390	137	92	330	137	137	1077	677	1754	677	506	1183	677	1754	
% Car & Ped	97.15	94.4	94.4	90.7	95.5	100.0	85.3	100.0	99.9	95.9	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2			
Trucks & Bikes	5	3	7	38	2	3	0	14.7	0	0.4	5	19	6.5	3	6.2	7.8	0	0	6.6	0	0	0	0	6.6	
% Trucks & Bikes	2.4	5.1	5.4	1.3	3.8	4.5	0	14.7	0	0.4	5	19	6.5	3	6.2	7.8	0	0	6.6	0	0	0	0	6.6	

Start Time	Ames Street												Main Street													
	From North						From East						From South						From West							
	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right		
07:30 AM	49	3	5	1	9	4	37	17	58	8	53	21	82	198	198	148	346	198	148	346	198	148	346	198	148	346
08:00 AM	26	7	16	127	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:15 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:30 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:45 AM	35	6	14	124	8	8	7	62	7	33	24	87	4	40	22	25	298	208	506	208	158	366	208	506		
Total	112	36	62	575	25	26	23	205	26	144	78	320	41	192	97	108	1178	843	2021	843	644	1487	843	2021		
09:00 AM	26	6	14	151	6	14	0	29	7	34	19	95	13	49	10	41	329	197	526	197	147	344	197	526		
09:15 AM	24	6	14	130	10	8	0	48	2	31	13	105	4	66	13	34	315	191	506	191	141	292	191	506		
Grand Total	210	59	129	1097	53	66	31	242	140	641	77	402	146	219	2263	1566	3829	1566	1191	2757	1566	3829				
Approach %	52.8	14.8	32.4	40.8	50.8	8.5	7.5	58.6	33.9	12.3	64.3	23.4	9.3	3.3	1.7	1.7	9.3	11.7	11.7	11.7	11.7	11.7				
Total %	13.4	3.8	8.2	3.4	4.2	0.7	2	15.5	8.9	4.9	25.7	9.3	3.3	1.7	1.7	1.7	9.3	11.7	11.7	11.7	11.7	11.7				
Car & Ped	205	56	122	987	51	65	11	31	241	133	390	137	92	330	137	137	1077	677	1754	677	506	1183	677	1754		
% Car & Ped	97.15	94.4	94.4	90.7	95.5	100.0	85.3	100.0	99.9	95.9	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2				
Trucks & Bikes	5	3	7	38	2	3	0	14.7	0	0.4	5	19	6.5	3	6.2	7.8	0	0	6.6	0	0	0	0	6.6		
% Trucks & Bikes	2.4	5.1	5.4	1.3	3.8	4.5	0	14.7	0	0.4	5	19	6.5	3	6.2	7.8	0	0	6.6	0	0	0	0	6.6		

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N/S: Galilei Way/Vassar Street
 E/W: Main Street
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047B
 Site Code : Y1049241
 Start Date : 10/26/2010
 Page No : 1

Start Time	Ames Street												Main Street											
	From North						From East						From South						From West					
	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right
07:30 AM	51	62	4	84	7	34	6	24	14	22	32	49	19	30	13	34	18	11	152	353	505	353	505	
07:45 AM	67	70	9	121	11	123	13	44	29	30	57	102	34	52	19	74	41	18	223	674	897	674	897	
Total	118	132	13	205	21	267	26	68	53	62	109	204	53	104	32	118	59	36	375	1227	1402	1227	1402	
08:00 AM	63	66	8	67	8	22	12	21	23	40	17	41	10	48	17	10	139	355	474	355	474			
08:15 AM	56	66	8	67	8	22	12	21	23	40	17	41	10	48	17	10	139	355	474	355	474			
08:30 AM	73	76	5	116	10	37	19	25	26	47	17	52	18	45	26	15	208	399	607	399	607			
08:45 AM	67	70	9	121	11	123	13	44	29	30	57	102	34	52	19	74	41	18	223	674	897	674	897	
Total	259	279	31	391	43	117	67	85	106	192	67	194	54	186	98	55	723	1499	2224	1499	2224			
09:00 AM	73	83	7	115	8	29	19	17	29	62	10	40	10	40	14	40	14	157	414	601	414	601		
09:15 AM	65	85	9	69	10	19	15	22	24	63	11	54	8	38	28	17	162	375	537	375	537			
Grand Total	515	579	58	699	74	209	130	154	216	419	122	340	91	342	207	104	1297	2962	4259	2962	4259			
Approach %	47.4	50.3	5	5	17.9	50.6	31.5	28.5	55.4	16.1	14.2	53.4	32.3	3.1	11.5	7	30.5	30.5	30.5	30.5	30.5	30.5		
Total %	17.4	19.5	2	2	5.5	7.1	4.4	4.4	7.3	14.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1		
Car & Ped	496	532	52	52	69	205	124	211	211	406	119	329	186	0	0	0	0	0	0	0	0	0		
% Car & Ped	96.3	94.4	89.6	96.3	92.2	95.9	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2	92.2		
Trucks & Bikes	19	47	6	5	4	6	6	6	5	13	3	3	3	4	13	21	0	0	358	0	0	0	0	358
% Trucks & Bikes	3.7	8.1	10.3	3.7	6.8	1.9	4.6	20.8	2.3	3.1	2.5	26.2	4.4	3.8	10.1	62.5	0	0	8.4	0	0	0	0	8.4

Start Time	Ames Street												Main Street													
	From North						From East						From South						From West							
	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right	Right	Thru	Left	Peaks	Left	Right		
07:30 AM	49	3	5	1	9	4	37	17	58	8	53	21	82	198	198	148	346	198	148	346	198	148	346	198	148	346
08:00 AM	26	7	16	127	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:15 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:30 AM	23	9	16	117	3	5	1	33	4	37	17	69	8	53	21	21	250	198	448	198	148	346	198	448		
08:45 AM	35	6	14	124	8	8	7	62	7	33	24	87	4	40	22	25	298	208	506	208	158	366	208	506		
Total	112	36	62	575	25	26	23	205	26	144	78	320														

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N/S: Galileo Galilei Way
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047A
 Site Code : Y1049241
 Start Date : 10/26/2010
 Page No : 1

S: Ames Street
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047G
 Site Code : Y1049241
 Start Date : 10/26/2010
 Page No : 1

Start Time	Galileo Galilei Way												Galileo Galilei Way												Galileo Galilei Way											
	From North				From South				From West				From East				From South				From West				From East											
	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total												
07:30 AM	57	109	214	38	68	13	170	20	39	8	83	25	13	12	39	10	91	12	87	23	17	150	469	619												
07:45 AM	57	111	214	38	68	13	170	20	39	8	83	25	13	12	39	10	91	12	87	23	17	150	469	619												
Total	109	214	38	68	13	170	20	39	8	83	25	13	12	39	10	91	12	87	23	17	150	469	619	689												
08:00 AM	48	103	22	76	4	96	23	37	14	61	14	88	14	104	35	23	221	14	104	35	23	330	978	1308												
08:15 AM	48	103	22	76	4	96	23	37	14	61	14	88	14	104	35	23	221	14	104	35	23	330	978	1308												
08:30 AM	36	100	33	64	3	104	36	56	28	48	15	98	15	105	29	28	246	15	105	29	28	246	550	796												
08:45 AM	31	96	28	54	5	91	31	43	21	52	14	132	26	105	35	42	271	26	105	35	42	271	535	806												
Total	168	403	124	264	15	386	106	170	78	205	53	461	77	409	140	120	1015	2164	409	140	120	1015	2164	3179												
09:00 AM	46	107	24	80	8	92	29	47	13	55	23	126	19	88	34	19	272	19	88	34	19	272	538	810												
09:15 AM	46	107	24	80	8	92	29	47	13	55	23	126	19	88	34	19	272	19	88	34	19	272	538	810												
09:30 AM	37	102	26	44	5	75	21	31	17	42	13	117	22	101	33	43	235	22	101	33	43	235	503	718												
09:45 AM	37	102	26	44	5	75	21	31	17	42	13	117	22	101	33	43	235	22	101	33	43	235	503	718												
Grand Total	360	826	212	456	41	723	206	285	143	384	108	894	145	776	259	217	1852	4183	6035	217	1852	4183	6035	6035												
Approach %	25.8	59.1	15.2	45.6	4.2	74.5	21.2	45.6	17	12.3	65.8	21.9	21.7	18.5	6.2	30.7	69.3	30.7	69.3	30.7	69.3	30.7	69.3	69.3												
Cars & Pecks	336	789	209	436	39	688	199	266	136	350	104	856	145	776	248	217	1852	4183	6035	217	1852	4183	6035	6035												
% Cars & Pecks	8.6	19.7	5.1	17.3	1	17.3	4.9	13.4	9.2	2.6	3.5	18.6	6.2	8	1.1	34.1	65.9	0	0	0	0	0	0	0												
% Trucks & Bikes	2.4	5.7	3	9.4	2	15	7	8	7	34	4	9	8	11	4.2	34.1	0	0	0	0	0	0	0	0												

Start Time	Ames Street												Broadway												Broadway											
	From South				From East				From West				From South				From East				From West				From South				From East				From West			
	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total								
07:30 AM	81	182	76	345	13	38	48	112	32	36	160	182	19	89	42	160	182	19	89	42	160	182	19	89	42	160	182									
07:45 AM	81	182	76	345	13	38	48	112	32	36	160	182	19	89	42	160	182	19	89	42	160	182	19	89	42	160	182									
Total	162	364	152	690	26	76	96	224	64	72	320	364	38	178	84	320	364	38	178	84	320	364	38	178	84	320	364									
08:00 AM	103	403	40	74	33	58	84	117	33	35	84	117	26	106	34	192	403	26	106	34	192	403	26	106	34	192	403									
08:15 AM	103	403	40	74	33	58	84	117	33	35	84	117	26	106	34	192	403	26	106	34	192	403	26	106	34	192	403									
08:30 AM	97	366	51	94	21	33	119	108	26	26	132	132	26	132	24	237	366	26	132	24	237	366	26	132	24	237	366									
08:45 AM	96	365	58	85	26	36	108	108	22	22	119	119	22	119	22	215	365	22	119	22	215	365	22	119	22	215	365									
Total	407	1507	201	345	117	126	420	420	106	106	479	479	105	870	1436	1507	1507	105	870	1436	1507	1507	105	870	1436	1507										
09:00 AM	107	48	70	28	31	89	111	25	25	111	111	35	194	350	544	48	70	28	31	89	111	25	25	111	111	35	194									
09:15 AM	107	48	70	28	31	89	111	25	25	111	111	35	194	350	544	48	70	28	31	89	111	25	25	111	111	35	194									
09:30 AM	90	36	43	15	15	52	75	34	34	114	114	30	148	221	409	36	43	15	15	52	75	34	34	114	114	30	148									
09:45 AM	90	36	43	15	15	52	75	34	34	114	114	30	148	221	409	36	43	15	15	52	75	34	34	114	114	30	148									
Grand Total	685	315	570	232	232	744	811	19	19	811	811	238	1522	2688	4210	315	570	232	232	744	811	19	19	811	811	238	1522									
Approach %	29.6	7.2	8.5	29.6	7.2	8.5	33.3	7.8	7.8	33.3	33.3	36.9	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1									
Cars & Pecks	770	351	351	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3									
% Cars & Pecks	98	97.2	96.3	96.4	97.3	65.3	97.1	98.8	89.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
% Trucks & Bikes	2	2.8	3.7	3.6	2.7	34.7	1.2	10.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										

Start Time	Galileo Galilei Way												Broadway												Broadway											
	From North				From South				From West				From East				From South				From West				From East											
	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total	Thru	Left	Peaks	Int. Total								
07:30 AM	53	104	41	198	3	95	16	114	15	44	12	71	22	95	41	158	541	15	44	12	71	22	95	41	158	541										
07:45 AM	53	104	41	198	3	95	16	114	15	44	12	71	22	95	41	158	541	15	44	12	71	22	95	41	158	541										
Total	106	208	82	396	6	190	32	228	30	88	24	142	44	190	82	316	1082	30	88	24	142	44	190	82	316	1082										
08:00 AM	53	104	41	198	3	95	16	114	15	44	12	71	22	95	41	158	541	15	44	12	71	22	95	41	158	541										
08:15 AM	53	104	41	198	3	95	16	114	15	44	12	71	22	95	41	158	541	15	44	12	71	22	95	41	158	541										
08:30 AM	36	100	33	169	3	104	36	143	28	48	13	89	15	105	29	149	550	15	105	29	149	550	15	105	29	149	550									
08:45 AM	31	96	28	155	5	91	31	127	21	52	14	87	26	105	35	166	535	26	105	35	166	535	26	105	35	166	535									
Total	173	404	133	695	14	386	126	507	76	158	38	358	123	403	144	636	2164	76	158	38	358	123	403	144	636	2164										
09:00 AM	792	969	756	878	750	928	736	866	696	840	944	740	974	854	943	984	878	750	928	736	866	696	840	944	740	974	854									
09:15 AM	792	969	756	878	750	928	736	866	696	840	944	740	974	854	984	878	750	928	736	866	696	840	944	740	974	854										
09:30 AM	135	370	123	648	15	377	102	484	75	186	51	312	73	406	135	614	2068	15	377	102	484	75	186	51	312	73	406									
09:45 AM	135</																																			

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N/S: Galileo Galilei Way
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047AA
 Site Code : Y1049241
 Start Date : 10/26/2010
 Page No : 1

S: Ames Street
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047GG
 Site Code : Y1049241
 Start Date : 10/28/2010
 Page No : 1

Start Time	Galileo Galilei Way From North				Broadway From East				Broadway From West				Galileo Galilei Way From South				Inch. Total	Int. Total	
	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks			
04:30 PM	34	62	12	53	6	129	35	16	72	84	33	94	13	83	40	13	176	533	709
04:45 PM	35	57	14	64	16	242	38	9	17	97	34	77	11	83	39	34	184	558	742
Total	69	119	26	117	22	571	73	25	89	181	57	171	24	166	79	47	360	1091	1451
05:00 PM	35	56	17	91	4	131	40	42	15	107	24	138	12	115	43	47	318	604	822
05:15 PM	35	56	17	91	4	131	40	42	15	107	24	138	12	115	43	47	318	604	822
05:30 PM	30	53	21	122	7	111	42	28	24	105	38	157	17	74	22	53	260	544	904
05:45 PM	36	78	13	112	6	97	32	29	20	98	31	118	18	79	43	44	303	551	854
Total	129	256	67	416	26	442	145	129	78	435	126	548	59	363	159	182	1275	2285	3560
06:00 PM	22	60	13	111	12	113	31	41	19	96	36	126	11	79	32	39	317	524	841
06:15 PM	22	60	13	111	12	113	31	41	19	96	36	126	11	79	32	39	317	524	841
06:30 PM	31	40	7	83	3	97	23	23	15	69	26	142	12	67	27	33	281	417	698
06:45 PM	27	48	22	62	8	98	22	24	16	70	24	157	13	67	17	30	273	432	705
Total	106	203	62	345	30	432	109	119	71	319	106	536	52	310	120	141	1141	1920	3061
Grand Total	304	578	155	878	72	1116	327	273	188	935	289	1255	135	839	358	370	2776	5296	8072
Approach %	29.3	55.7	14.9	4.8	73.7	21.6	6.2	1.8	13.3	66.2	20.5	10.1	6.3	26.9	8.8	3.4	27.0	54.7	81.7
Total %	5.7	10.9	2.9	1.4	21.1	6.2	3.5	1.7	5.5	2.5	15.8	6.8	34.4	65.6	0	0	74.6	0	0
Cars & Pecks	301	571	155	871	71	1108	325	273	187	916	288	1251	135	838	357	370	2776	5296	8072
% Cars & Pecks	99	98.8	100	99.5	98.6	99.3	99.4	99.2	99.5	98	99.7	99.2	100	99.9	99.7	64.1	0	0	99.2
Trucks & Bikes	3	7	0	7	1	8	2	1	1	19	1	4	0	1	1	1	0	0	0
% Trucks & Bikes	1	1.2	0	34.1	1.4	0.7	0.6	19.8	0.5	2	0.3	7.6	0	0	0.3	35.9	0	0	7.8

Start Time	Broadway From East				Ames Street From South				Broadway From West				Inch. Total	Int. Total	
	Thru	Left	Peaks	Right	Right	Left	Peaks	Thru	Left	Peaks	Right	Thru			Left
04:30 PM	129	42	71	38	27	100	25	123	25	102	33	94	30	384	578
04:45 PM	133	36	71	38	27	100	25	123	25	102	33	94	30	384	578
Total	262	78	142	76	54	200	50	246	50	204	66	188	60	768	1156
05:00 PM	112	28	123	56	43	158	20	125	37	318	384	384	384	702	702
05:15 PM	138	40	107	45	35	203	25	133	46	356	416	416	416	772	772
05:30 PM	107	41	103	39	30	139	21	127	53	295	345	345	345	660	660
05:45 PM	107	41	103	39	30	139	21	127	53	295	345	345	345	660	660
Total	484	144	448	196	147	658	82	529	186	1292	1582	1582	1582	2874	2874
06:00 PM	134	39	68	36	41	129	20	120	26	223	390	390	390	613	613
06:15 PM	141	40	75	31	29	150	21	130	31	256	392	392	392	638	638
06:30 PM	124	38	60	24	31	126	16	122	30	166	355	355	355	521	521
06:45 PM	124	38	60	24	31	126	16	122	30	166	355	355	355	521	521
Total	524	146	248	118	133	464	77	497	114	826	1495	1495	1495	2321	2321
Grand Total	1270	368	850	393	339	1320	200	1291	343	2513	3861	3861	3861	6574	6574
Approach %	75	21.5	48.8	17.4	15.4	46.6	15.4	46.6	15.4	46.6	15.4	46.6	15.4	46.6	15.4
Total %	32.9	8.8	10.2	3.8	3.4	12.8	0.5	3.4	0.9	39.4	60.6	60.6	60.6	118.3	118.3
Cars & Pecks	1267	367	848	391	336	1285	200	1285	343	2513	3861	3861	3861	6574	6574
% Cars & Pecks	99.8	99.7	94.8	99.1	96.1	96.1	100	99.5	76.4	0	0	0	0	191	191
Trucks & Bikes	3	1	2	3	3	0	6	6	0	0	0	0	0	0	0
% Trucks & Bikes	0.2	0.3	5.2	0.5	0.9	3.9	0	0.5	23.6	0	0	0	0	3	3

Start Time	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				Inch. Total	Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
04:30 PM	106	123	38	171	17	97	34	148	11	83	39	133	16	142	58	400		
04:45 PM	106	123	38	171	17	97	34	148	11	83	39	133	16	142	58	400		
05:00 PM	35	56	17	108	4	131	40	180	15	107	24	146	12	115	43	170		
05:15 PM	28	69	16	113	4	103	31	138	19	125	33	177	12	95	51	158		
05:30 PM	30	53	21	104	7	111	42	160	24	105	38	167	17	74	22	113		
Total Volume	128	235	68	431	30	468	151	649	75	434	129	638	52	367	155	574		
% App. Total	29.7	54.5	15.8	16.8	20.2	21.3	23.3	26.1	11.8	68	29.2	30.1	31.1	63.9	27	84.4		
Cars & Pecks	127	234	68	429	29	467	150	646	75	422	129	626	52	367	154	573		
% Cars & Pecks	99.2	99.6	100	99.5	96.7	99.8	99.3	99.5	100	97.2	100	98.1	100	100	99.4	99.8		
Trucks & Bikes	1	0	0	1	1	1	3	3	0	12	0	12	0	0	1	18		
% Trucks & Bikes	0.8	0.4	0	0.5	3.3	0.2	0.7	0.5	0	2.8	0	1.9	0	0	0.6	0.2		

Start Time	Broadway From East				Ames Street From South				Broadway From West				Inch. Total	Int. Total
	Thru	Left	Peaks	Right	Right	Left	Peaks	Thru	Left	Peaks	Right	Thru		
04:30 PM	169	41	32	169	38	133	36	169	16	142	58	400	384	578
04:45 PM	170	46	45	170	38	133	36	170	16	142	58	400	384	578
05:00 PM	102	56	39	102	35	127	35	102	25	144	160	417	384	578
05:15 PM	649	198	149	649	198	149	198	649	77	544	621	1617	1416	1719
05:30 PM	649	198	149	649	198	149	198	649	77	544	621	1617	1416	1719
Total Volume	2647	578	415	2647	578	415	578	2647	266	1964	2262	5969	5004	6662
% App. Total	92.1	88.4	86.6	91.2	87.1	86.6	87.6	92.1	87.6	94.4	97.0	96.9	99.6	99.6
Cars & Pecks	2646	577	414	2646	577	414	577	2646	265	1963	2261	5968	5003	6661
% Cars & Pecks	99.9	99.8	99.9	99.9	99.8	99.9	99.9	99.9	99.8	99.4	99.5	99.6	99.6	99.6
Trucks & Bikes	1	1	1	1	2	1	1	1	1	3	3	7	7	7
% Trucks & Bikes	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.6	0.5	0.4	0.4	0.4

Start Time	Broadway From East				Ames Street From South				Broadway From West				Inch. Total	Int. Total	
	Thru	Left	Peaks	Right	Right	Left	Peaks	Thru	Left	Peaks	Right	Thru			Left
04:30 PM	129	42	71	38	27	100	25	123	25	102	33	94	30	384	578
04:45 PM	133	36	71	38	27	100	25	123	25	102	33	94	30	384	578
Total	262	78	142	76	54	200	50	246	50	204	66	188	60	768	1156
05:00 PM	112	28	123	56	43	158	20	125	37	318	384	384	384	702	702
05:15 PM	138	40	107	45	35	203	25	133	46	356	416	416	416	772	772
05:30 PM	107	41													

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N/S: Ames Street
 E/W: Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

N/S: Galilee Way/Vassar Street
 E/W: Main Street
 City, State: Cambridge, MA
 Client: McM/P. Viveiros

File Name : 04047CC
 Site Code : Y1049241
 Start Date : 10/30/2010
 Page No : 1

Start Time	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				Inch. Total	Inch. Total		
	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.				
11:00 AM	5	6	4	32	7	9	1	19	0	9	3	56	2	47	4	17	4	124	97	231
11:15 AM	4	9	10	41	2	4	0	11	1	11	4	38	8	40	2	11	101	101	95	196
11:30 AM	13	8	5	27	7	6	0	18	2	16	8	52	14	39	4	8	105	120	225	249
11:45 AM	9	5	8	42	4	5	3	26	2	18	10	56	7	46	2	6	130	119	249	249
Total	31	28	27	142	20	24	4	74	3	54	25	202	31	172	12	42	460	431	891	891
12:00 PM	12	5	8	54	2	7	1	20	3	11	5	56	10	45	10	11	141	119	260	260
12:15 PM	6	7	11	57	3	5	1	30	1	10	4	64	8	41	2	14	165	99	264	264
12:30 PM	7	8	7	61	1	4	1	24	1	14	7	36	8	37	8	26	147	103	250	250
12:45 PM	10	5	9	53	1	4	1	32	0	14	6	64	9	30	5	11	160	94	254	254
Total	35	25	35	225	7	20	4	106	5	49	22	220	35	153	25	62	613	415	1028	1028
01:00 PM	7	9	8	58	4	11	1	23	3	5	4	66	10	52	7	19	166	121	287	287
01:15 PM	8	7	8	77	5	9	0	12	1	8	4	74	9	42	4	20	183	105	288	288
01:30 PM	10	16	9	79	1	7	0	29	0	6	10	64	4	47	3	35	207	113	320	320
01:45 PM	10	10	7	52	1	7	1	13	2	11	6	42	10	62	7	26	133	134	297	297
Total	35	42	32	206	11	34	2	77	6	30	24	246	35	200	21	100	689	473	1162	1162
Grand Total	101	95	94	633	38	78	10	287	14	133	71	668	99	528	58	204	1762	1319	3081	3081
Approach %	34.8	32.8	32.4	30.2	61.9	7.9	0.8	14.5	77.1	8.5	7.5	40	4.4	7.5	40	4.4	57.2	42.8	42.8	42.8
Cars & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cars & Bikes	100	100	100	94.8	100	100	100	94.6	100	99.2	94.4	91.9	99	98.2	100	85.8	0	0	95.4	95.4
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks & Bikes	0	0	0	5.2	0	0	0	5.4	0	0	0.8	8.1	1	1.1	0	14.2	0	0	0	0

Start Time	Ames Street From North				Main Street From East				Ames Street From South				Main Street From West				Inch. Total	Inch. Total	
	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.			
01:00 PM	8	7	8	24	4	11	1	16	3	5	4	12	10	52	7	69	121	69	121
01:15 PM	7	8	8	23	5	9	0	14	1	8	4	13	9	42	4	55	105	55	105
01:30 PM	10	16	9	38	1	7	0	8	0	6	10	16	4	47	3	54	113	54	113
01:45 PM	10	10	7	52	1	7	1	13	2	11	6	42	10	62	7	26	133	134	297
Total	35	42	32	206	11	34	2	77	6	30	24	246	35	200	21	100	689	473	1162
PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Cars & Bikes	35	42	32	206	11	34	2	77	6	30	23	259	33	200	21	254	469	254	469
% Cars & Bikes	100	100	100	100	100	100	100	100	100	100	95.8	98.3	100	98.5	100	98.8	99.2	98.8	99.2
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : 04047BBB
 Site Code : Y1049241
 Start Date : 10/30/2010
 Page No : 1

Start Time	Galilee Way From North				Main Street From East				Vassar Street From South				Main Street From West				Inch. Total	Inch. Total	
	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.			
11:00 AM	17	36	6	24	6	8	1	4	22	18	2	11	5	33	13	15	54	167	231
11:15 AM	22	33	7	23	4	3	9	21	24	4	18	0	24	15	18	68	161	229	229
11:30 AM	15	36	9	15	5	11	10	12	11	24	3	19	1	28	22	15	61	175	236
11:45 AM	16	54	8	21	6	12	17	29	13	18	2	16	2	31	27	11	77	206	283
Total	70	159	30	83	21	35	31	54	67	84	11	64	8	116	77	59	260	709	969
12:00 PM	19	38	6	24	12	18	9	17	16	25	4	15	7	33	16	14	70	203	273
12:15 PM	14	34	6	36	3	12	6	12	16	25	3	8	6	21	14	14	69	160	225
12:30 PM	19	37	9	43	7	7	6	14	17	25	0	27	5	30	21	10	94	183	277
12:45 PM	16	40	4	33	4	11	7	15	17	24	1	36	3	24	25	12	96	176	272
Total	68	149	25	136	26	48	28	58	66	99	8	86	21	108	76	45	325	722	1047
01:00 PM	16	47	7	27	5	7	3	17	25	37	3	48	2	34	20	9	101	206	307
01:15 PM	21	45	5	34	6	10	3	17	26	26	3	33	6	24	18	12	96	193	289
01:30 PM	20	36	7	39	4	12	15	24	13	28	3	36	5	33	27	13	112	203	315
01:45 PM	19	33	11	17	5	14	6	9	24	32	3	28	6	42	21	15	69	219	288
Total	76	161	30	117	20	45	27	67	88	123	12	145	19	133	89	49	378	821	1199
Grand Total	214	469	85	336	67	126	86	179	221	306	31	295	48	357	342	153	963	2252	3215
Approach %	27.9	61.1	11.1	24	45.2	30.8	39.6	54.8	5.6	7.4	85.2	5.6	7.4	85.2	5.6	7.4	85.2	5.6	7.4
Cars & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cars & Bikes	100	100	100	98.6	100	98.2	97.4	93.3	94.8	97.7	96.3	97.7	100	99.2	99.2	71.2	0	0	94.9
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks & Bikes	0	0	0	1.4	0	1.8	0.6	2.3	6.7	1.4	2.3	3.2	13.9	0	0.8	28.8	0	0	5.1

Start Time	Galilee Way From North				Main Street From East				Vassar Street From South				Main Street From West				Inch. Total	Inch. Total	
	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.	Right	Thru	Left	Peds.			
01:00 PM	16	47	7	27	5	7	3	17	25	37	3	48	2	34	20	9	101	206	307
01:15 PM	21	45	5	34	6	10	3	17	26	26	3	33	6	24	18	12	96	193	289
01:30 PM	20	36	7	39	4	12	15	24	13	28	3	36	5	33	27	13	112	203	315
01:45 PM	19	33	11	17	5	14	6	9	24	32	3	28	6	42	21	15	69	219	288
Total	76	161	30	117	20	45	27	67	88	123	12	145	19	133	89	49	378	821	1199
PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Cars & Bikes	75	160	30	265	20	42	27	89	86	121	12	219	19	132	89	240	813	240	813
% Cars & Bikes	98.7	99.4	100	99.3	100	97.7	100	98.9	97.7	98.4	100	98.2	100	99.2	100	99.6	99.6	99.6	99.6
Trucks & Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks & Bikes	1.3	0.6	0	0.7	0	2.3	0	1.8	2.3	1.6	0	1.8	0	0.8	0	0	0	0	0.4

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N/S: Galileo Galilei Way
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047AAA
 Site Code : Y1049241
 Start Date : 10/30/2010
 Page No : 1

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S: Ames Street
 E/W: Broadway
 City, State: Cambridge, MA
 Client: McM/P: Viveiros

File Name : 04047GGG
 Site Code : Y1049241
 Start Date : 10/30/2010
 Page No : 1

Start Time	Galileo Galilei Way From North						Broadway From East						Broadway From West						Inch. Total	Intr. Total
	Thru		Left		Peds.		Thru		Left		Peds.		Thru		Left		Peds.			
	Right	Left	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right		
11:00 AM	24	33	8	24	2	49	5	8	15	7	29	10	31	12	58	18	26	89	278	307
11:15 AM	35	46	5	23	2	65	4	5	6	36	10	41	14	55	16	20	99	278	377	406
11:30 AM	28	33	6	47	1	73	8	12	11	43	13	31	13	61	13	13	103	303	406	487
11:45 AM	34	46	8	25	5	86	9	11	14	34	9	71	25	65	18	27	134	353	487	568
Total	121	158	27	119	13	275	30	46	38	142	42	174	64	239	65	86	425	1212	1637	1899
12:00 PM	25	34	5	28	2	62	10	19	10	33	16	56	15	66	22	20	123	300	423	456
12:15 PM	30	33	7	46	1	85	9	16	10	23	16	44	10	62	25	19	125	311	436	481
12:30 PM	35	35	4	31	2	80	14	12	11	25	17	69	17	67	27	39	151	334	485	500
12:45 PM	33	42	6	23	7	95	8	11	9	29	14	76	11	60	22	19	129	336	465	500
Total	123	144	22	128	12	322	41	58	40	110	63	245	53	255	96	97	528	1281	1809	2000
01:00 PM	16	59	3	38	2	90	6	7	13	33	13	71	18	73	24	15	131	350	481	515
01:15 PM	29	39	5	24	1	101	12	15	10	24	9	74	12	62	21	12	125	325	450	485
01:30 PM	34	42	6	44	3	80	10	16	8	35	12	71	13	71	35	14	145	349	494	500
01:45 PM	36	41	4	29	2	71	6	28	10	40	11	77	14	74	29	12	146	358	484	500
Total	115	181	18	135	8	342	34	66	41	132	45	295	57	280	109	53	547	1582	1909	2000
Grand Total	359	483	67	382	33	937	105	170	119	384	150	712	174	774	270	236	1500	3855	5355	5855
Approach %	39.5	53.1	7.4	38.2	3.1	87.2	9.8	18.2	58.8	23	14.3	63.5	22.2	63.5	22.2	28	72	28	72	72
Cars & Peds	9.3	12.5	1.7	10.5	0.9	24.3	2.7	3.1	10	3.9	2.0	10.9	1.7	10.9	3.7	0	0	0	0	0
% Cars & Peds	2.6	2.6	0.2	2.8	0.2	6.8	0.8	0.8	2.3	1.0	0.6	3.0	0.4	3.0	1.3	0	0	0	0	0
% Trucks & Bikes	99.7	99.9	100	96.9	99.7	99.9	100	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
% Trucks & Bikes	0.3	1	0	13.1	3	0.6	0	12.4	0.8	2.1	0	12.2	2.3	0.6	0.4	19.1	0	0	0	0

Start Time	Galileo Galilei Way From North						Broadway From East						Broadway From West						Inch. Total	Intr. Total
	Thru		Left		Peds.		Thru		Left		Peds.		Thru		Left		Peds.			
	Right	Left	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right		
11:00 AM	16	59	3	38	2	90	6	7	13	33	13	71	18	73	24	15	131	350	481	515
11:15 AM	29	39	5	24	1	101	12	15	10	24	9	74	12	62	21	12	125	325	450	485
11:30 AM	34	42	6	44	3	80	10	16	8	35	12	71	13	71	35	14	145	349	494	500
11:45 AM	36	41	4	29	2	71	6	28	10	40	11	77	14	74	29	12	146	358	484	500
Total	115	181	18	135	8	342	34	66	41	132	45	295	57	280	109	53	547	1582	1909	2000
Grand Total	359	483	67	382	33	937	105	170	119	384	150	712	174	774	270	236	1500	3855	5355	5855
Approach %	39.5	53.1	7.4	38.2	3.1	87.2	9.8	18.2	58.8	23	14.3	63.5	22.2	63.5	22.2	28	72	28	72	72
Cars & Peds	9.3	12.5	1.7	10.5	0.9	24.3	2.7	3.1	10	3.9	2.0	10.9	1.7	10.9	3.7	0	0	0	0	0
% Cars & Peds	2.6	2.6	0.2	2.8	0.2	6.8	0.8	0.8	2.3	1.0	0.6	3.0	0.4	3.0	1.3	0	0	0	0	0
% Trucks & Bikes	99.7	99.9	100	96.9	99.7	99.9	100	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
% Trucks & Bikes	0.3	1	0	13.1	3	0.6	0	12.4	0.8	2.1	0	12.2	2.3	0.6	0.4	19.1	0	0	0	0

Start Time	Galileo Galilei Way From North						Broadway From East						Broadway From West						Inch. Total	Intr. Total
	Thru		Left		Peds.		Thru		Left		Peds.		Thru		Left		Peds.			
	Right	Left	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right		
11:00 AM	16	59	3	38	2	90	6	7	13	33	13	71	18	73	24	15	131	350	481	515
11:15 AM	29	39	5	24	1	101	12	15	10	24	9	74	12	62	21	12	125	325	450	485
11:30 AM	34	42	6	44	3	80	10	16	8	35	12	71	13	71	35	14	145	349	494	500
11:45 AM	36	41	4	29	2	71	6	28	10	40	11	77	14	74	29	12	146	358	484	500
Total	115	181	18	135	8	342	34	66	41	132	45	295	57	280	109	53	547	1582	1909	2000
Grand Total	359	483	67	382	33	937	105	170	119	384	150	712	174	774	270	236	1500	3855	5355	5855
Approach %	39.5	53.1	7.4	38.2	3.1	87.2	9.8	18.2	58.8	23	14.3	63.5	22.2	63.5	22.2	28	72	28	72	72
Cars & Peds	9.3	12.5	1.7	10.5	0.9	24.3	2.7	3.1	10	3.9	2.0	10.9	1.7	10.9	3.7	0	0	0	0	0
% Cars & Peds	2.6	2.6	0.2	2.8	0.2	6.8	0.8	0.8	2.3	1.0	0.6	3.0	0.4	3.0	1.3	0	0	0	0	0
% Trucks & Bikes	99.7	99.9	100	96.9	99.7	99.9	100	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
% Trucks & Bikes	0.3	1	0	13.1	3	0.6	0	12.4	0.8	2.1	0	12.2	2.3	0.6	0.4	19.1	0	0	0	0

Start Time	Galileo Galilei Way From North						Broadway From East						Broadway From West						Inch. Total	Intr. Total
	Thru		Left		Peds.		Thru		Left		Peds.		Thru		Left		Peds.			
	Right	Left	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right	Thru	Left	Thru	Right		
11:00 AM	16	59	3	38	2	90	6	7	13	33	13	71	18	73	24	15	131	350	481	515
11:15 AM	29	39	5	24	1	101	12	15	10	24	9	74	12	62	21	12	125	325	450	485
11:30 PM	34	42	6	44	3	80	10	16	8	35	12	71	13	71	35	14	145	349	494	500
11:45 PM	36	41	4	29	2	71	6	28	10	40	11	77	14	74	29	12	146	358	484	500
Total	115	181	18	135	8	342	34	66	41	132	45	295	57	280	109	53	547	1582	1909	2000
Grand Total	359	483	67	382	33	937	105	170	119	384	150	712	174	774	270	236	1500	3855	5355	5855
Approach %	39.5	53.1	7.4	38.2	3.1	87.2	9.8	18.2	58.8	23	14.3	63.5	22.2	63.5	22.2	28	72	28	72	72
Cars & Peds	9.3	12.5	1.7	10.5	0.9	24.3	2.7	3.1	10	3.9	2.0	10.9	1.7	10.9	3.7	0	0	0	0	0
% Cars & Peds	2.6	2.6	0.2	2.8	0.2	6.8	0.8	0.8	2.3	1.0	0.6	3.0	0.4	3.0	1.3	0	0	0	0	0
% Trucks & Bikes	99.7	99.9	100	96.9	99.7	99.9	100	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
% Trucks & Bikes	0.3	1	0	13.1	3	0.6	0	12.4	0.8	2.1	0	12.2	2.3	0.6	0.4	19.1	0	0	0	0

Start Time	Galileo Galilei Way From North						Broadway From East						Broadway From West						Inch. Total	Intr. Total
	Thru		Left		Peds.</															



Accurate Counts
978-664-2565

File Name : 0380000e
Site Code : 0380000E
Start Date : 5/13/2010
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N/S Street : Location E
E/W Street :
City/State : Cambridge, MA
Weather : Clear

File Name : 0380000e
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N/S Street : Location E
E/W Street :
City/State : Cambridge, MA
Weather : Clear

Groups Printed- Cars

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
07:00	0	1	0	2	0	14	0	0	0	0	0	19	
07:15	1	3	0	9	2	19	2	1	0	0	0	35	
07:30	3	0	0	9	2	13	2	2	3	3	0	30	
07:45	0	2	0	11	0	18	2	0	1	0	0	31	
Total	4	6	0	31	2	64	4	0	6	0	0	115	
08:00	0	3	0	22	0	16	3	0	0	0	0	45	
08:15	0	2	0	11	0	14	3	0	0	0	0	35	
08:30	1	0	0	14	0	28	0	0	0	0	0	45	
08:45	0	1	0	17	0	30	3	1	1	1	1	53	
Total	1	6	0	64	0	88	9	1	1	1	1	178	
Grand Total	5	10	0	95	2	152	13	1	1	1	1	293	
Approach %	33.3	66.7	0	97.9	2.1	92.1	7.9	6.2	93.8	0.3	5.1		
Total %	1.7	3.4	0	32.4	0.7	51.9	4.4	0.3	5.1				

Groups Printed- Cars - Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
07:00	0	1	0	2	0	14	0	0	0	0	0	19	
07:15	1	3	0	9	2	19	2	1	0	0	0	37	
07:30	3	0	0	9	2	13	2	2	3	3	0	34	
07:45	0	2	0	11	0	18	2	0	1	0	0	34	
Total	4	6	0	31	4	64	6	3	6	6	0	124	
08:00	0	3	0	22	0	16	3	1	1	1	0	46	
08:15	0	2	0	11	0	14	3	0	0	0	0	35	
08:30	1	0	0	14	0	28	0	0	0	0	0	45	
08:45	0	1	0	17	0	30	4	1	1	1	1	54	
Total	1	6	0	64	0	88	10	2	2	2	2	180	
Grand Total	5	12	0	95	4	152	16	5	5	5	5	304	
Approach %	29.4	70.6	0	96	4	90.5	9.5	25	75	15	15		
Total %	1.6	3.9	0	31.2	1.3	50	5.3	1.6	4.9	4.9	4.9		
Cars	5	10	0	95	2	152	13	1	1	1	1	293	
% Cars	100	83.3	0	100	50	100	81.2	20	100	100	96.4		
Trucks	0	2	0	0	2	0	3	4	0	0	0	11	
% Trucks	0	16.7	0	0	0	0	18.8	80	0	0	0	3.6	

Groups Printed- Cars

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
08:00	0	3	0	22	0	16	3	19	0	0	0	45	
08:15	0	2	0	11	0	14	3	17	0	0	0	35	
08:30	1	0	0	14	0	28	0	28	0	2	2	45	
08:45	0	1	0	17	0	30	3	33	1	1	1	53	
Total Volume	1	6	0	64	0	64	9	97	1	9	10	178	
% App. Total	14.3	85.7	0	100	0	100	9.3	97	10	90	100		
PHF	.250	.500	.583	.727	.000	.727	.733	.750	.735	.250	.450	.500	

Groups Printed- Cars - Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
08:00	0	3	0	22	0	16	3	19	1	1	2	46	
08:15	0	2	0	11	0	14	3	17	0	0	0	35	
08:30	1	0	0	14	0	28	0	28	0	2	2	45	
08:45	0	1	0	17	0	30	4	34	1	1	1	54	
Total Volume	1	6	0	64	0	64	10	98	2	9	11	180	
% App. Total	14.3	85.7	0	100	0	100	10.2	98	18.2	81.8	50		
PHF	.250	.500	.583	.727	.000	.727	.733	.625	.721	.500	.450	.550	

Peak Hour Analysis

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:00

Start Time	From North	From East	From South	From West	Int. Total
08:00	0	3	16	3	19
08:15	0	2	11	0	14
08:30	1	0	14	0	15
08:45	0	1	17	0	18
Total Volume	1	6	64	0	71
% App. Total	14.3	85.7	100	0	100
PHF	.250	.500	.583	.727	.000

Peak Hour Analysis

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

Start Time	From North	From East	From South	From West	Int. Total
07:15	1	3	16	3	19
07:30	3	0	14	0	17
07:45	0	2	14	0	16
Total Volume	4	5	44	3	56
% App. Total	33.3	66.7	750	735	650
PHF	.333	.500	.625	.727	.000



N/S Street : Location E
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 City/State : Cambridge, MA
 Weather : Clear

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Groups Printed- Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	16	14	16	14	14	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	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
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	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
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	100	0	0	0	0	0	100	0	0	0	0	0
Total %	0	18.2	0	0	18.2	0	27.3	36.4	0	0	0	0	0

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	16	14	16	14	14	
07:15	0	0	0	0	1	0	0	0	0	1	0	0	1
07:30	0	0	0	0	1	0	0	1	0	2	0	0	2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	2	2	2	4	0	4	0	4	10
% App. Total	0	100	250	0	100	500	500	500	0	500	0	500	525
PHF	.000	.250	.250	.000	.500	.500	.500	.500	.000	.500	.000	.500	.625

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	16	14	16	14	14	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	0	0	1	0	0	1
+30 mins.	0	0	0	0	1	0	0	0	0	2	0	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	2	2	2	4	0	4	0	4	10
% App. Total	0	100	250	0	100	500	500	500	0	500	0	500	500
PHF	.000	.250	.250	.000	.500	.500	.500	.500	.000	.500	.000	.500	.500

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

Start Time	From North	From East	From South	From West
07:00	0	0	0	0
+15 mins.	0	1	0	0
+30 mins.	0	1	0	0
+45 mins.	0	0	0	0
Total Volume	0	2	2	2
% App. Total	0	100	500	500
PHF	.000	.250	.250	.500

Accurate Counts
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N/S Street : Location E
 E/W Street :
 City/State : Cambridge, MA
 Weather : Clear

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Groups Printed- Curs - Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	16	14	16	14	14	
11:00	0	2	4	0	0	0	8	4	0	3	4	25	
11:15	0	2	0	6	2	10	6	1	4	1	4	31	
11:30	0	3	0	6	0	13	3	2	5	2	5	32	
11:45	1	1	1	8	0	5	3	0	5	3	0	23	
Total	1	8	6	24	2	36	16	6	18	6	18	111	
12:00	1	0	0	9	0	6	11	0	9	0	0	36	
12:15	0	3	0	4	0	8	3	1	10	1	10	29	
12:30	4	2	0	8	0	6	9	0	8	0	8	37	
12:45	0	2	0	2	0	4	3	1	11	2	11	23	
Total	5	7	0	23	0	24	26	2	38	2	38	125	
Grand Total	6	15	47	60	42	87.5	87.5	8	56	8	56	236	
Approch %	28.6	71.4	95.9	41.1	58.8	41.2	12.5	12.5	87.5	3.4	23.7	87.5	
Total %	2.5	6.4	19.9	0.8	17.8	3.4	23.7	3.4	23.7	3.4	23.7	87.5	
Cars	5	15	47	60	42	87.5	87.5	8	56	8	56	232	
% Cars	83.3	100	100	88.3	100	87.5	100	87.5	100	87.5	100	98.3	
Trucks	1	0	0	1	1	1	1	1	0	1	0	4	
% Trucks	16.7	0	0	1.7	0	1.7	0	1.7	0	1.7	0	1.7	

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	16	14	16	14	14	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	1	1	1	8	0	5	3	8	0	5	5	23	
12:00	1	0	1	9	0	6	11	0	9	0	9	36	
12:15	0	3	3	4	0	8	3	11	1	10	11	29	
12:30	4	2	6	8	0	8	9	15	0	8	8	37	
Total Volume	6	6	12	29	0	29	25	26	51	1	32	125	
% App. Total	50	50	500	100	0	49	51	3	97	3	97	125	
PHF	.375	.500	.500	.806	.000	.806	.781	.591	.750	.250	.800	.750	

Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:45

Start Time	From North	From East	From South	From West
11:45	2	8	5	8
12:00	1	9	6	17
12:15	0	4	8	3
12:30	4	8	6	9
Total Volume	6	29	25	26
% App. Total	50	50	49	51
PHF	.500	.806	.781	.591

Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

Start Time	From North	From East	From South	From West
11:45	2	8	5	8
+15 mins.	1	6	10	6
+30 mins.	1	6	13	9
+45 mins.	4	8	5	8
Total Volume	6	29	34	23
% App. Total	50	50	59.6	40.4
PHF	.375	.500	.654	.523



N/S Street : Location E
 E/W Street :
 City/State : Cambridge, MA
 Weather : Clear

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Groups Printed- Cars

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:00	0	2	2	4	0	8	4	8	4	2	4	24	
11:15	0	2	2	6	1	10	6	1	4	1	4	30	
11:30	0	3	3	6	0	13	3	2	5	2	5	32	
11:45	1	1	8	8	0	5	3	0	5	0	5	23	
Total	1	8	24	24	1	36	16	5	18	5	18	109	
12:00	0	0	9	9	0	6	11	6	9	0	9	35	
12:15	0	3	4	4	0	7	3	1	10	1	10	28	
12:30	4	2	8	2	8	6	9	0	8	3	8	37	
12:45	0	2	2	2	0	4	3	1	11	1	11	23	
Total	4	7	23	0	23	26	2	38	2	38	123	232	
Grand Total	5	15	47	1	59	42	7	56	11.1	88.9	3	241.1	
Approach %	2.2	7.5	97.9	2.1	58.4	41.6	18.1	25.4	11.1	88.9	3	241.1	
Total %	2.2	6.5	20.3	0.4	25.4	18.1	3	24.1	11.1	88.9	3	241.1	

Accurate Counts
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N/S Street : Location E
 E/W Street :
 City/State : Cambridge, MA
 Weather : Clear

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Groups Printed- Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:00	0	0	0	0	0	0	0	0	0	0	0	1	
11:15	0	0	0	0	0	1	0	0	0	0	0	1	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	1	0	0	0	0	0	2	
12:00	1	0	0	0	0	0	0	0	0	0	0	1	
12:15	0	0	0	0	0	1	0	0	0	0	0	1	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	1	0	0	0	0	0	2	
Grand Total	1	0	0	0	0	1	0	0	0	0	0	4	
Approach %	100	0	0	0	0	100	0	0	0	0	0	100	
Total %	25	0	0	0	0	25	0	0	0	0	0	25	

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:45	1	1	2	8	0	8	5	3	8	0	5	23	
12:00	0	0	9	9	0	17	0	9	35	0	9	35	
12:15	0	3	4	4	0	7	3	10	1	10	11	28	
12:30	4	2	6	8	0	8	6	9	15	0	8	37	
Total Volume	5	6	11	29	0	29	24	26	50	1	32	123	
% App. Total	.455	.545	.100	.806	.000	.806	.857	.591	.735	.250	.800	.831	
PHF	.313	.500	.458	.806	.000	.806	.857	.591	.735	.250	.800	.831	

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:15	1	1	2	6	1	7	10	6	16	0	9	9	
+15 mins.	0	0	6	6	0	12	3	8	1	10	11	11	
+30 mins.	0	3	3	6	0	9	3	8	0	8	8	8	
+45 mins.	4	2	6	8	0	8	0	11	17	1	11	12	
Total Volume	5	6	11	29	1	30	34	23	57	2	38	40	
% App. Total	.455	.545	.100	.806	.333	.833	.654	.404	.838	.500	.864	.833	
PHF	.313	.500	.458	.806	.250	.833	.654	.523	.838	.500	.864	.833	

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:00	0	0	0	0	0	0	0	0	0	0	0	1	
11:15	0	0	0	0	1	1	0	0	0	0	0	1	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	1	1	0	0	0	0	0	2	
% App. Total	.000	.000	.000	.000	.250	.250	.000	.000	.000	.250	.000	.500	
PHF	.000	.000	.000	.000	.250	.250	.000	.000	.000	.250	.000	.500	

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	9	16	14	14	
11:15	0	0	0	0	0	0	0	0	0	0	0	1	
+15 mins.	0	0	0	0	1	1	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	1	0	1	0	0	0	1	0	1	0	0	0	
Total Volume	1	0	1	0	1	1	1	0	1	0	0	1	
% App. Total	100	0	100	0	100	250	250	0	100	0	0	250	
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.250	.000	.000	.250	



Accurate Counts
978-664-2565

File Name : 0380000e
Site Code : 0380000E
Start Date : 5/13/2010
Page No : 1

N/S Street : Location E
E/W Street :
City/State : Cambridge, MA
Weather : Clear

File Name : 0380000e
Site Code : 0380000E
Start Date : 5/13/2010
Page No : 1

N/S Street : Location E
E/W Street :
City/State : Cambridge, MA
Weather : Clear

Groups Printed- Cars

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
16:00	0	0	0	0	0	2	6	6	0	0	24		
16:15	0	0	0	2	0	4	0	4	1	14	21		
16:30	0	0	0	1	0	1	1	14	0	18	34		
16:45	0	0	0	1	0	4	18	4	0	11	35		
Total	0	0	0	4	0	11	7	42	1	57	114		
17:00	0	0	0	0	0	2	16	2	0	13	31		
17:15	0	0	0	0	0	2	19	0	0	24	40		
17:30	0	0	0	4	0	1	18	0	0	24	47		
17:45	0	0	0	0	0	3	7	7	1	14	26		
Total	0	0	0	4	0	8	60	1	70	144			
Grand Total	0	0	0	8	0	15	102	2	127	258			
Approach %	0	100	1.2	88.9	11.1	12.8	87.2	1.6	98.4				
Total %	0	1.2	0	3.1	0.4	5.8	39.5	0.8	49.2				

Groups Printed- Cars - Trucks

Start Time	From North			From East			From South			From West			Int. Total
	4	1	1	8	6	12	9	12	16	14	14		
16:00	0	0	0	0	0	2	6	6	0	0	24		
16:15	0	0	0	2	0	4	0	4	1	14	21		
16:30	0	0	0	1	0	1	1	14	0	18	34		
16:45	0	0	0	1	0	4	18	4	0	11	35		
Total	0	0	0	4	0	11	7	42	1	57	114		
17:00	0	0	0	0	0	2	16	2	0	13	31		
17:15	0	0	0	0	0	2	19	0	0	24	40		
17:30	0	0	0	4	0	1	18	0	0	24	47		
17:45	0	0	0	0	0	3	7	7	1	14	26		
Total	0	0	0	4	0	8	60	1	70	144			
Grand Total	0	0	0	8	0	15	102	2	127	258			
Approach %	0	100	1.2	88.9	11.1	12.8	87.2	1.6	98.4				
Total %	0	1.2	0	3.1	0.4	5.8	39.5	0.8	49.2				
% Cars	0	3	0	8	1	15	102	2	127	258			
% Trucks	0	0	0	0	0	0	0	0	0	0	0		
% Trucks	0	0	0	0	0	0	0	0	0	0	0		

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Start Time	From North	From East	From South	From West	Int. Total
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
Total Volume	0	0	0	0	0
% App. Total	0	0	0	0	0
PHF	.000	.250	.250	.313	.000



Groups Printed- Cars

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
11:00	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
11:15	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	10
11:30	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
11:45	1	1	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	10
Total	3	1	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	31
12:00	4	1	0	0	0	1	5	0	11	0	0	0	0	0	0	0	0	11
12:15	4	1	0	0	1	6	0	0	12	0	0	0	0	0	0	0	0	12
12:30	2	0	0	0	0	3	0	0	5	0	0	0	0	0	0	0	0	5
12:45	4	0	0	0	0	4	0	0	8	0	0	0	0	0	0	0	0	8
Total	14	2	0	0	0	18	0	0	36	0	0	0	0	0	0	0	0	36
Grand Total	17	3	0	0	0	2	45	0	67	0	0	0	0	0	0	0	0	67
Approach %	85	15	0	0	0	4.3	95.7	0	0	0	0	0	0	0	0	0	0	0
Total %	25.4	4.5	0	0	0	3	67.2	0	0	0	0	0	0	0	0	0	0	0

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	1	1	0	0	0	6	6	0	6	0	0	0	0	0	0	0	0	6
12:00	4	1	0	0	2	0	8	0	10	0	0	0	0	0	0	0	0	10
12:15	4	1	0	0	5	1	5	0	11	0	0	0	0	0	0	0	0	11
Total Volume	9	3	0	0	12	2	25	0	39	0	0	0	0	0	0	0	0	39
% App. Total	75	25	0	0	7.4	92.6	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.563	.750	.000	.000	.600	.500	.781	.844	.000	.000	.000	.000	.000	.000	.000	.000	.000	.813

Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:30

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	4	1	0	0	5	0	6	0	6	0	0	0	0	0	0	0	0	6
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	1	1	0	0	2	0	8	0	10	0	0	0	0	0	0	0	0	10
Total Volume	5	2	0	0	7	0	14	0	17	0	0	0	0	0	0	0	0	17
% App. Total	87.5	12.5	0	0	16	3.6	96.4	0	0	0	0	0	0	0	0	0	0	0
PHF	.875	.500	.000	.000	.800	.250	.844	.875	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts
 978-664-2565

Groups Printed- Cars

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
16:00	8	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	11
16:15	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
16:30	13	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	15
16:45	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Total	46	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	51
17:00	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
17:15	30	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	34
17:30	27	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	29
17:45	37	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	39
Total	123	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	131
Grand Total	169	0	0	0	0	0	13	0	13	0	0	0	0	0	0	0	0	182
Approach %	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
Total %	92.9	0	0	0	0	0	7.1	0	0	0	0	0	0	0	0	0	0	0

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
17:00	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
17:15	30	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	34
17:30	27	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	29
17:45	37	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	39
Total Volume	123	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	131
% App. Total	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
PHF	.831	.000	.000	.000	.831	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.840

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 17:00

Start Time	From North				From East				From South				From West					
	3	2	5	4	6	7	10	14	Int. Total	3	2	5	4	6	7	10	14	Int. Total
17:00	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
17:15	30	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	34
17:30	27	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	29
17:45	37	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	39
Total Volume	123	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	131
% App. Total	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0
PHF	.831	.000	.000	.000	.831	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.840

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

Start Time	From North	From East	From South	From West
17:00	0	0	0	0
+0 mins.	0	0	0	0
+15 mins.	0	0	0	0
+30 mins.	0	0	0	0
+45 mins.	0	0	0	0
Total Volume	0	0	0	0
% App. Total	0	0	0	0
PHF	0.000	0.000	0.000	0.000

April 2014 TMC Counts

Accurate Counts
978-664-2565

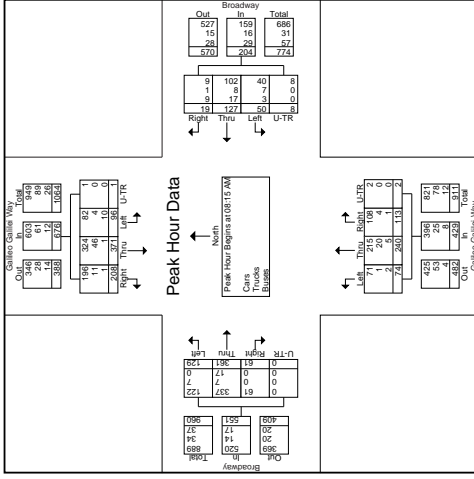
File Name : 1646001
Site Code : 1646001
Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646001
Site Code : 1646001
Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Galileo Galilei Way From North				Galileo Galilei Way From South				Broadway From East				Galileo Galilei Way From South				Broadway From West				Int. Total
	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	
07:45 AM	15	95	50	0	14	35	6	0	12	58	25	0	53	86	13	0	482	0	0	0	762
08:00 AM	22	82	56	0	6	39	7	0	18	65	20	0	45	79	7	0	485	0	0	0	485
08:15 AM	21	90	52	0	11	30	4	3	13	56	26	1	34	96	13	0	461	0	0	0	461
08:30 AM	21	90	52	0	10	34	4	2	22	73	31	0	24	74	21	0	459	0	0	0	459
08:45 AM	20	88	57	0	19	33	6	1	18	53	33	3	42	96	16	0	453	0	0	0	453
Total	84	362	210	0	40	136	21	0	71	247	119	21	145	346	57	0	1859	0	0	0	1859
08:00 AM	34	91	48	0	10	30	5	2	21	58	23	0	29	95	11	0	457	0	0	0	457
08:15 AM	19	90	53	0	18	35	3	2	18	53	15	0	27	89	19	0	451	0	0	0	451
08:30 AM	19	90	53	0	18	35	3	2	18	53	15	0	27	89	19	0	451	0	0	0	451
08:45 AM	12.5	56.2	31.2	0.1	23.1	64.2	10	2.7	16.6	49	25.2	0.3	27	62.7	10.3	0	323	0	0	0	323
Total %	4.5	29.2	11.2	0.1	2.6	7.3	1.1	0.3	3.7	13.1	5.7	0.1	8.1	18.9	3.1	0	316.2	0	0	0	316.2
Cars	132	625	373	0	77	206	16	11	126	405	188	2	275	621	109	0	1622	0	0	0	1622
% Trucks	8	84	17	0	12	19	5	0	2	45	11	0	11	18	1	0	233	0	0	0	233
% Buses	18	4	6	0	12.9	7.4	12.5	0	1.5	8.8	5.5	0	3.8	2.7	0.9	0	6.6	0	0	0	6.6
% Bikes	11.4	0.6	1.3	0	8.6	12.8	47.3	0	3	2.4	0.5	0.1	0.3	4.2	0	0	133	0	0	0	133

Start Time	Galileo Galilei Way From North				Galileo Galilei Way From South				Broadway From East				Galileo Galilei Way From South				Broadway From West				Int. Total
	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	
08:15 AM	21	102	51	0	11	30	4	3	48	13	56	26	1	96	13	0	143	0	0	0	461
08:30 AM	21	90	52	0	10	34	4	2	50	22	73	31	0	126	24	74	21	0	0	0	459
08:45 AM	20	88	57	0	19	33	6	1	47	21	58	23	0	102	29	85	11	0	0	0	453
Total	84	362	210	0	40	136	21	0	71	247	119	21	145	346	57	0	1859	0	0	0	1859
08:00 AM	34	91	48	0	10	30	5	2	21	58	23	0	29	95	11	0	457	0	0	0	457
08:15 AM	19	90	53	0	18	35	3	2	18	53	15	0	27	89	19	0	451	0	0	0	451
08:30 AM	19	90	53	0	18	35	3	2	18	53	15	0	27	89	19	0	451	0	0	0	451
08:45 AM	12.5	56.2	31.2	0.1	23.1	64.2	10	2.7	16.6	49	25.2	0.3	27	62.7	10.3	0	323	0	0	0	323
Total %	4.5	29.2	11.2	0.1	2.6	7.3	1.1	0.3	3.7	13.1	5.7	0.1	8.1	18.9	3.1	0	316.2	0	0	0	316.2
Cars	132	625	373	0	77	206	16	11	126	405	188	2	275	621	109	0	1622	0	0	0	1622
% Trucks	8	84	17	0	12	19	5	0	2	45	11	0	11	18	1	0	233	0	0	0	233
% Buses	18	4	6	0	12.9	7.4	12.5	0	1.5	8.8	5.5	0	3.8	2.7	0.9	0	6.6	0	0	0	6.6
% Bikes	11.4	0.6	1.3	0	8.6	12.8	47.3	0	3	2.4	0.5	0.1	0.3	4.2	0	0	133	0	0	0	133

Accurate Counts
978-664-2565

File Name : 1646001
Site Code : 1646001
Print Date : 4/9/2014
Page No. : 4

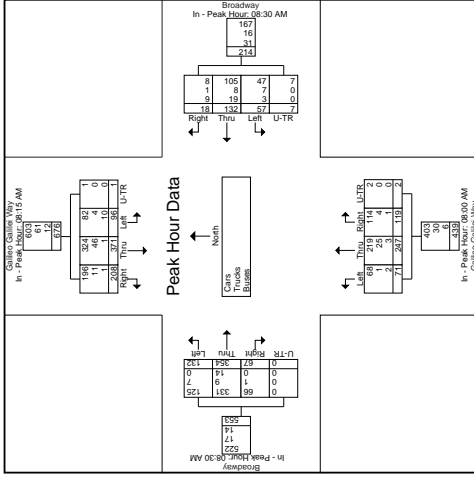
N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 1646001
Site Code : 1646001
Print Date : 4/9/2014
Page No. : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Broadway				Galileo Galilei Way				Broadway								
	Left	Thru	Right	U-TR	Appx. Total	Left	Thru	Right	U-TR	Appx. Total	Left	Thru	Right	U-TR	Appx. Total	Left	Thru	Right	U-TR	Appx. Total	
08:30 AM	102	51	0	174	34	4	2	50	18	65	23	0	112	24	74	21	0	119			
+10 mins.	21	90	52	164	19	33	6	59	13	56	26	1	86	42	96	16	0	154			
+15 mins.	15	85	0	100	30	0	2	58	11	52	11	0	69	29	89	11	0	130			
+45 mins.	34	91	26	151	36	3	2	58	18	53	33	0	105	37	89	19	0	145			
Total/Volume	166	371	208	745	132	18	7	214	71	247	119	2	439	132	354	67	0	553			
% App. Total	14.2	54.9	30.8	0.1	26.6	61.7	8.4	3.3	69.7	16.2	27.1	0.5	63.1	23.9	64	12.1	0	68.8			
% Cars	82	324	196	603	47	15	8	67	88	219	114	2	403	125	351	68	0	522			
% Trucks	4	46	11	61	7	8	1	16	1	25	4	0	30	7	29	1	0	37			
% Buses	10	1	1	12	3	19	9	31	2	3	1	0	6	14	0	4	0	14			
% Buses	10.4	0.3	0.5	1.8	5.3	14.4	50	14.5	2.8	1.2	0.8	0	1.4	0	4	0	0	2.5			



Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 2

N/S Street : Galileo Gallilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 1

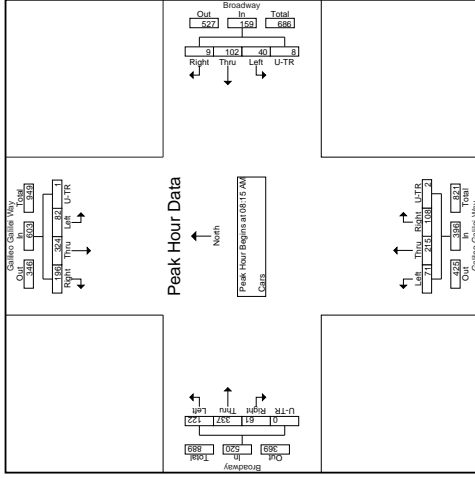
Accurate Counts
978-664-2565

N/S Street : Galileo Gallilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Gallilei Way From North				Galileo Gallilei Way From South				Broadway From East				Broadway From West				In Total	Out Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	11	86	48	0	9	27	2	0	11	53	21	0	51	79	13	0	411	
Total	16	155	73	0	13	47	3	1	20	93	38	0	73	126	22	0	680	
08:00 AM	19	70	53	0	4	29	4	0	18	55	28	0	44	73	7	0	404	
08:15 AM	17	85	49	0	9	25	1	3	12	52	25	1	33	91	13	0	416	
08:30 AM	18	77	50	1	6	27	2	2	21	64	30	0	23	67	21	0	409	
08:45 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
Total	70	314	209	1	35	109	10	6	68	219	114	2	139	320	57	0	1672	
09:00 AM	31	80	41	0	9	22	3	2	21	51	22	0	27	90	11	0	410	
09:15 AM	15	76	51	0	16	28	0	2	17	42	19	0	36	85	18	0	400	
09:30 AM	13	65	33	0	17	26	1	1	13	36	18	0	27	62	10	0	362	
Total	117	553	333	0	233	673	52	36	175	592	261	0	274	619	103	0	3162	
Approach %	4.2	18.8	11.8	0	2.3	6.5	0.5	0.3	4	12.8	5.9	0.1	8.7	19.6	3.4	0		

Start Time	Galileo Gallilei Way From North				Galileo Gallilei Way From South				Broadway From East				Broadway From West				In Total	Out Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	18	77	50	1	6	27	2	2	21	64	30	0	23	67	21	0	409	
08:00 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
08:15 AM	17	85	49	0	9	25	1	3	12	52	25	1	33	91	13	0	416	
08:30 AM	18	77	50	1	6	27	2	2	21	64	30	0	23	67	21	0	409	
08:45 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
Total	70	314	209	1	35	109	10	6	68	219	114	2	139	320	57	0	1672	

Start Time	Galileo Gallilei Way From North				Galileo Gallilei Way From South				Broadway From East				Broadway From West				In Total	Out Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	11	86	48	0	9	27	2	0	11	53	21	0	51	79	13	0	411	
08:00 AM	19	70	53	0	4	29	4	0	18	55	28	0	44	73	7	0	404	
08:15 AM	17	85	49	0	9	25	1	3	12	52	25	1	33	91	13	0	416	
08:30 AM	18	77	50	1	6	27	2	2	21	64	30	0	23	67	21	0	409	
08:45 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
Total	70	314	209	1	35	109	10	6	68	219	114	2	139	320	57	0	1672	



Start Time	Galileo Gallilei Way From North				Galileo Gallilei Way From South				Broadway From East				Broadway From West				In Total	Out Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	11	86	48	0	9	27	2	0	11	53	21	0	51	79	13	0	411	
08:00 AM	19	70	53	0	4	29	4	0	18	55	28	0	44	73	7	0	404	
08:15 AM	17	85	49	0	9	25	1	3	12	52	25	1	33	91	13	0	416	
08:30 AM	18	77	50	1	6	27	2	2	21	64	30	0	23	67	21	0	409	
08:45 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
Total	70	314	209	1	35	109	10	6	68	219	114	2	139	320	57	0	1672	

Start Time	Galileo Gallilei Way From North				Galileo Gallilei Way From South				Broadway From East				Broadway From West				In Total	Out Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	11	86	48	0	9	27	2	0	11	53	21	0	51	79	13	0	411	
08:00 AM	19	70	53	0	4	29	4	0	18	55	28	0	44	73	7	0	404	
08:15 AM	17	85	49	0	9	25	1	3	12	52	25	1	33	91	13	0	416	
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08:45 AM	16	82	56	0	16	28	3	1	17	48	31	1	39	89	16	0	423	
Total	70	314	209	1	35	109	10	6	68	219	114	2	139	320	57	0	1672	

Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 4

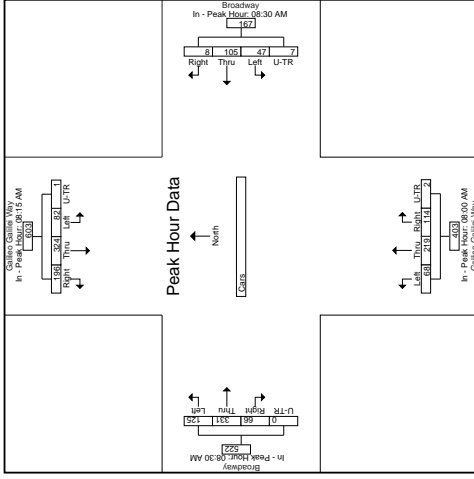
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 3

Accurate Counts
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N/S Street : Galileo Galilei Way
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Start Time	Galileo Galilei Way			Broadway			Galileo Galilei Way			Broadway			In-Total																																																																																																																																																																																					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right																																																																																																																																																																																						
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	<table border="1"> <thead> <tr> <th>Time</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> </tr> </thead> <tbody> <tr> <td>08:30 AM</td> <td>151</td> <td>6</td> <td>27</td> <td>37</td> <td>18</td> <td>55</td> <td>28</td> <td>0</td> <td>101</td> <td>23</td> <td>67</td> <td>21</td> </tr> <tr> <td>08:35 AM</td> <td>146</td> <td>16</td> <td>28</td> <td>48</td> <td>12</td> <td>52</td> <td>25</td> <td>1</td> <td>90</td> <td>39</td> <td>89</td> <td>16</td> </tr> <tr> <td>08:40 AM</td> <td>139</td> <td>15</td> <td>26</td> <td>46</td> <td>11</td> <td>47</td> <td>24</td> <td>0</td> <td>87</td> <td>37</td> <td>85</td> <td>13</td> </tr> <tr> <td>08:45 AM</td> <td>130</td> <td>15</td> <td>22</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>08:50 AM</td> <td>124</td> <td>16</td> <td>20</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>08:55 AM</td> <td>114</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>09:00 AM</td> <td>114</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>09:05 AM</td> <td>114</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>09:10 AM</td> <td>114</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>09:15 AM</td> <td>114</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> <td>36</td> <td>85</td> <td>18</td> </tr> <tr> <td>Total Volume</td> <td>1603</td> <td>105</td> <td>8</td> <td>167</td> <td>168</td> <td>219</td> <td>114</td> <td>2</td> <td>403</td> <td>125</td> <td>331</td> <td>66</td> </tr> <tr> <td>% App. Total</td> <td>53.7</td> <td>32.5</td> <td>0.2</td> <td>28.1</td> <td>62.9</td> <td>4.8</td> <td>4.2</td> <td>16.8</td> <td>54.3</td> <td>28.3</td> <td>0.5</td> <td>23.9</td> </tr> <tr> <td>PHF</td> <td>0.61</td> <td>0.63</td> <td>0.75</td> <td>0.38</td> <td>0.67</td> <td>0.75</td> <td>0.70</td> <td>0.50</td> <td>0.76</td> <td>0.61</td> <td>0.71</td> <td>0.60</td> </tr> </tbody> </table>												Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	08:30 AM	151	6	27	37	18	55	28	0	101	23	67	21	08:35 AM	146	16	28	48	12	52	25	1	90	39	89	16	08:40 AM	139	15	26	46	11	47	24	0	87	37	85	13	08:45 AM	130	15	22	46	17	48	31	0	97	36	85	18	08:50 AM	124	16	20	46	17	48	31	0	97	36	85	18	08:55 AM	114	16	17	46	17	48	31	0	97	36	85	18	09:00 AM	114	16	17	46	17	48	31	0	97	36	85	18	09:05 AM	114	16	17	46	17	48	31	0	97	36	85	18	09:10 AM	114	16	17	46	17	48	31	0	97	36	85	18	09:15 AM	114	16	17	46	17	48	31	0	97	36	85	18	Total Volume	1603	105	8	167	168	219	114	2	403	125	331	66	% App. Total	53.7	32.5	0.2	28.1	62.9	4.8	4.2	16.8	54.3	28.3	0.5	23.9	PHF	0.61	0.63	0.75	0.38	0.67	0.75	0.70	0.50	0.76	0.61	0.71	0.60
Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right																																																																																																																																																																																						
08:30 AM	151	6	27	37	18	55	28	0	101	23	67	21																																																																																																																																																																																						
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08:50 AM	124	16	20	46	17	48	31	0	97	36	85	18																																																																																																																																																																																						
08:55 AM	114	16	17	46	17	48	31	0	97	36	85	18																																																																																																																																																																																						
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Peak Hour for Eager Abigail Briggs St:	<table border="1"> <thead> <tr> <th>Time</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> </tr> </thead> <tbody> <tr> <td>08:30 AM</td> <td>85</td> <td>49</td> <td>0</td> <td>151</td> <td>6</td> <td>27</td> <td>37</td> <td>18</td> <td>55</td> <td>28</td> <td>0</td> <td>101</td> </tr> <tr> <td>08:35 AM</td> <td>77</td> <td>50</td> <td>1</td> <td>146</td> <td>16</td> <td>28</td> <td>48</td> <td>12</td> <td>52</td> <td>25</td> <td>1</td> <td>90</td> </tr> <tr> <td>08:40 AM</td> <td>72</td> <td>46</td> <td>0</td> <td>139</td> <td>15</td> <td>26</td> <td>46</td> <td>11</td> <td>47</td> <td>24</td> <td>0</td> <td>87</td> </tr> <tr> <td>08:45 AM</td> <td>64</td> <td>44</td> <td>0</td> <td>130</td> <td>15</td> <td>22</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>08:50 AM</td> <td>57</td> <td>44</td> <td>0</td> <td>124</td> <td>16</td> <td>20</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>08:55 AM</td> <td>50</td> <td>44</td> <td>0</td> <td>117</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>09:00 AM</td> <td>44</td> <td>44</td> <td>0</td> <td>110</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>09:05 AM</td> <td>38</td> <td>44</td> <td>0</td> <td>103</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>09:10 AM</td> <td>32</td> <td>44</td> <td>0</td> <td>96</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>09:15 AM</td> <td>26</td> <td>44</td> <td>0</td> <td>89</td> <td>16</td> <td>17</td> <td>46</td> <td>17</td> <td>48</td> <td>31</td> <td>0</td> <td>97</td> </tr> <tr> <td>Total Volume</td> <td>82</td> <td>324</td> <td>196</td> <td>1603</td> <td>105</td> <td>8</td> <td>167</td> <td>168</td> <td>219</td> <td>114</td> <td>2</td> <td>403</td> </tr> <tr> <td>% App. Total</td> <td>13.6</td> <td>53.7</td> <td>32.5</td> <td>28.1</td> <td>62.9</td> <td>4.8</td> <td>4.2</td> <td>16.8</td> <td>54.3</td> <td>28.3</td> <td>0.5</td> <td>23.9</td> </tr> <tr> <td>PHF</td> <td>0.61</td> <td>0.63</td> <td>0.75</td> <td>0.38</td> <td>0.67</td> <td>0.75</td> <td>0.70</td> <td>0.50</td> <td>0.76</td> <td>0.61</td> <td>0.71</td> <td>0.60</td> </tr> </tbody> </table>												Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	08:30 AM	85	49	0	151	6	27	37	18	55	28	0	101	08:35 AM	77	50	1	146	16	28	48	12	52	25	1	90	08:40 AM	72	46	0	139	15	26	46	11	47	24	0	87	08:45 AM	64	44	0	130	15	22	46	17	48	31	0	97	08:50 AM	57	44	0	124	16	20	46	17	48	31	0	97	08:55 AM	50	44	0	117	16	17	46	17	48	31	0	97	09:00 AM	44	44	0	110	16	17	46	17	48	31	0	97	09:05 AM	38	44	0	103	16	17	46	17	48	31	0	97	09:10 AM	32	44	0	96	16	17	46	17	48	31	0	97	09:15 AM	26	44	0	89	16	17	46	17	48	31	0	97	Total Volume	82	324	196	1603	105	8	167	168	219	114	2	403	% App. Total	13.6	53.7	32.5	28.1	62.9	4.8	4.2	16.8	54.3	28.3	0.5	23.9	PHF	0.61	0.63	0.75	0.38	0.67	0.75	0.70	0.50	0.76	0.61	0.71	0.60
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08:45 AM	64	44	0	130	15	22	46	17	48	31	0	97																																																																																																																																																																																						
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08:55 AM	50	44	0	117	16	17	46	17	48	31	0	97																																																																																																																																																																																						
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09:05 AM	38	44	0	103	16	17	46	17	48	31	0	97																																																																																																																																																																																						
09:10 AM	32	44	0	96	16	17	46	17	48	31	0	97																																																																																																																																																																																						
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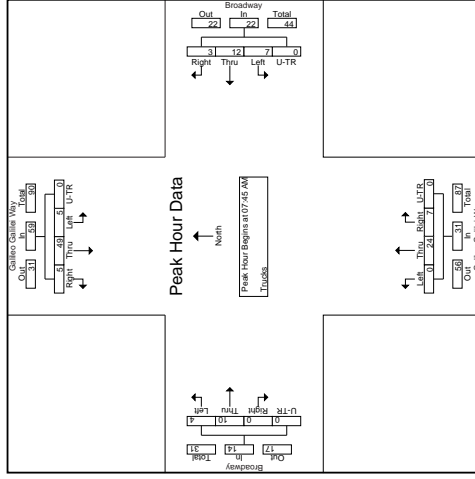
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E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Counts Printed - Trucks

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total		
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR			
07:45 AM	1	8	1	2	5	2	0	4	1	0	1	3	0	29	
Total	2	14	3	3	5	3	0	1	8	5	0	2	5	0	51
08:00 AM	1	12	1	4	1	0	0	10	1	0	1	3	0	0	35
08:15 AM	2	17	1	2	0	0	0	2	1	0	1	1	0	0	28
08:30 AM	1	12	2	0	3	0	0	8	1	0	1	3	0	0	34
08:45 AM	0	6	0	2	1	1	0	1	5	1	0	3	2	0	23
Total	4	47	5	7	10	2	0	1	23	4	0	6	8	0	129
09:00 AM	1	11	7	1	2	0	0	5	1	0	2	1	0	0	31
09:15 AM	1	12	7	0	1	0	0	7	1	0	1	13	1	0	31
09:30 AM	1	12	1	0	1	0	0	4	0	0	1	1	0	0	23
Approach %	7.3	77.1	15.6	0	33.3	52.8	13.9	0	34	77.6	19	0	36.7	60	3.3
Total %	3.4	36.1	7.3	0	5.2	8.2	2.1	0	0.9	18.3	4.7	0	4.7	7.7	0.4

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total		
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR			
07:30 AM	0	10	0	2	4	0	0	4	0	0	1	3	0	4	
07:45 AM	1	12	1	4	1	0	0	10	1	0	1	3	0	0	
08:00 AM	2	17	1	2	0	0	0	2	1	0	1	1	0	0	
08:15 AM	1	12	2	0	3	0	0	8	1	0	1	3	0	0	
08:30 AM	0	6	0	2	1	1	0	1	5	1	0	3	2	0	
Total	6	55	4	10	8	1	0	27	9	1	6	14	0	44	
Approach %	8.5	83.3	8.5	0	31.8	54.5	13.6	0	22	0	31	26.6	71.4	0	14
PHE	.695	.721	.695	.000	.738	.585	.750	.375	.000	.786	.000	.438	.000	.000	.875



Galileo Galilei Way

Broadway

Galileo Galilei Way

Broadway

Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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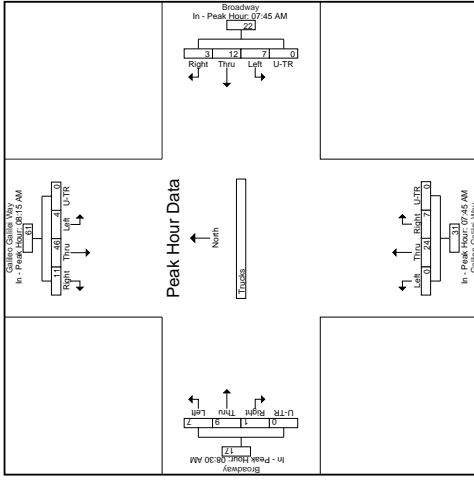
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Broadway				Galileo Galilei Way				Broadway							
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR				
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	Peak Hour for East Approach Begins At:																			
07:30 AM	1	0	20	2	3	2	0	7	0	4	4	0	8	0	0	0	4			
+10 mins.	2	17	1	0	2	3	2	0	7	0	4	4	0	8	0	0	4			
+15 mins.	1	12	0	15	1	4	1	0	6	0	10	1	0	11	3	2	0	0	5	
+20 mins.	1	6	0	10	0	7	0	0	6	0	8	1	0	9	2	3	1	0	5	
+25 mins.	1	11	0	7	0	3	2	0	0	0	6	1	0	0	3	1	0	0	5	
Total Volume	4	46	11	0	61	7	12	3	0	22	0	24	7	0	31	7	9	1	0	17
% App. Total	6.6	75.4	18	0	31.8	54.5	13.6	0	77.4	29.8	0	41.2	52.9	5.9	0	0	0	0	0	0
PHF	.80	.676	.393	.000	.763	.750	.375	.000	.786	.000	.600	.438	.000	.706	.260	.260	.000	.000	.850	.850



Accurate Counts
978-664-2565

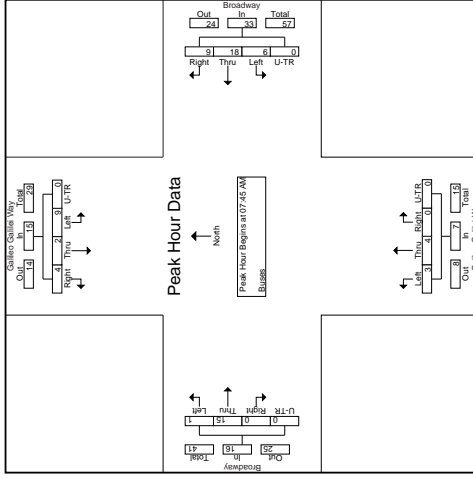
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Site Code : 16460001
Print Date : 4/9/2014
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N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear



Counts Printed - Buses

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total	
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR		
07:45 AM	3	1	0	3	5	0	1	1	0	0	1	4	0	22
Total	3	1	0	3	5	0	1	2	0	0	1	7	0	31
08:00 AM	2	0	0	1	6	2	0	0	0	0	0	3	0	16
08:15 AM	2	0	0	1	3	3	0	1	2	0	0	4	0	17
08:30 AM	2	1	0	1	4	2	0	1	1	0	0	4	0	16
08:45 AM	4	0	0	1	4	2	0	0	0	0	0	5	0	17
Total	10	1	0	4	17	9	0	2	3	1	0	16	0	66
09:00 AM	2	0	0	0	6	2	0	0	2	0	0	4	0	16
09:15 AM	2	0	0	1	5	13	0	4	0	0	0	28	0	20
09:30 AM	13	2	0	0	8	11	0	4	0	0	0	28	0	139
09:45 AM	643	14.3	21.4	0	13.3	55	317.7	0	25	66.8	6.2	3.4	96.6	0
Approach %	13.5	3	4.5	0	6	24.8	14.3	0	3	8.3	0.8	0.8	21.1	0

Peak Hour Analysis from 07:30 AM to 09:15 AM - Peak 1 of 1

Start Time	Galileo Galilei Way			Broadway			Galileo Galilei Way			Broadway			In. Total	
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR		
07:30 AM	3	1	0	3	5	0	1	1	0	0	1	4	0	22
07:45 AM	2	0	0	1	6	2	0	0	0	0	0	3	0	16
08:00 AM	2	0	0	1	3	3	0	1	2	0	0	4	0	17
08:15 AM	2	1	0	1	4	2	0	0	0	0	0	4	0	16
08:30 AM	2	0	0	1	4	2	0	0	0	0	0	5	0	17
08:45 AM	4	0	0	1	4	2	0	0	0	0	0	5	0	17
Total	60	13.3	26.7	0	19.2	54.5	27.3	0	33	42.9	57.1	6.2	93.8	0
% App. 0-80	750	500	800	750	500	800	750	500	800	750	500	800	500	800



Accurate Counts
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Survey Date : 4/9/2014
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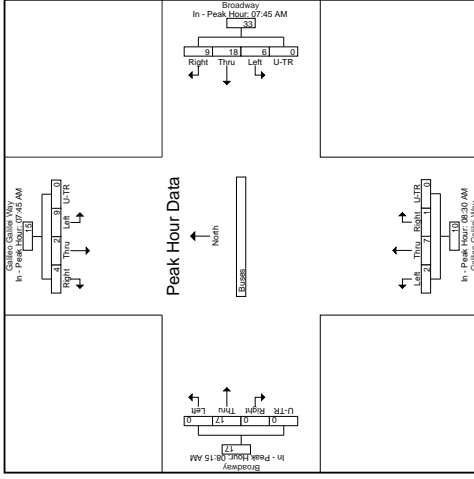
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Galileo Galilei Way				Broadway				Broadway				
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	Peak Hour for Eager/Broadway/Brighton St.																
+10 mins.	3	1	0	5	3	5	2	0	10	1	0	0	2	0	4	0	0
+15 mins.	2	0	0	4	1	6	2	0	9	0	1	0	1	0	4	0	0
+20 mins.	2	0	0	3	1	3	2	0	7	1	2	0	5	0	4	0	0
+25 mins.	2	0	0	3	1	3	2	0	7	1	2	0	5	0	4	0	0
+30 mins.	2	0	0	3	1	3	2	0	7	1	2	0	5	0	4	0	0
Total Volume	9	2	4	15	6	18	9	0	33	2	7	1	10	0	17	0	0
% App. Topt	60	13.3	26.7	0	19.2	54.5	27.3	0	70	7.0	10	0	100	0	100	0	0
PHF	.750	.500	.500	.750	.750	.750	.750	.000	.833	.500	.438	.000	.500	.000	.667	.000	.000



Accurate Counts
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File Name : 16460001
Site Code : 16460001
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N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
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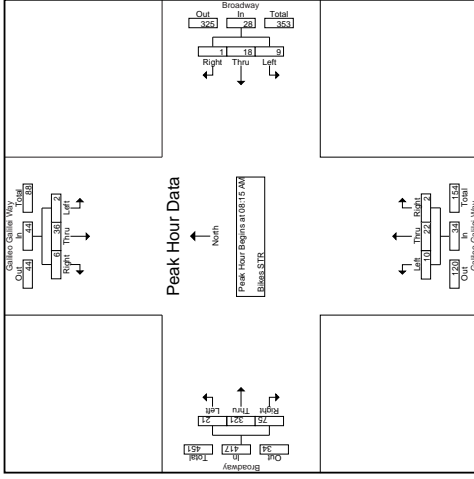
Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	1	5	2	0	1	0	1	6	0	3	34	8	63
07:45 AM	2	1	1	0	1	0	2	11	1	3	54	12	57
Total	3	7	2	0	2	0	5	2	0	0	57	4	75
08:00 AM	1	3	0	0	2	0	3	4	0	5	85	7	125
08:15 AM	1	9	2	0	2	0	1	5	0	1	81	10	112
08:30 AM	1	15	1	2	5	0	5	8	2	8	73	27	148
08:45 AM	3	34	7	5	17	0	14	19	2	19	250	48	469
Total	6	58	10	7	24	0	22	46	4	25	616	92	885
09:00 AM	0	5	0	4	3	1	1	5	0	6	82	31	138
09:15 AM	1	4	0	1	1	0	2	7	0	2	49	16	88
09:30 AM	1	5	0	1	2	0	4	2	0	4	76	17	109
09:45 AM	1	15	1	2	5	0	5	8	2	8	73	27	148
Total	4	29	1	8	11	1	12	21	2	20	266	91	382
% Appr %	10.6	75.8	13.6	29.7	67.6	2.7	29.7	66.6	4.7	4.2	76.3	17.4	70.1
Total %	0.9	6.4	1.2	1.4	3.2	0.1	2.4	5.4	0.4	3.3	61.6	13.7	88.5

Start Time	Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	1	0	0	1	0	0	3	0	3
07:45 AM	0	1	0	0	1	0	0	3	0	3
Total	0	2	0	0	2	0	0	6	0	6
08:00 AM	0	2	0	0	2	0	0	4	0	4
08:15 AM	0	2	0	0	2	0	0	4	0	4
08:30 AM	0	2	0	0	2	0	0	4	0	4
08:45 AM	0	2	0	0	2	0	0	4	0	4
Total	0	10	0	0	10	0	0	20	0	20
% Appr %	0.0	29.7	0.0	0.0	29.7	0.0	0.0	33.1	0.0	22.7
Total %	0.0	2.7	0.0	0.0	7.4	0.0	0.0	10.1	0.0	11.3

Start Time	Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	1	0	0	1	0	0	3	0	3
07:45 AM	0	1	0	0	1	0	0	3	0	3
Total	0	2	0	0	2	0	0	6	0	6
08:00 AM	0	2	0	0	2	0	0	4	0	4
08:15 AM	0	2	0	0	2	0	0	4	0	4
08:30 AM	0	2	0	0	2	0	0	4	0	4
08:45 AM	0	2	0	0	2	0	0	4	0	4
Total	0	10	0	0	10	0	0	20	0	20
% Appr %	0.0	29.7	0.0	0.0	29.7	0.0	0.0	33.1	0.0	22.7
Total %	0.0	2.7	0.0	0.0	7.4	0.0	0.0	10.1	0.0	11.3



Accurate Counts
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File Name : 16460001
Site Code : 16460001
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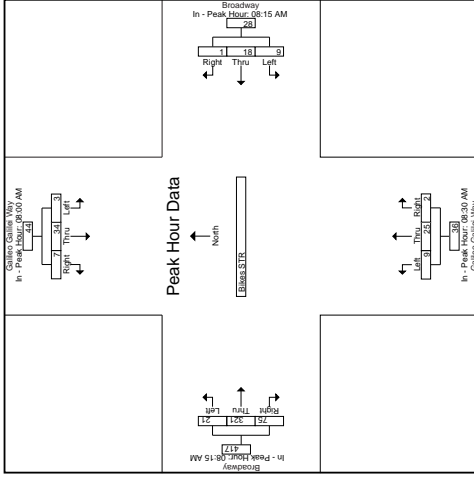
N5 Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
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Accurate Counts
978-664-2565

N5 Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way In - Peak			Galileo Galilei Way Out - Peak			Broadway East - Peak			Broadway West - Peak			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins At:													
08:00 AM	3	1	5	0	0	11	0	0	6	0	0	85	7
+0 mins.	0	7	3	0	2	0	0	0	2	0	0	81	10
+15 mins.	1	9	2	0	4	0	0	0	15	1	1	82	62
+30 mins.	1	15	2	0	3	1	0	0	6	0	0	83	37
+45 mins.	3	34	7	0	6	2	0	0	0	0	0	85	110
Total Volume	6	77.3	15.9	0	18	28	0	25	36	21	32.1	75	417
% App. Total	6.8	77.3	15.9	32.1	64.3	36.6	25	69.4	5.6	5	77	18	417
PHF	.750	.567	.583	.353	.250	.638	.450	.781	.600	.583	.324	.605	.308



Accurate Counts
978-664-2565

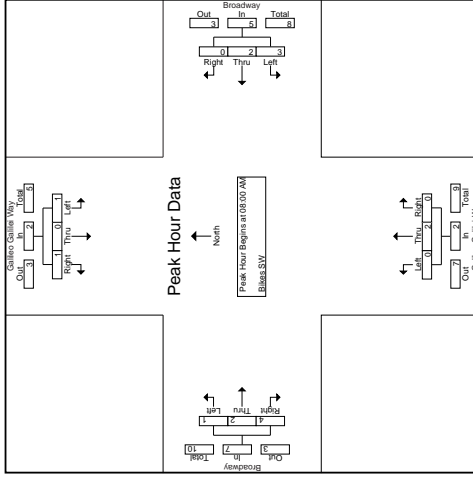
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear



Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	7
08:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	2	0	0	1	0	0	3
Total	1	0	0	4	0	0	2	0	0	1	0	0	16
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	2	1	0	0	0	0	0	0	0	0	0	0	3
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	100	0	0	20	40	40	23
Total	33.3	33.3	33.3	71.4	28.6	0	0	0	0	8	16	16	16
Approach %	8	8	8	20	8	0	0	0	0	8	16	16	16

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	1	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
08:45 AM	0	0	0	0	0	0	2	0	0	1	0	0	3
Total	1	0	0	3	0	0	2	0	0	1	0	0	6
% App. PHE	250	000	250	750	000	000	417	000	250	250	250	500	571

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

Accurate Counts
978-664-2565

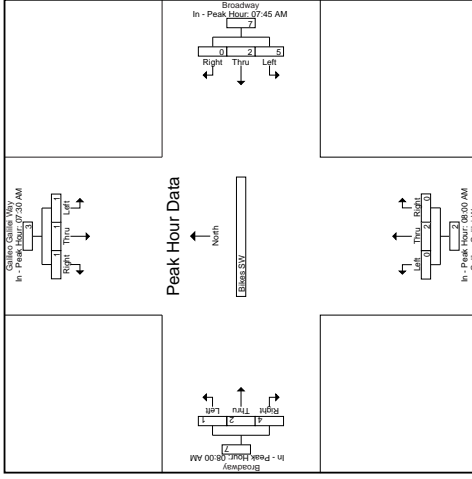
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Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From South			Galileo Galilei Way From West			Broadway From East			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins At:												
0:00 mins.	0	1	1	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	1	0	0	0	0	0	0	0	0	0
% App. Total	33.3	33.3	33.3	0	0	0	0	0	0	0	0	0
PHF	.250	.250	.250	.000	.000	.000	.000	.000	.000	.250	.250	.250



Accurate Counts
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File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

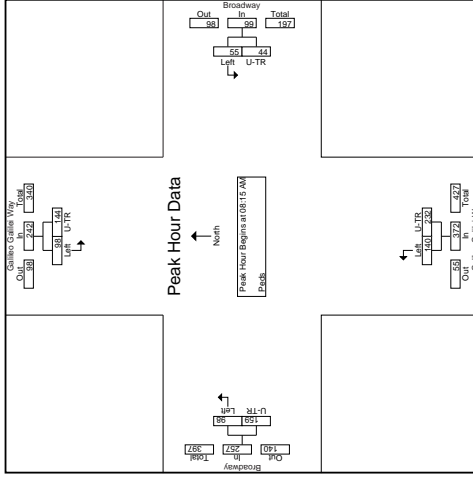
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Site Code : 16460001
Print Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Galileo Galilei Way From North		Galileo Galilei Way From South		Broadway From East		Broadway From West		In. Total
	WB	NB	WB	NB	WB	NB	WB	NB	
07:45 AM	18	4	30	26	5	8	11	17	142
Total	28	61	47	41	9	17	11	217	
08:00 AM	28	40	38	47	9	38	15	23	206
08:15 AM	17	47	36	64	13	36	19	29	233
08:30 AM	21	22	29	58	6	29	19	32	188
08:45 AM	33	38	33	74	15	33	30	50	284
Total	89	147	136	246	43	134	63	154	821
09:00 AM	27	37	42	36	21	42	30	48	255
09:15 AM	16	22	36	32	13	36	19	23	158
09:30 AM	16	22	26	32	8	26	13	22	151
09:45 AM	16	22	26	32	8	26	13	22	151
Total %	38.6	61.4	42.6	57.4	58.1	41.9	37.5	62.5	14.3
Approach %	10.8	17.2	16.8	22.7	5.5	8.6	8.6	14.3	

Start Time	Galileo Galilei Way From North		Galileo Galilei Way From South		Broadway From East		Broadway From West		In. Total
	WB	NB	WB	NB	WB	NB	WB	NB	
07:30 AM	10	17	17	17	5	17	11	17	118
07:45 AM	10	17	17	17	5	17	11	17	118
08:00 AM	10	17	17	17	5	17	11	17	118
08:15 AM	10	17	17	17	5	17	11	17	118
08:30 AM	10	17	17	17	5	17	11	17	118
08:45 AM	10	17	17	17	5	17	11	17	118
09:00 AM	10	17	17	17	5	17	11	17	118
09:15 AM	10	17	17	17	5	17	11	17	118
09:30 AM	10	17	17	17	5	17	11	17	118
09:45 AM	10	17	17	17	5	17	11	17	118
Total	108	172	172	172	55	172	119	172	1188
% NB of Total	40.5	59.5	40.5	59.5	40.5	59.5	40.5	59.5	
PHF	0.742	0.766	0.766	0.766	0.766	0.766	0.766	0.766	0.766

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

Accurate Counts
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File Name : 16460001
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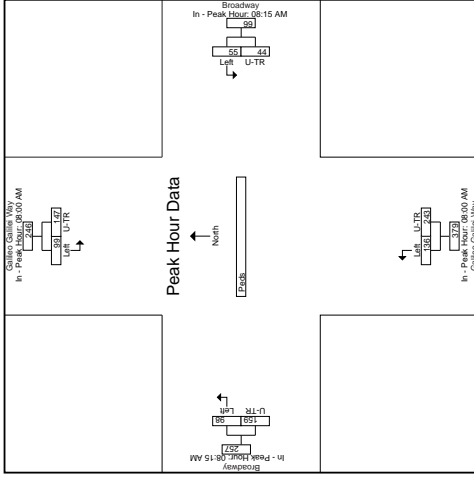
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way			Galileo Galilei Way			Broadway			Broadway			Int. Total
	WB	EB	App. Total	WB	EB	App. Total	SB	EB	App. Total	SB	EB	App. Total	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Each Approach													
07:30 AM	28	40	68	38	47	85	19	19	38	19	29	48	
+0 mins.	17	47	64	36	64	100	19	32	51	19	32	51	
+15 mins.	21	42	63	33	64	97	19	32	51	19	32	51	
+45	31	38	69	23	71	107	30	40	70	30	40	70	
Total Volume	99	147	246	136	243	379	86	159	257	86	159	257	
% App. Total	40.2	59.8	896	55.6	64.1	38.1	61.9	38.1	61.9	38.1	61.9	38.1	61.9
PHF	.750	.762	.866	.856	.861	.866	.817	.795	.803	.817	.795	.803	



Accurate Counts
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File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

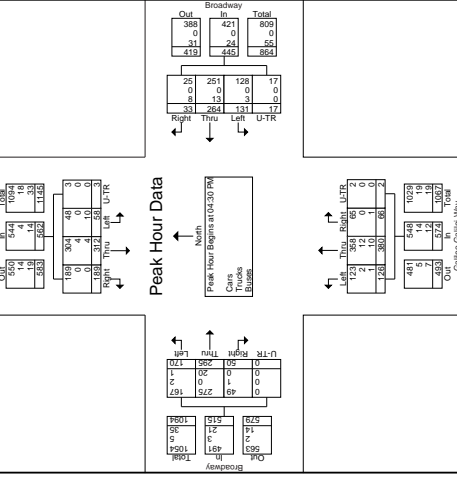
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North			Galileo Galilei Way From South			Broadway From East			Galileo Galilei Way From South			Broadway From West			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
04:30 PM	17	74	47	0	33	62	8	3	34	95	2	1	34	74	9	0	489
04:45 PM	13	79	44	0	32	64	8	3	38	97	16	0	42	86	12	0	546
05:00 PM	13	79	44	1	37	74	11	4	33	103	14	0	56	64	17	0	549
05:15 PM	22	67	46	0	26	66	9	2	35	84	19	0	30	66	15	0	487
05:30 PM	13	61	44	0	30	72	5	5	40	89	20	3	39	71	17	0	508
05:45 PM	13	61	44	0	30	72	5	5	40	89	20	3	39	71	17	0	508
Total	61	286	162	1	125	276	33	19	146	372	68	3	167	237	61	0	2899
06:00 PM	15	59	48	0	21	54	9	0	29	74	16	2	35	64	11	0	437
06:15 PM	16	69	43	0	20	57	4	4	36	63	10	2	31	53	6	0	444
06:30 PM	11	53	34	0	15	43	3	3	24	52	9	1	25	46	4	0	372
Approach %	3.1	14.3	8.3	0.1	5.7	12.9	1.5	0.7	5.7	17.3	3.3	0.2	7.7	14.6	2.5	0	
Cars	104	550	399	3	224	490	45	28	281	654	129	9	301	539	88	0	3804
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	20	9	1	0	4	23	15	0	3	18	2	0	2	40	0	0	137
% Total	16.1	1.6	0.3	0	1.6	4.5	25	0	1.1	2.6	1.3	0	0.7	6.9	0	0	3.4



Start Time	Galileo Galilei Way From North			Galileo Galilei Way From South			Broadway From East			Galileo Galilei Way From South			Broadway From West			Int. Total				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
04:30 PM	15	60	50	0	21	85	15	1	122	85	15	1	38	71	12	0	489			
04:45 PM	17	74	47	0	33	62	8	3	106	34	95	2	41	34	74	9	0	512		
05:00 PM	13	79	44	1	37	74	11	4	126	33	103	14	0	56	64	17	0	549		
05:15 PM	22	67	46	0	26	66	9	2	126	33	103	14	0	56	64	17	0	549		
05:30 PM	13	79	44	0	30	72	5	5	126	33	103	14	0	56	64	17	0	549		
05:45 PM	13	79	44	0	30	72	5	5	126	33	103	14	0	56	64	17	0	549		
Total	68	312	189	3	562	131	264	33	17	445	128	380	66	2	574	170	295	50	0	515
% App. Total	10.3	55.5	33.6	0.5	68.8	29.4	59.3	7.4	3.8	68.3	22	66.2	11.5	0.3	69.0	33	57.3	5.7	0	93.0
Cars	88	304	189	3	544	128	259	25	17	421	123	358	65	2	548	167	275	44	0	491
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	10	4	0	0	4	0	0	0	2	12	0	0	0	2	0	0	0	0	0	3
% Total	17.2	1.3	0	0	2.5	2.3	4.9	24.2	0	5.4	0.8	2.6	1.5	0	2.1	0.6	6.8	0	0	4.1

Start Time	Galileo Galilei Way From North			Galileo Galilei Way From South			Broadway From East			Galileo Galilei Way From South			Broadway From West			Int. Total				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
04:30 PM	15	60	50	0	21	85	15	1	122	85	15	1	38	71	12	0	121			
04:45 PM	17	74	47	0	33	62	8	3	106	34	95	2	41	34	74	9	0	117		
05:00 PM	13	79	44	1	37	74	11	4	126	33	103	14	0	56	64	17	0	137		
05:15 PM	22	67	46	0	26	66	9	2	126	33	103	14	0	56	64	17	0	137		
05:30 PM	13	79	44	0	30	72	5	5	126	33	103	14	0	56	64	17	0	137		
05:45 PM	13	79	44	0	30	72	5	5	126	33	103	14	0	56	64	17	0	137		
Total	68	312	189	3	562	131	264	33	17	445	128	380	66	2	574	170	295	50	0	515
% App. Total	10.3	55.5	33.6	0.5	68.8	29.4	59.3	7.4	3.8	68.3	22	66.2	11.5	0.3	69.0	33	57.3	5.7	0	93.0
Cars	88	304	189	3	544	128	259	25	17	421	123	358	65	2	548	167	275	44	0	491
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	10	4	0	0	4	0	0	0	2	12	0	0	0	2	0	0	0	0	0	3
% Total	17.2	1.3	0	0	2.5	2.3	4.9	24.2	0	5.4	0.8	2.6	1.5	0	2.1	0.6	6.8	0	0	4.1

Accurate Counts
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File Name : 1646001
Site Code : 1646001
Date : 4/9/2014
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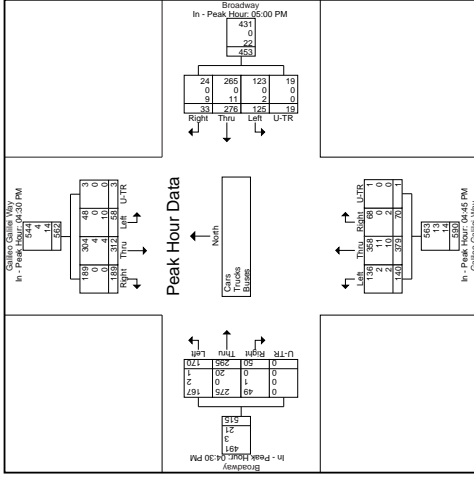
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646001
Site Code : 1646001
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Broadway				Galileo Galilei Way				Broadway				
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	08:00 PM				04:45 PM				04:30 PM				04:15 PM				
Peak Hour for Eastbound Bikes Rt:	15	80	0	145	32	64	8	112	34	95	21	1	151	38	71	12	0
+10 mins.	17	74	0	138	37	74	11	126	38	97	16	0	151	34	74	9	0
+15 mins.	13	70	0	130	30	60	5	112	35	80	19	0	138	42	82	2	0
+45 mins.	13	70	0	130	30	60	5	112	35	80	19	0	138	42	82	2	0
Total Volume	58	312	189	562	125	276	33	453	140	379	70	1	590	170	295	50	0
% App. Total	10.3	55.5	33.6	100	27.6	60.9	7.3	82.2	29.7	64.2	11.9	0.2	99.7	33.3	57.3	9.7	0
Trucks	88	304	189	562	202	724	24	350	119	308	68	280	563	167	275	49	0
% Cars	88	304	189	562	202	724	24	350	119	308	68	280	563	167	275	49	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	10	4	0	14	2	11	9	22	10	2	0	0	14	1	20	0	0
% Buses	17.2	1.3	0	2.5	1.6	4	27.3	4.9	1.4	2.6	2.9	0	2.4	0.6	6.8	0	0



Accurate Counts
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File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

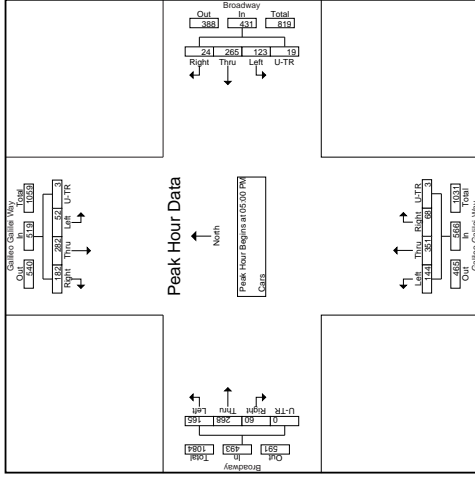
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				In. Total	Out. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
04:30 PM	14	70	47	0	33	59	7	3	32	92	20	1	34	69	9	0	488	
04:45 PM	27	147	97	0	60	120	11	5	53	172	35	2	71	134	21	0	985	
05:00 PM	11	80	48	2	31	61	5	8	38	91	16	0	40	80	11	0	522	
05:15 PM	10	77	44	1	37	70	9	4	32	85	14	0	56	61	17	0	527	
05:30 PM	20	66	46	0	25	65	7	2	34	80	18	0	30	61	15	0	469	
05:45 PM	11	59	44	0	30	69	3	5	40	85	20	3	39	66	17	0	494	
Total	92	282	162	3	123	265	24	19	144	351	68	3	165	288	60	0	2089	
06:00 PM	12	57	48	0	21	50	7	0	29	73	16	2	34	59	11	0	419	
06:15 PM	13	64	42	0	20	45	4	3	35	59	0	2	31	78	6	0	421	
06:30 PM	10	54	38	0	27	49	4	4	24	62	13	0	30	57	10	0	364	
Approach %	10.1	53.6	36	0.3	28.5	62.3	5.7	3.6	24.8	62.1	12.3	0.9	32.1	57.5	10.4	0	3604	
Total %	2.7	14.5	9.7	0.1	5.9	12.9	1.2	0.7	6.9	17.2	3.4	0.2	7.9	14.2	2.6	0	3604	

Start Time	Galileo Galilei Way From North				Broadway From East				Galileo Galilei Way From South				Broadway From West				In. Total	Out. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
04:30 PM	14	70	47	0	33	59	7	3	32	92	20	1	34	69	9	0	488	
04:45 PM	27	147	97	0	60	120	11	5	53	172	35	2	71	134	21	0	985	
05:00 PM	11	80	48	2	31	61	5	8	38	91	16	0	40	80	11	0	522	
05:15 PM	10	77	44	1	37	70	9	4	32	85	14	0	56	61	17	0	527	
05:30 PM	20	66	46	0	25	65	7	2	34	80	18	0	30	61	15	0	469	
05:45 PM	11	59	44	0	30	69	3	5	40	85	20	3	39	66	17	0	494	
Total	92	282	162	3	123	265	24	19	144	351	68	3	165	288	60	0	2089	
06:00 PM	12	57	48	0	21	50	7	0	29	73	16	2	34	59	11	0	419	
06:15 PM	13	64	42	0	20	45	4	3	35	59	0	2	31	78	6	0	421	
06:30 PM	10	54	38	0	27	49	4	4	24	62	13	0	30	57	10	0	364	
Approach %	10.1	53.6	36	0.3	28.5	62.3	5.7	3.6	24.8	62.1	12.3	0.9	32.1	57.5	10.4	0	3604	
Total %	2.7	14.5	9.7	0.1	5.9	12.9	1.2	0.7	6.9	17.2	3.4	0.2	7.9	14.2	2.6	0	3604	



Accurate Counts
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Site Code : 16460001
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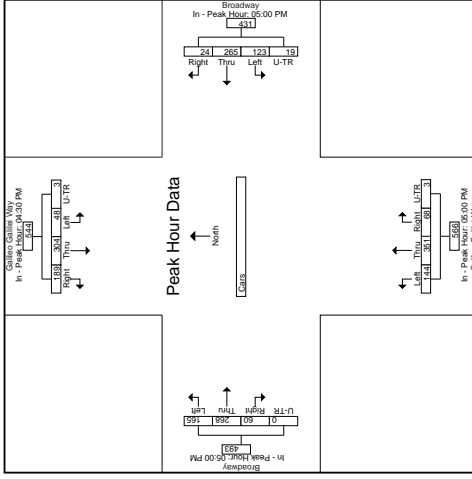
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Galileo Galilei Way				Broadway				Broadway			
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																
Peak Hour for Eastbound Direction:																
05:00 PM	140	0	0	0	105	38	91	16	0	145	40	80	11	0	131	
+10 mins.	77	50	61	5	8	38	91	16	0	145	40	80	11	0	131	
+15 mins.	14	70	47	0	120	32	95	14	0	141	56	61	17	0	134	
+20 mins.	10	70	44	2	130	30	85	15	0	148	39	66	17	0	122	
+25 mins.	10	71	44	2	130	30	85	15	0	148	39	66	17	0	122	
Total Volume	48	304	189	3	544	123	265	24	19	431	144	351	69	3	566	165
% App. Total	8.9	55.9	34.7	0.6	29.5	61.5	5.6	4.4	25.4	62	12	0.5	33.5	54.4	19.2	0
PHF	.867	.860	.845	.375	.885	.831	.896	.867	.884	.898	.824	.850	.737	.838	.887	.860



Accurate Counts
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File Name : 16460001
Site Code : 16460001
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
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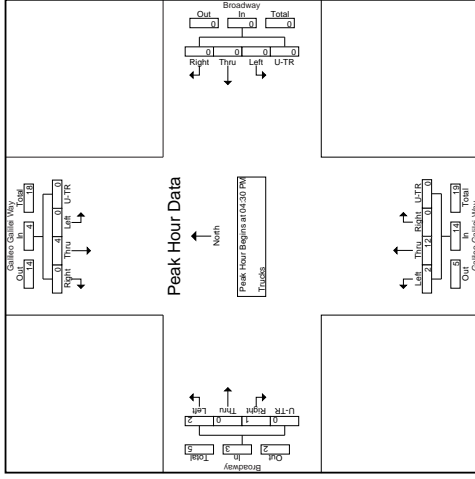
Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Counts Printed - Tracks

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	2	0	0	0	0	1	2	0	0	0	0	5
Total	0	4	0	0	0	0	1	2	0	0	0	0	10
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	1	5	0	0	0	0	6
05:30 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
05:45 PM	0	2	0	0	0	0	1	10	0	0	0	0	12
Total	0	2	0	0	0	0	1	10	0	0	0	0	12
06:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
06:15 PM	0	3	0	0	0	0	2	17	0	0	0	0	4
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	100	0	0	0	0	10.5	89.5	0	0	66.7	0	33.3
Total %	0	29	0	0	0	0	6.5	54.8	0	0	6.5	0	3.2

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	2	0	0	0	0	0	2	0	0	0	0	2
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	1	5	0	0	0	0	6
05:30 PM	0	100	0	0	0	0	14.3	85.7	0	0	14	66.7	31
Approach %	0	100	0	0	0	0	14.3	85.7	0	0	14	66.7	31
Total %	0	100	0	0	0	0	14.3	85.7	0	0	14	66.7	31
PHE	.000	.500	.000	.000	.000	.000	.500	.600	.000	.000	.250	.000	.875



Accurate Counts
978-664-2565

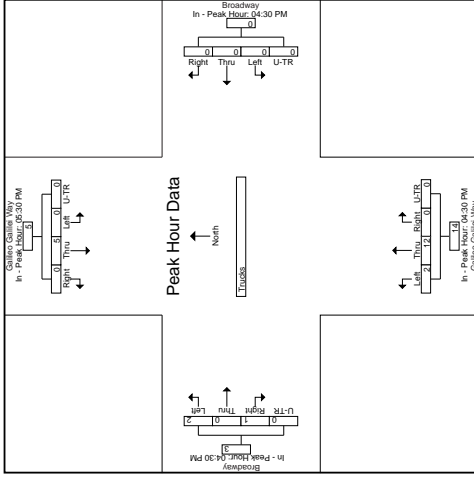
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Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way EW Street			Galileo Galilei Way EW Street			Broadway EW Street			Broadway EW Street			Imp. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Eager/Bright/Blk													
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	1	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	0	100	0	0	0	0	0	0	0	0	0	0	0
PHF	0.000	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250



Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 3

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

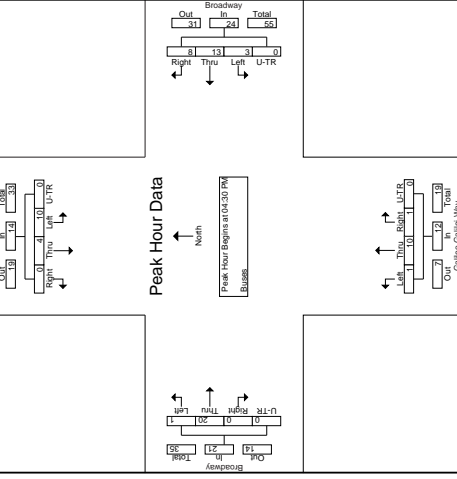
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	2	0	0	2	3	1	0	1	1	0	0	0	19
04:45 PM	3	2	0	3	4	1	0	2	1	0	0	5	38
Total	5	3	0	5	7	2	0	3	2	0	0	5	0
05:00 PM	2	0	0	2	3	0	0	1	3	0	0	0	0
05:15 PM	3	1	0	4	2	0	0	3	0	0	0	6	0
05:30 PM	2	0	0	1	2	0	1	2	1	0	0	5	0
05:45 PM	2	0	0	3	2	0	0	2	0	0	0	5	0
Total	9	2	0	11	9	0	1	11	1	0	0	19	0
06:00 PM	3	2	0	4	2	0	0	0	0	0	1	5	0
06:15 PM	3	2	1	0	2	15	0	3	4	0	0	4	0
06:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	0
Approach	66.7	30	3.3	9.5	54.8	35.7	0	13	78.3	8.7	0	4.8	95.2
Total %	14.6	6.6	0.7	2.9	16.8	10.9	0	2.2	13.1	1.5	0	1.5	28.2

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	2	0	0	2	3	1	0	1	1	0	0	0	19
04:45 PM	3	2	0	3	4	1	0	2	1	0	0	5	38
Total	5	3	0	5	7	2	0	3	2	0	0	5	0
05:00 PM	2	0	0	2	3	0	0	1	3	0	0	0	0
05:15 PM	3	1	0	4	2	0	0	3	0	0	0	6	0
05:30 PM	2	0	0	1	2	0	1	2	1	0	0	5	0
05:45 PM	2	0	0	3	2	0	0	2	0	0	0	5	0
Total	9	2	0	11	9	0	1	11	1	0	0	19	0
06:00 PM	3	2	0	4	2	0	0	0	0	0	1	5	0
06:15 PM	3	2	1	0	2	15	0	3	4	0	0	4	0
06:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	0
Approach	66.7	30	3.3	9.5	54.8	35.7	0	13	78.3	8.7	0	4.8	95.2
Total %	14.6	6.6	0.7	2.9	16.8	10.9	0	2.2	13.1	1.5	0	1.5	28.2



Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	2	0	0	2	3	1	0	1	1	0	0	0	19
04:45 PM	3	2	0	3	4	1	0	2	1	0	0	5	38
Total	5	3	0	5	7	2	0	3	2	0	0	5	0
05:00 PM	2	0	0	2	3	0	0	1	3	0	0	0	0
05:15 PM	3	1	0	4	2	0	0	3	0	0	0	6	0
05:30 PM	2	0	0	1	2	0	1	2	1	0	0	5	0
05:45 PM	2	0	0	3	2	0	0	2	0	0	0	5	0
Total	9	2	0	11	9	0	1	11	1	0	0	19	0
06:00 PM	3	2	0	4	2	0	0	0	0	0	1	5	0
06:15 PM	3	2	1	0	2	15	0	3	4	0	0	4	0
06:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	0
Approach	66.7	30	3.3	9.5	54.8	35.7	0	13	78.3	8.7	0	4.8	95.2
Total %	14.6	6.6	0.7	2.9	16.8	10.9	0	2.2	13.1	1.5	0	1.5	28.2

Accurate Counts
978-664-2565

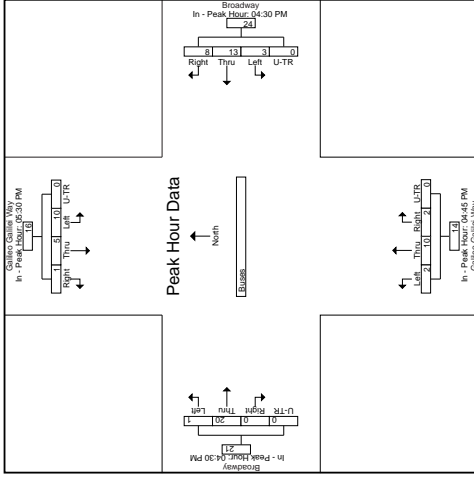
File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 4

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 3

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way				Galileo Galilei Way				Broadway				Broadway							
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR				
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Eastbound Direction:																				
04:30 PM	0	0	0	2	0	0	0	3	2	0	5	1	1	1	0	3	0	0	0	7
+10 mins.	2	1	0	3	2	3	1	0	6	1	0	0	4	0	0	4	0	5	0	5
+15 mins.	3	2	1	0	6	0	2	0	2	1	0	0	4	0	0	4	0	3	0	0
+45 mins.	10	5	1	0	16	3	13	8	0	24	2	10	2	0	14	1	20	0	0	21
Total Volume	69.5	31.2	6.2	0	19.5	54.2	33.3	0	14.3	71.4	14.3	0	4.8	95.2	0	0	0	0	0	0
% App. Toph	.833	.665	.250	.000	.667	.375	.813	.000	.857	.667	.000	.000	.250	.833	.000	.000	.000	.000	.000	.750



Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

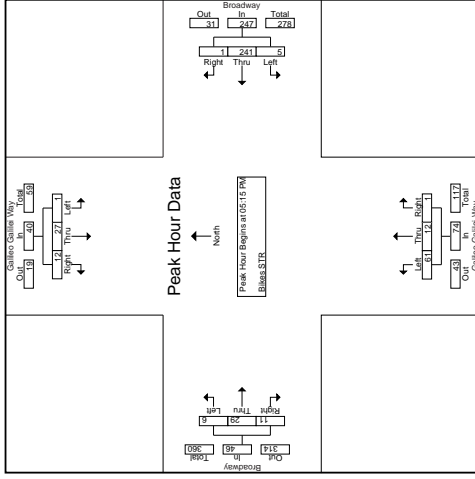
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North			Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
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	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	6	5	47	0	12	10	0	3	5	5	3	80
05:15 PM	0	9	2	84	0	8	2	0	3	10	5	125	125
05:30 PM	0	7	1	56	1	12	6	0	2	4	1	93	93
05:45 PM	0	3	6	47	0	16	3	0	1	8	3	87	87
Total	0	25	15	230	1	42	17	0	6	27	12	389	389
06:00 PM	0	8	3	1	54	0	25	1	102	7	2	102	102
06:15 PM	0	2	1	45	2	16	3	0	1	8	3	87	87
06:30 PM	0	1	2	50	0	16	3	0	10	4	1	83	83
06:45 PM	0	4	2	45	0	25	0	0	10	7	2	102	102
Total	0	14	6	195	2	74.8	24.4	0.8	13.3	24	7	247	247
Approach %	1.4	64.3	34.3	3.8	95.7	0.5	74.8	24.4	0.8	13.3	62.7	24	67.0
Total %	0.1	6.7	3.6	2.2	56.8	0.3	14.2	4.6	0.1	1.5	7	2.7	72.0

Start Time	Broadway From East			Galileo Galilei Way From South			Broadway From West			In. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
05:30 PM	0	0	0	0	0	0	0	0	0	0		
05:45 PM	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0		
06:00 PM	0	84	0	85	0	0	10	3	10	5	105	
06:15 PM	0	47	0	47	16	3	0	19	1	8	12	87
06:30 PM	0	3	6	9	16	3	0	19	1	8	3	102
06:45 PM	0	8	3	11	54	1	1	27	0	7	2	102
Total	0	158	29	247	91.4	1.1	74	68.5	13	63	46	407
% App. Opp.	2.5	67.5	30	37.6	0.4	24.7	1.4	27.4	0.3	23.9	46	61.4
P.H.F.	250	750	500	833	417	717	250	726	610	500	685	638



Accurate Counts
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File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
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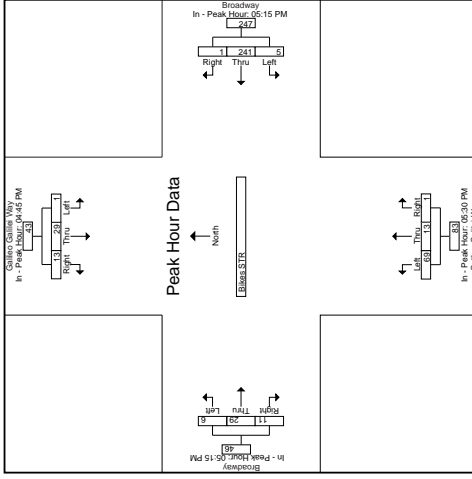
N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way Eastbound			Galileo Galilei Way Westbound			Broadway Eastbound			Broadway Westbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	7	4	11	05:30 PM	85	0	0	18	05:15 PM	3	10	5
+0 mins.	0	6	6	12	3	60	1	16	3	0	19	2	4
+15 mins.	0	9	2	11	0	47	0	27	1	0	9	3	7
+30 mins.	0	9	2	11	0	56	0	27	1	0	9	3	2
+45 mins.	0	9	2	11	0	56	0	27	1	0	9	3	2
Total Volume	1	29	13	43	5	247	1	69	13	1	83	6	29
% App. Total	2.3	67.4	30.2	43	2	97.6	0.4	15.7	1.2	13	63	23.9	46
PHF	.260	.205	.342	.398	.417	.726	.250	.352	.250	.789	.950	.725	.639



Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galliei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

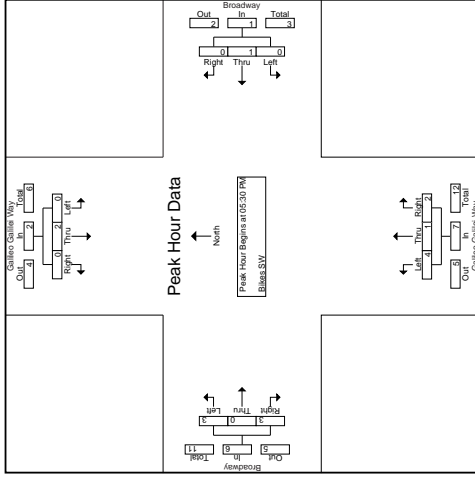
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Galliei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galliei Way From North			Broadway From East			Galileo Galliei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	1
Total	0	0	0	1	2	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	2	2	0	0	0	0	4
05:15 PM	1	0	0	0	0	0	2	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	2	3	0	0	0	0	5
Total	1	0	0	0	0	0	7	5	0	0	0	0	12
06:00 PM	0	1	0	0	0	0	0	0	1	1	0	0	2
06:15 PM	0	1	0	0	0	0	2	3	2	0	0	0	5
06:30 PM	0	0	0	0	0	0	61.5	23.7	16.4	42.9	0	0	57.1
Approach %	33.3	66.7	0	25	75	0	29.6	11.1	7.4	11.1	0	0	14.8
Total %	3.7	7.4	0	3.7	11.1	0	29.6	11.1	7.4	11.1	0	0	14.8

Start Time	Broadway From East			Galileo Galliei Way From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
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
06:30 PM	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
% App. PHE	.000	.500	.000	.000	.250	.500	.583	.375	.000	.750



Accurate Counts
978-664-2565

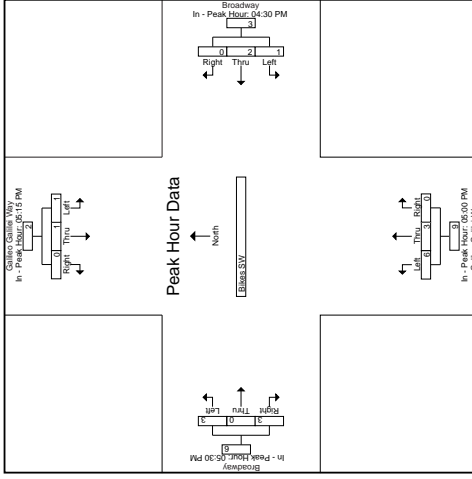
File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 4

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 3

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way Peak			Broadway From East			Galileo Galilei Way From West			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
04:30 PM	0	0	0	1	0	0	2	0	0	0	0	2
05:00 PM	0	0	0	2	0	0	2	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0
06:15 PM	1	1	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	3	0	0	6	0	0	2	0	2
% App. Total	50	50	0	33.3	0	0	66.7	0	0	33.3	0	33.3
PHF	.250	.250	.000	.375	.000	.000	.375	.000	.000	.375	.000	.375



Accurate Counts
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File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 3

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Survey Date : 4/9/2014
Page No : 4

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
Page No. : 2

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

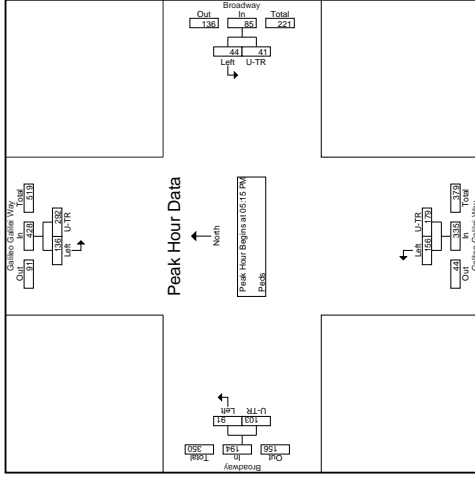
File Name : 16460001
Site Code : 16460001
Print Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Galilei Way
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North				Galileo Galilei Way From South				Broadway From East				Broadway From West				In. Total
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	
05:00 PM	31	33	10	8	23	38	11	17	34	74	29	37	31	20	27	171	
05:15 PM	69	65	25	18	34	74	29	37	51	53	17	31	256	35	35	351	
05:30 PM	39	64	16	4	29	37	21	26	29	26	29	29	281	29	29	281	
05:45 PM	53	72	2	4	43	46	19	20	20	46	19	20	260	20	20	260	
Total	139	233	52	30	143	178	66	100	107	178	66	100	107	100	100	1075	
06:00 PM	28	91	10	14	38	54	22	28	54	54	22	28	285	28	28	285	
06:15 PM	24	65	11	13	44	34	29	34	44	34	29	34	234	34	34	234	
06:30 PM	26	47	9	8	26	34	17	14	26	34	17	14	187	14	14	187	
06:45 PM	37	62	5	7	43	26	17	20	43	26	17	20	165	20	20	165	
Approx %	37.1	62.9	54.7	45.3	43.2	56.8	47.3	52.7	47.3	56.8	47.3	52.7	47.3	52.7	47.3	52.7	
Total %	14.9	25.2	5.2	4.3	13.8	18.1	8.8	9.8	13.8	18.1	8.8	9.8	9.8	9.8	9.8	9.8	

Start Time	Galileo Galilei Way From North				Galileo Galilei Way From South				Broadway From East				Broadway From West				In. Total
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	
05:00 PM	16	20	4	3	20	37	6	6	20	37	6	6	21	26	21	47	
05:15 PM	36	56	19	11	35	42	7	7	35	42	7	7	29	29	29	59	
05:30 PM	33	72	12	4	54	46	10	20	54	46	10	20	20	39	20	260	
05:45 PM	28	91	10	14	43	34	22	28	43	34	22	28	28	28	28	285	
Total	119	233	46	38	143	178	66	100	107	178	66	100	107	100	100	1075	
% Appx. Total	31.8	68.2	48.2	41.8	46.6	53.4	46.9	53.1	46.9	53.1	46.9	53.1	46.9	53.1	46.9	53.1	
PHF	0.72	0.92	0.59	0.58	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	



Accurate Counts
978-664-2565

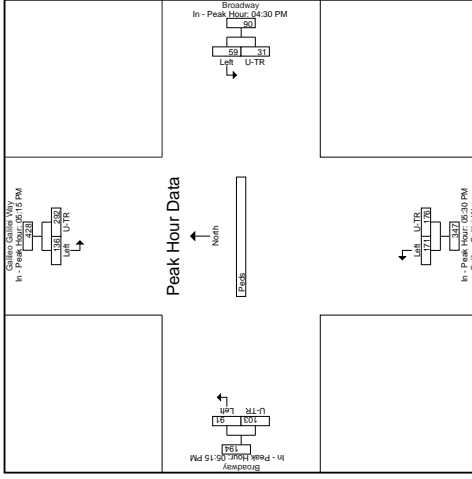
File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 4

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 3

N/S Street : Galileo Galilei Way
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way			Galileo Galilei Way			Broadway			Broadway			Int. Total
	WB	EB	App. Total	WB	EB	App. Total	SB	NB	App. Total	SB	NB	App. Total	
04:30 PM	103	103	206	25	42	67	77	21	26	47	21	26	47
05:15 PM	39	64	103	10	35	45	77	21	26	47	21	26	47
06:00 PM	36	66	102	10	34	44	77	21	26	47	21	26	47
06:45 PM	33	62	95	9	31	40	72	22	28	50	22	28	50
07:30 PM	28	51	79	7	24	31	72	22	28	50	22	28	50
Total Volume	136	292	428	59	171	230	347	91	103	194	91	103	194
% App. Total	31.8	68.2	100	13.3	46.7	60	77.7	21.3	26.3	47.6	21.3	26.3	47.6
PHF	.872	.882	.899	.819	.833	.833	.815	.868	.888	.888	.888	.888	.888



Accurate Counts
978-664-2565

File Name : 16460001
Site Code : 16460001
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

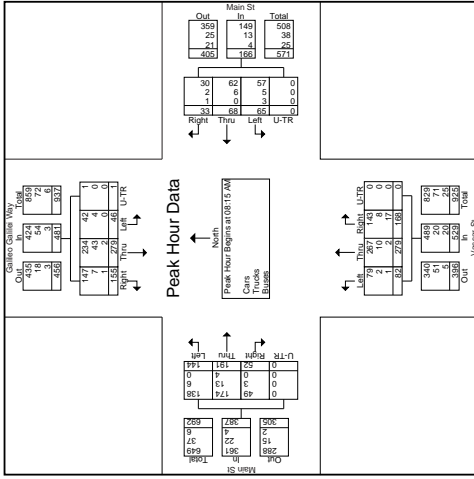
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No. : 2

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Galileo/Galileo Way From North						Main St From East						Vassar St From South						Main St From West						In Total
	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR		
07:45 AM	11	24	35	0	14	13	8	0	12	69	37	0	30	40	5	0	0	0	348	0	0	0	0	659	
08:00 AM	11	61	22	0	14	26	7	0	20	82	38	0	31	41	7	0	0	0	360	0	0	0	0	360	
08:15 AM	20	64	41	0	15	15	10	0	30	68	38	0	33	40	11	0	0	0	385	0	0	0	0	385	
08:30 AM	12	79	28	1	21	24	6	0	19	78	35	0	37	66	12	0	0	0	418	0	0	0	0	418	
08:45 AM	6	69	43	0	20	18	6	0	13	76	45	0	35	46	13	0	0	0	390	0	0	0	0	390	
Total	49	273	134	1	70	83	29	0	82	304	156	0	136	193	45	0	0	0	1535	0	0	0	0	1535	
09:00 AM	8	67	43	0	9	11	11	0	20	57	50	0	39	39	16	0	0	0	370	0	0	0	0	370	
09:15 AM	6	72	39	0	16	17	11	0	15	69	43	0	26	40	9	0	0	0	363	0	0	0	0	363	
Grand Total	83	655	279	1	119	135	66	0	142	566	317	0	258	343	89	0	0	0	2945	0	0	0	0	2945	
Total %	2.8	18.8	9.5	0.1	3.7	4.2	20.2	0	4.8	19.2	10.8	0	8.8	11.6	2.7	0	0	0	20.6	0	0	0	0	20.6	
% Cars	74	473	262	2	100	118	60	0	139	536	273	0	232	319	76	0	0	0	905.5	0	0	0	0	905.5	
% Trucks	892	85.2	95.19	100	84	87.4	90.19	0	97.9	94.7	86.1	0	89.9	93	95	0	0	0	90.5	0	0	0	0	90.5	
% Buses	1	9	2	0	8	11.9	6.1	0	1.4	5.5	2.8	0	8.9	4.7	5	0	0	0	2.7	0	0	0	0	2.7	
% Buses	1.2	1.6	0.7	0	7.6	0.7	3	0	0.7	0.9	1.1	0	1.2	2.3	0	0	0	0	7.6	0	0	0	0	7.6	

Start Time	Galileo/Galileo Way From North						Main St From East						Vassar St From South						Main St From West					
	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR	U-TR	Left	Thru	Right	U-TR	U-TR	
07:30 AM	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	21	24	6	0	44	13	76	45	0	134	55	46	13	0	94	390	0	0	0	0	0	0	0	0
08:15 AM	6	69	43	0	118	9	11	11	0	31	20	57	60	0	127	39	16	0	370	0	0	0	0	370
09:00 AM	8	67	43	0	118	9	11	11	0	31	20	57	60	0	127	39	16	0	370	0	0	0	0	370
% App. Data	9.6	58	32.2	0.1	48.1	39.2	4.1	19.9	0	166	155.5	31.8	0	529	374	49.4	13.4	0	387	1565	0	0	0	1565
% App. Data	575	883	901	250	962	774	708	750	0	814	683	894	840	0	972	923	723	813	0	841	935	0	0	935
Cars	42	234	147	1	424	57	62	30	0	149	79	267	143	0	489	138	174	49	0	361	1423	0	0	1423
% Trucks	43	7	100	0	84	87	91.6	2	0	96.3	80.1	90.2	80.1	0	56	91.3	94.2	0	93.6	91.6	0	0	0	93.6
% Buses	8.7	15.4	4.5	0	11.2	7.7	8.8	6.1	0	7.8	2.4	3.6	4.8	0	3.8	4.2	6.8	5.8	0	5.7	7.0	0	0	5.7
% Buses	0	2	1	0	3	3	0	1	0	2	1.7	0	4	0	2	0	4	0	2	0	4	0	0	4
% Buses	0	0.7	0.6	0	0.6	4.6	0	3.0	0	2.4	1.2	0.7	10.1	0	3.8	0	2.1	0	0	1.0	1.0	0	0	1.0

Accurate Counts
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File Name : 1646002
Site Code : 1646002
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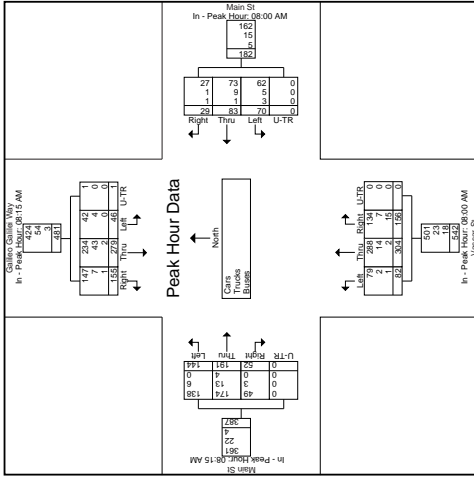
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City/Town/State : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date/Time : 8/8/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City/Town/State : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West				App. Total	Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
08:00 AM	125	0	0	0	47	20	82	38	0	140	33	40	11	0	0	84		
+10 mins.	20	64	41	0	7	0	0	0	0	0	0	0	0	0	0	0		
+15 mins.	12	79	28	1	15	10	0	40	30	68	38	0	156	37	66	115		
+20 mins.	8	67	45	0	118	14	6	0	0	78	5	0	132	5	46	16		
Tot/Vol/Time	46	279	155	1	481	70	83	29	0	182	304	156	0	542	144	191	52	
% App. Total	9.6	58	37.2	0.2	38.5	45.6	15.9	0	18.2	15.1	56.1	28.8	0	37.2	49.4	13.4	0	
PHF	0.2	0.23	0.27	0.00	0.02	0.02	0.00	0.00	0.00	0.08	0.08	0.04	0.00	0.08	0.04	0.00	0.01	
% Cars	91.3	83.9	94.8	100	88.1	88.6	88	93.1	0	89	96.3	94.7	85.9	0	92.4	95.8	91.1	
% Trucks	4	43	7	0	54	5	9	1	0	15	2	14	7	0	23	6	13	
% Buses	0	0.7	0.6	0	0.6	4.3	1.2	3.4	0	2.7	1.2	0.7	9.6	0	3.3	0	0	



Accurate Counts
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File Name : 16460002
Site Code : 16460002
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

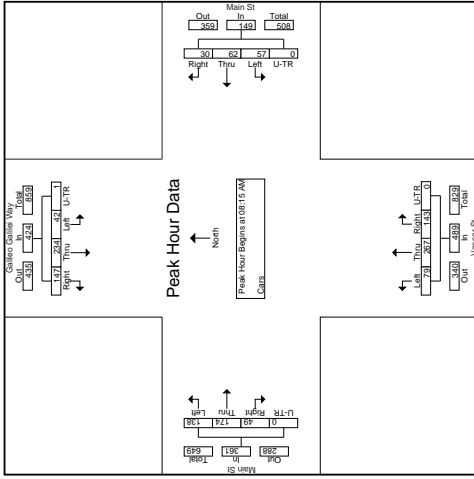
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Site Code : 16460002
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Accurate Counts
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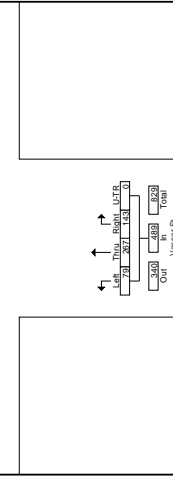
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Groups Printed: Cars

Start Time	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West			In Total
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	9	64	33	1	9	13	7	0	12	66	32	0	314
Total	17	129	59	1	17	21	13	0	25	131	61	0	600
08:00 AM	10	51	19	0	13	20	7	0	20	76	34	0	320
08:15 AM	19	51	37	0	13	14	9	0	29	66	34	0	350
08:30 AM	10	64	27	1	17	22	5	0	19	74	28	0	374
08:45 AM	6	69	43	0	19	17	6	0	11	72	38	0	359
Total	45	226	126	1	62	73	27	0	79	288	134	0	1405
09:00 AM	7	59	40	0	8	9	10	0	20	55	43	0	340
09:15 AM	5	59	37	0	13	15	10	0	15	62	35	0	321
Grand Total	74	173	262	2	100	118	60	0	139	556	273	0	2664
%	9.2	58.2	39.2	0.2	12.2	14.2	8.4	0	16.8	66.2	33.2	0	100
Total %	2.8	17.8	9.8	0.1	3.8	4.4	2.3	0	5.2	20.1	10.2	0	100



Start Time	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West			In Total
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
08:15 AM	19	51	37	0	13	14	9	0	36	66	34	0	350
08:30 AM	10	64	27	1	17	22	5	0	19	74	28	0	374
09:00 AM	7	59	40	0	8	9	10	0	20	55	43	0	340
09:15 AM	5	59	37	0	13	15	10	0	15	62	35	0	321
Grand Total	41	133	141	1	49	60	25	0	70	257	140	0	1485
%	2.7	8.9	9.4	0.1	3.3	4.2	1.7	0	4.7	17.2	9.4	0	100
Total %	2.8	17.8	9.8	0.1	3.8	4.4	2.3	0	5.2	20.1	10.2	0	100



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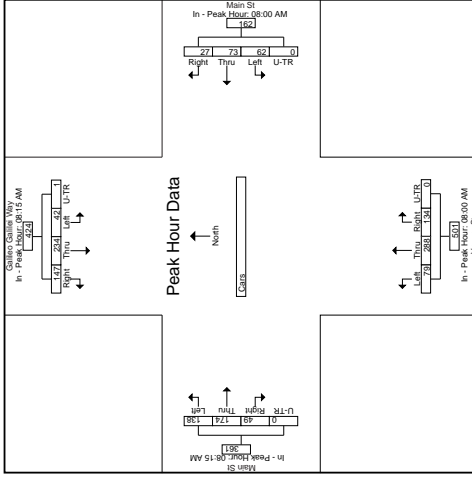
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West						
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR			
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	Peak Hour For Each Approach Begins at:																		
08:15 AM	51	37	0	107	13	20	7	0	40	20	76	34	0	130	32	36	10	0	78
+10 mins.	19	10	0	29	13	14	9	0	36	29	66	34	0	129	35	61	11	0	107
+15 mins.	10	64	27	109	13	14	9	0	36	29	66	34	0	129	35	61	11	0	107
+20 mins.	7	50	45	109	19	22	5	0	44	19	74	38	0	121	41	12	0	0	80
Total Volume	42	234	147	424	62	73	27	0	162	79	288	134	0	501	138	174	49	0	361
% App. Total	9.9	55.2	34.7	100	13.8	17.2	6.3	0	36.6	17.8	64.5	26.7	0	58.2	15.2	19.6	5.6	0	36.1
PHF	.553	.914	.855	.750	.972	.816	.850	.750	.950	.681	.917	.882	.700	.983	.923	.713	.766	.000	.833



Accurate Counts
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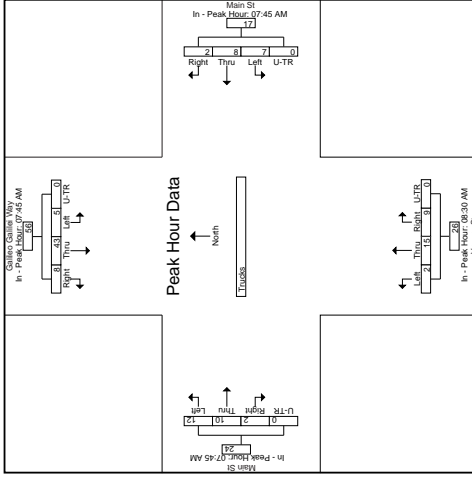
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
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Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West																	
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total					
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																														
Peak Hour for Each Approach Begins at:																														
07:45 AM																														
+0 mins.	6	2	0	0	8	0	1	0	0	1	0	4	0	0	4	0	4	0	0	4	0	4	0	0	4	1	0	0	0	1
+15 mins.	1	10	2	0	13	0	5	0	0	5	2	4	3	0	9	5	2	0	0	7	2	0	0	0	2	0	0	0	0	0
+30 mins.	1	4	0	0	5	0	1	0	0	1	0	2	1	0	3	2	1	0	0	3	2	1	0	0	3	2	1	0	0	3
+45 mins.	2	14	3	0	19	3	1	0	0	4	0	2	1	0	3	2	1	0	0	3	2	1	0	0	3	2	1	0	0	3
Total Volume	5	43	8	0	56	7	8	2	0	17	2	15	9	0	26	12	10	2	0	24	12	10	2	0	24	0	0	0	0	0
% App. Total	8.9	76.8	14.3	0	100	11.8	14.3	3.4	0	29.5	3.4	25.0	34.6	0	100	50	41.7	8.3	0	100	50	41.7	8.3	0	100	0	0	0	0	0
PHF	.625	.768	.667	.000	.667	.400	.500	.000	.000	.768	.350	.750	.350	.000	.772	.600	.500	.300	.000	.600	.600	.500	.300	.000	.600	.000	.000	.000	.000	.000



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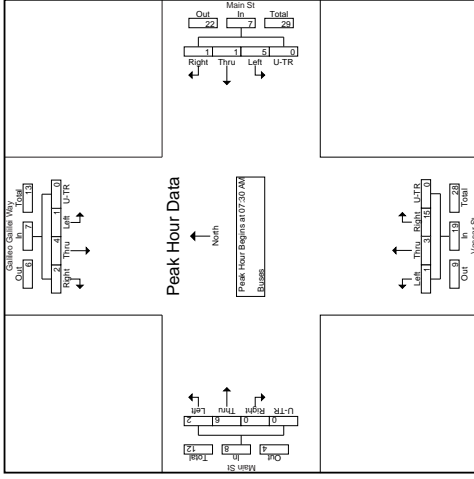
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Gallit Way												Vassar St				Main St														
	From North				From East				From South				From West				From South				From West										
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	App. Total	Imp. Total	
07:45 AM	1	4	0	0	2	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	14	0	
Total	1	4	0	0	2	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	14	0	
08:00 AM	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
08:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
Total	0	2	2	0	3	1	1	0	0	0	0	0	0	0	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	33	
09:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
09:15 AM	0	3	0	0	2	0	0	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
Grand Total	1	9	2	0	9	8	1	2	0	0	0	0	0	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	76	
%	1.3	11.8	2.6	0	11.3	1.3	2.6	0	0	0	0	0	0	0	19.7	6.6	0	0	0	0	0	0	0	0	0	0	0	0	0	100	

Start Time	Galileo Gallit Way												Vassar St				Main St													
	From North				From East				From South				From West				From South				From West									
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	App. Total	Imp. Total
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:39 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:50 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:55 AM	0	4	0	0	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total Volume	1	4	2	0	7	5	1	1	0	0	0	0	0	0	19	15	0	0	0	0	0	0	0	0	0	0	0	0	0	41
% App. Total	14.3	57.1	28.6	0	71.4	14.3	14.3	0	0	0	0	0	0	0	15.8	78.9	0	0	0	0	0	0	0	0	0	0	0	0	0	100
APP	1	250	350	0	450	350	1000	0	0	0	0	0	0	0	375	350	0	0	0	0	0	0	0	0	0	0	0	0	0	732



File Name : 16460002
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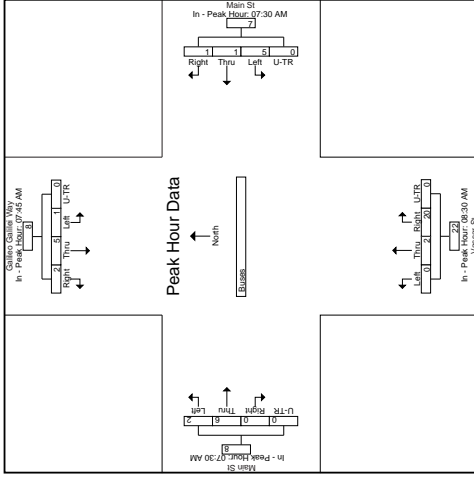
File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West			
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	07:30 AM				08:30 AM				07:30 AM				07:30 AM			
Peak Hour (For Each Approach) Begins at:	07:30 AM				08:30 AM				07:30 AM				07:30 AM			
+0 mins.	4	0	0	5	1	0	0	0	0	0	3	0	3	0	0	0
+15 mins.	0	0	1	1	2	0	0	2	0	0	4	0	4	0	1	0
+30 mins.	0	0	0	1	1	1	0	2	0	2	7	0	6	0	0	0
Total Volume	5	2	0	8	5	1	1	7	0	2	20	0	22	2	6	0
% App. Echl	12.5	62.5	25	0	71.4	14.3	14.3	0	9.1	90.9	0	0	25	75	0	0
PHE	250	513	500	400	625	250	250	875	500	250	714	200	611	500	750	600



Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Accurate Counts
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File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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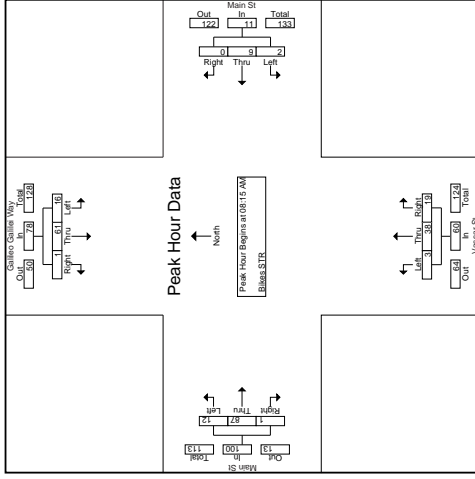
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Gallied Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	0	7	0	0	1	0	0	0	4	2	1	0	34
08:00 AM	1	15	0	1	3	0	1	14	4	4	19	0	62
08:15 AM	1	5	0	1	1	0	2	7	4	0	14	0	36
08:30 AM	3	8	0	1	2	0	4	5	4	20	0	0	48
08:45 AM	7	27	0	1	2	0	1	10	5	1	18	1	57
Total	13	56	0	3	8	0	3	39	21	3	53	1	98
09:00 AM	4	10	0	0	2	0	2	6	2	4	16	0	46
09:15 AM	0	7	0	2	2	0	0	7	8	5	14	1	46
Grand Total	18	88	0	6	15	0	6	66	35	21	124	1	393
App. %	14.5	38.6	0.0	38.6	17.5	0.0	5.6	66.6	33.7	11.1	84.8	1.9	39.3
Total %	4.6	22.4	0.3	1.5	3.8	0.0	1.5	16.8	8.9	5.3	34.1	0.8	23.9

Start Time	Galileo Gallied Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
08:15 AM	3	8	1	2	0	3	0	4	5	9	20	0	48
08:30 AM	2	16	0	3	0	3	1	10	5	16	1	20	57
08:45 AM	4	10	0	2	0	2	2	6	2	10	4	16	20
Total Volume	16	61	1	7	0	11	3	38	19	60	12	87	100
% App. Total	20.5	78.2	1.3	16.3	0.0	14.1	5	63.3	31.7	12	87	1	63.5
THPE	371	350	351	350	690	917	375	328	679	690	1250	250	694



Accurate Counts
978-664-2565

File Name : 1646002
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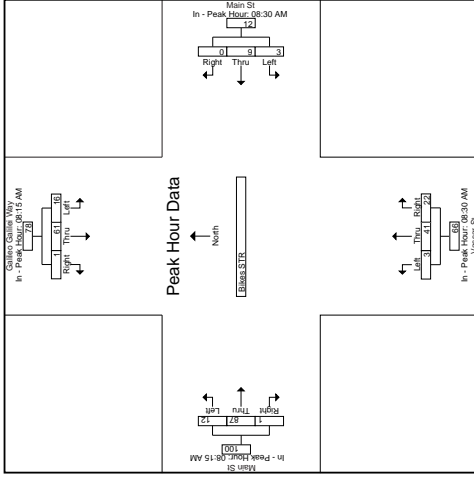
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From South			Main St From East			Vassar St From South			Main St From West			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour For Each Approach Equals:															
+0 mins.	8	1	12	08:30 AM	3	0	3	08:30 AM	10	5	16	08:15 AM	20	0	24
+15 mins.	2	16	18	08:45 AM	1	2	3	08:45 AM	1	18	19	08:30 AM	1	18	19
+30 mins.	7	27	34	09:00 AM	2	0	2	09:00 AM	6	2	8	08:45 AM	3	33	36
Total Volume	16	61	77	09:15 AM	5	9	14	09:15 AM	41	22	63	09:00 AM	12	87	99
% App. Total	20.5	78.2	1.3		25	75	0		62.1	33.3	4.6		12	87	1
PHE	571	565	250		373	750	0		589	688	660		750	659	694



Accurate Counts
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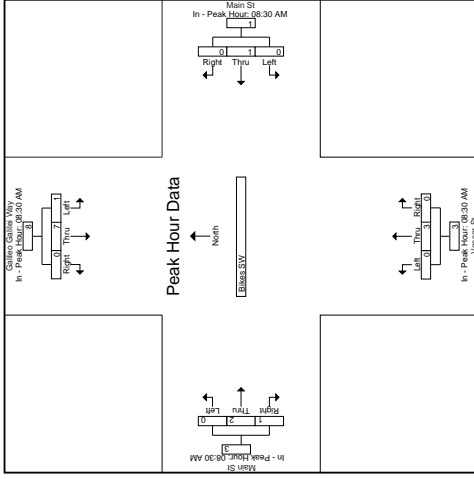
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From South			Main St From East			Vassar St From South			Main St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	08:30 AM												
Peak Hour For Each Approach/Right-of-Way:	08:30 AM												
+0 mins.	0	1	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	2	0	0	0	0	0	0	0	0	0	0	1
+30 mins.	1	3	0	0	0	0	1	0	1	0	1	0	1
Total Volume	1	7	0	0	1	0	1	0	1	0	2	0	3
% App. Total	12.5	87.5	0	0	100	0	100	0	66.7	0	33.3	0	750
PHE	250	583	000	500	900	000	375	000	375	000	500	250	750



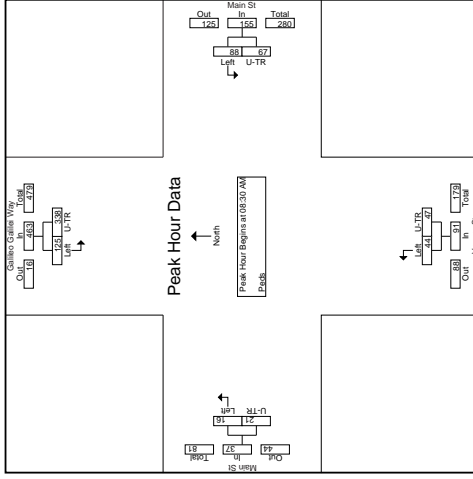
Accurate Counts
978-664-2565

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No. : 1

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	EB	WB	App. Total	SE	NE	App. Total	WB	EB	App. Total	SW	NW	App. Total
07:45 AM	19	92	111	10	10	20	21	31	52	3	4	7
Total	28	156	184	15	16	31	19	5	24	7	4	11
08:00 AM	23	68	91	10	7	17	18	13	31	2	2	4
08:15 AM	29	98	127	11	11	22	15	8	23	1	2	3
08:30 AM	20	86	106	17	6	23	9	10	5	4	4	13
08:45 AM	33	87	120	17	21	38	5	13	18	7	6	13
Total	106	339	445	55	45	100	47	44	91	15	15	30
09:00 AM	43	94	137	31	18	49	12	11	23	3	8	11
09:15 AM	29	71	100	23	22	45	18	13	31	1	3	4
Grand Total	205	660	865	124	101	225	108	107	215	24	10	34
% App. Total	23.7	75.3	79.0	14.4	11.6	24.4	12.4	11.6	24.4	2.8	1.1	3.9
Total %	15.3	49.3	64.6	9.3	7.5	16.8	8.1	6.5	14.8	1.8	2.2	3.0

Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	EB	WB	App. Total	SE	NE	App. Total	WB	EB	App. Total	SW	NW	App. Total
08:30 AM	106	339	445	17	6	23	9	10	19	5	4	9
08:45 AM	53	120	173	17	38	55	5	13	18	7	6	13
09:15 AM	29	71	100	23	22	45	18	13	31	1	3	4
Total Volume	125	338	463	88	67	155	44	47	91	16	21	37
% App. Total	27	73	80	56.8	43.2	51.6	48.4	51.6	43.2	56.8	43.2	56.8
PH	72	239	311	710	701	1411	211	204	415	271	266	537

Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	EB	WB	App. Total	SE	NE	App. Total	WB	EB	App. Total	SW	NW	App. Total
08:30 AM	106	339	445	17	6	23	9	10	19	5	4	9
08:45 AM	53	120	173	17	38	55	5	13	18	7	6	13
09:15 AM	29	71	100	23	22	45	18	13	31	1	3	4
Total Volume	125	338	463	88	67	155	44	47	91	16	21	37
% App. Total	27	73	80	56.8	43.2	51.6	48.4	51.6	43.2	56.8	43.2	56.8
PH	72	239	311	710	701	1411	211	204	415	271	266	537

Accurate Counts
978-664-2565

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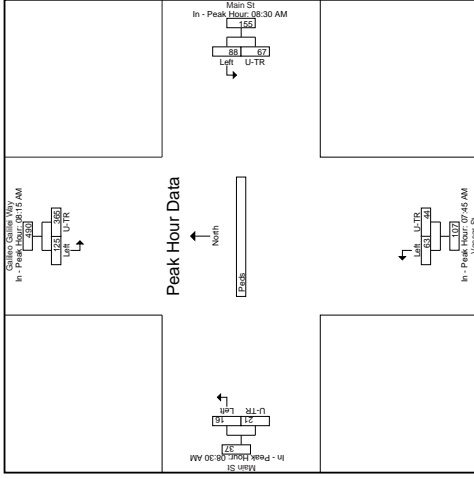
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 8/8/2014
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way			Main St			Vassar St			Main St			Int. Total
	EB	WB	App. Total	S/B	N/B	App. Total	WB	EB	App. Total	NB	S/B	App. Total	
07:30 AM to 09:15 AM - Peak 1 of 1	98	29	127	17	6	23	21	13	34	5	4	9	
+0 mins.	20	86	106	17	21	38	18	13	31	7	6	13	
+15 mins.	33	87	120	21	18	39	15	10	25	3	8	11	
+30 mins.	125	365	490	88	67	155	63	44	107	16	21	37	
Total Volume	25.5	74.5	100	56.8	43.2	100	58.9	41.1	100	43.2	56.8	100	
% App. Total	.777	.911	.894	.710	.761	.791	.750	.846	.787	.571	.656	.712	



Accurate Counts
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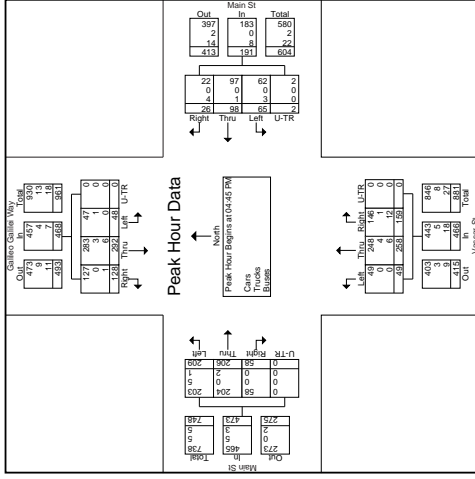
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear

File Name : 16460002
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear



Groups Printed: Cars - Trucks - Buses

Start Time	Galileo Gallia Way From North				Vassar St From South				Main St From East				Main St From West				Int. Total
	Left	Thru	Right	U-T	Left	Thru	Right	U-T	Left	Thru	Right	U-T	Left	Thru	Right	U-T	
04:45 PM	9	27	24	0	0	17	26	4	0	0	0	0	0	0	0	0	60
05:00 PM	13	75	41	0	0	27	44	10	0	0	0	0	0	0	0	0	129
05:15 PM	13	69	31	0	0	17	28	8	0	0	0	0	0	0	0	0	113
05:30 PM	13	71	32	0	0	6	23	6	0	0	0	0	0	0	0	0	116
05:45 PM	10	62	35	0	0	25	21	8	0	0	0	0	0	0	0	0	107
Total	49	277	139	0	0	62	90	31	0	0	0	0	0	0	0	0	465
Grand Total	49	277	139	0	0	62	90	31	0	0	0	0	0	0	0	0	465
Cars	57	108	108	0	0	108	136	93	0	0	0	0	0	0	0	0	368
Trucks	8	35	35	0	0	35	49	51	0	0	0	0	0	0	0	0	388
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis from 04:30 PM to 06:15 PM - Peak 1 of 1

Start Time	Galileo Gallia Way				Vassar St				Main St				Int. Total
	Left	Thru	Right	U-T	Left	Thru	Right	U-T	Left	Thru	Right	U-T	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	9	27	24	0	0	17	26	4	0	0	0	0	60
05:00 PM	13	75	41	0	0	27	44	10	0	0	0	0	129
05:15 PM	13	69	31	0	0	17	28	8	0	0	0	0	113
05:30 PM	13	71	32	0	0	6	23	6	0	0	0	0	116
05:45 PM	10	62	35	0	0	25	21	8	0	0	0	0	107
Total	49	277	139	0	0	62	90	31	0	0	0	0	465
Cars	57	108	108	0	0	108	136	93	0	0	0	0	368
Trucks	8	35	35	0	0	35	49	51	0	0	0	0	388
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0

Accurate Counts
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File Name : 1646002
Site Code : 1646002
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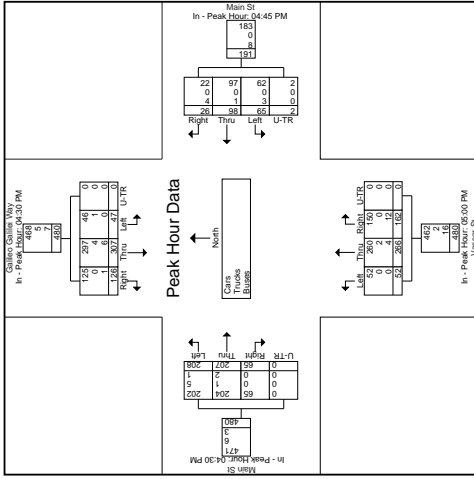
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date Time : 8/8/2014
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From North					Vassar St From South					Main St From West									
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Imp. Total				
	04:30 PM					05:00 PM					04:30 PM									
+0 mins.	12	86	30	0	128	17	26	4	0	47	6	65	37	0	108	52	20	0	124	
+15 mins.	9	77	24	0	110	17	28	8	1	54	21	70	45	0	136	56	45	18	119	
+30 mins.	13	60	41	0	129	6	23	8	0	36	11	66	31	0	110	47	18	0	123	
Tot/Vol/Time	47	307	126	0	480	65	98	26	2	191	52	266	102	0	480	208	207	65	480	
% App. Error	9.8	64	26.2	0		34	51.3	13.6	1	10.8	55.4	33.8	0		43.3	43.1	13.5	0		
PHE	964	297	135	0	1496	875	312	309	0	1491	512	266	160	0	1919	768	313	0	1088	
% Cars	97.9	96.7	99.2	0	97.5	98.4	99	84.6	100	95.8	100	97.7	92.6	0	96.2	97.1	98.6	100	0	98.1
% Trucks	1	4	0	0	5	0	0	0	0	2	0	0	0	0	2	5	1	0	0	6
% Buses	2	1	0	0	1	3	1	4	0	0	0	0	0	0	0.4	2.4	0.5	0	0	1.2
% Misc	0	2	0.8	0	1.5	4.6	1	15.4	0	4.2	0	1.5	7.4	0	3.3	0.5	1	0	0	0.6



Accurate Counts
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File Name : 16460002
Site Code : 16460002
Survey Date : 4/8/2014
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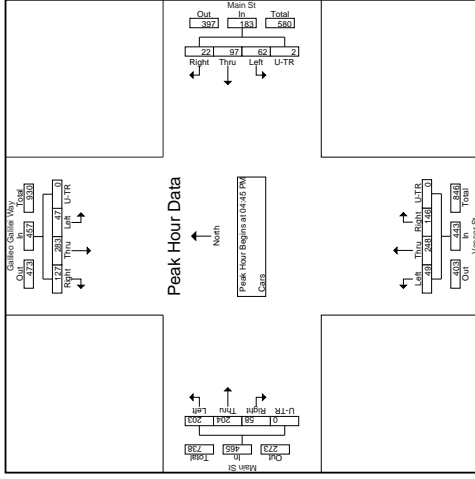
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear

File Name : 16460002
Site Code : 16460002
Survey Date : 4/8/2014
Page No. : 1

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear

Start Time	Galileo Galilei Way From North				Main St From East				Vassar St From South				Main St From West				In Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:45 PM	9	72	23	0	16	26	3	0	9	53	3	0	56	44	18	0	360
Total	21	155	53	0	25	42	8	0	15	111	5.5	0	107	95	38	0	725
05:00 PM	12	74	41	0	16	28	7	1	6	62	34	0	51	57	15	0	404
05:15 PM	13	68	31	0	6	22	5	1	21	69	42	0	44	52	12	0	386
05:30 PM	13	69	32	0	24	21	7	0	13	64	39	0	52	51	13	0	398
05:45 PM	10	60	35	0	14	18	8	0	12	65	35	0	35	34	23	0	349
Total	48	271	139	0	60	89	27	2	52	260	150	0	182	194	65	0	1537
06:00 PM	11	43	29	0	18	20	2	1	14	51	36	0	38	34	8	0	306
06:15 PM	14	48	35	0	15	19	4	0	7	52	34	0	41	35	20	0	324
Grand Total	94	517	295	0	118	170	41	3	108	474	275	0	568	558	129	0	2892
%	10.3	59.9	28.9	0.1	13.5	51.7	12.2	0.3	11.9	54.4	9.5	0	12.7	12.4	4.5	0	
Total %	3.3	17.9	8.9	0	4.1	5.9	1.4	0.1	3	16.4	3	0	12.7	12.4	4.5	0	

Start Time	Galileo Galilei Way From North				Main St From East				Vassar St From South				Main St From West				In Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:45 PM	9	72	23	0	16	26	3	0	9	53	3	0	56	44	18	0	360
04:45 PM	9	72	23	0	16	26	3	0	9	53	3	0	56	44	18	0	360
05:00 PM	12	74	41	0	16	28	7	1	6	62	34	0	51	57	15	0	404
05:15 PM	13	68	31	0	6	22	5	1	21	69	42	0	44	52	12	0	386
05:30 PM	13	69	32	0	24	21	7	0	13	64	39	0	52	51	13	0	398
05:45 PM	10	60	35	0	14	18	8	0	12	65	35	0	35	34	23	0	349
Total	48	271	139	0	60	89	27	2	52	260	150	0	182	194	65	0	1537
06:00 PM	11	43	29	0	18	20	2	1	14	51	36	0	38	34	8	0	306
06:15 PM	14	48	35	0	15	19	4	0	7	52	34	0	41	35	20	0	324
Grand Total	94	517	295	0	118	170	41	3	108	474	275	0	568	558	129	0	2892
%	10.3	59.9	28.9	0.1	13.5	51.7	12.2	0.3	11.9	54.4	9.5	0	12.7	12.4	4.5	0	
Total %	3.3	17.9	8.9	0	4.1	5.9	1.4	0.1	3	16.4	3	0	12.7	12.4	4.5	0	



File Name : 16460002
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear

File Name : 16460002
Site Code : 16460002
Survey Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
Weather : Clear

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File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
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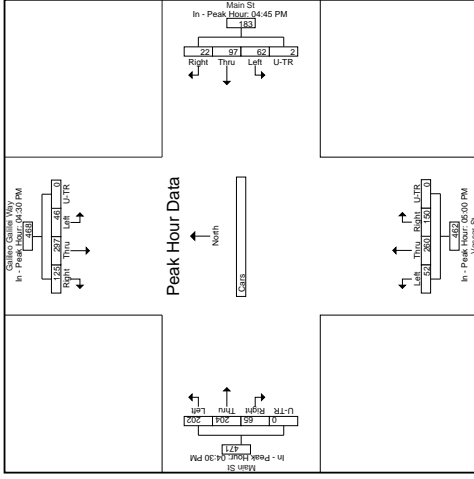
N/S Street : Galileo Way / Vassar St
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Weather : Clear

File Name : 1646002
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Accurate Counts
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Times	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West			
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	Peak Hour For Each Approach Begins at:															
04:30 PM	83	30	0	125	0	125	0	125	0	125	0	125	0	125	0	125
+10 mins.	12	83	30	125	0	125	0	125	0	125	0	125	0	125	0	125
+15 mins.	9	72	23	104	16	28	7	52	21	69	42	34	62	24	51	20
+20 mins.	13	68	41	127	6	24	7	37	13	44	35	35	44	34	44	18
+25 mins.	15	65	41	127	6	24	7	37	13	44	35	35	44	34	44	18
Total Volume	46	297	125	468	62	97	22	183	52	260	150	0	462	204	65	0
% App. Total	9.8	63.5	26.7	100	13.2	21.3	5.5	39.5	11.3	56.3	32.5	0	49.9	43.3	13.8	0
PHF	.855	.895	.762	.800	.931	.646	.866	.800	.880	.619	.892	.893	.875	.895	.813	.800



Accurate Counts
978-664-2565

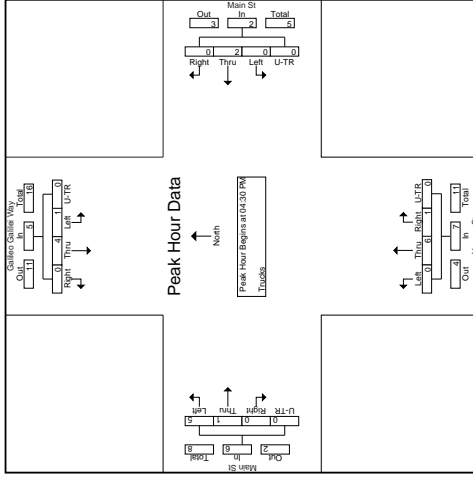
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No : 2

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
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Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Groups Printed: Trucks

Start Time	Galileo Galileo Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:45 PM	0	2	0	0	0	0	0	0	2	1	0	0	5
Total	0	4	0	0	2	0	0	0	5	1	1	0	14
05:00 PM	1	0	0	0	0	0	0	0	1	1	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	4
05:30 PM	0	1	0	0	0	0	0	1	0	1	0	0	3
05:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	3
Total	1	2	0	0	0	0	0	2	0	5	2	0	12
06:00 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
06:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	3
Grand Total	11	77	0	0	4	0	0	0	87	12	7	0	207
% Trucks	3.1	21.9	0.0	0.0	10.0	0.0	0.0	0.0	87.5	3.1	0.0	0.0	25.4

Start Time	Galileo Galileo Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	2	0	0	0	0	0	0	3	0	0	0	5
04:45 PM	0	2	0	0	0	0	0	0	2	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	4	0	0	2	0	0	6	1	0	7	1	20
05:30 PM	0	80	0	0	100	0	0	85.7	14.3	0	85.3	14.7	200
% Trucks	25.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	25.0
Total	1	82	0	0	102	0	0	91.7	14.3	0	90.3	15.7	220

Peak Hour for Entire Intersection Begins at 04:30 PM

Peak Hour for Entire Intersection Begins at 04:30 PM

Accurate Counts
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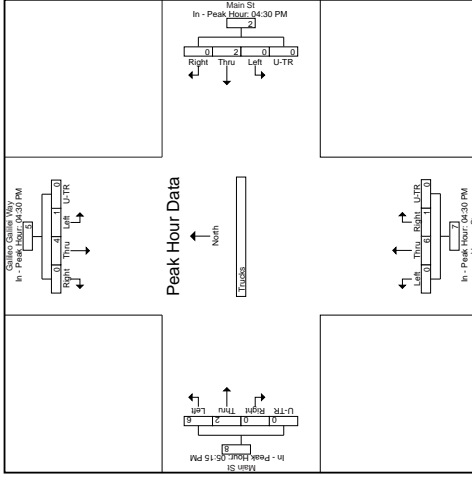
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 8/8/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Way Peak North				Galileo Way Peak South				Main St Peak East				Main St Peak West				
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	04:30 PM				04:30 PM				05:15 PM				05:15 PM				
Peak Hour (for Each Approach) Begins at:	04:30 PM				04:30 PM				05:15 PM				05:15 PM				
+0 mins.	2	0	0	2	0	0	0	2	0	0	3	0	0	0	0	0	4
+15 mins.	0	2	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total Volume	1	4	0	5	0	2	0	2	0	6	1	0	7	6	2	0	8
% App. Echl	20	80	0	0	100	0	0	0	85.7	14.3	0	7	75	25	0	0	0
PHE	250	500	0	0	250	0	0	250	500	250	0	583	275	250	0	0	500



File Name : 16460002
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Accurate Counts
978-664-2565

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No : 2

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

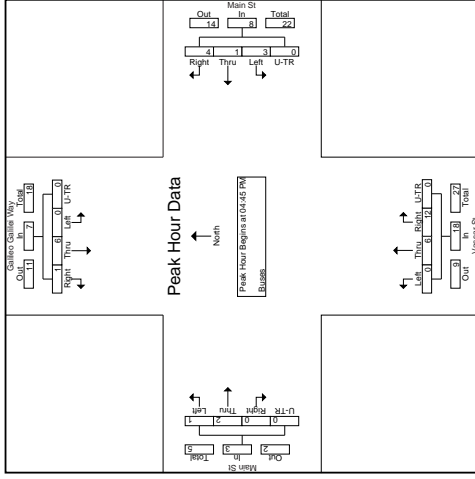
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No : 1

Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From North				Main St From East				Vassar St From South				Main St From West				In. Total	
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
04:45 PM	0	3	1	0	0	1	0	1	0	0	2	4	0	0	1	0	0	13
Total	0	4	1	0	2	0	2	0	0	2	6	0	1	0	0	0	0	18
05:00 PM	0	1	0	0	1	0	1	0	0	2	3	0	0	0	0	0	0	8
05:15 PM	0	1	0	0	1	0	1	0	0	1	2	0	1	1	0	0	0	9
05:30 PM	0	1	0	0	1	0	1	0	0	1	2	0	1	0	0	0	0	6
05:45 PM	0	1	0	0	0	0	1	0	0	4	12	0	2	1	0	0	0	7
Total	0	4	0	0	2	1	4	0	0	4	12	0	2	1	0	0	0	30
06:00 PM	0	1	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0	7
06:15 PM	0	2	0	0	1	0	0	0	1	2	1	0	0	2	0	0	0	9
Grand Total	0	11	1	0	43.7	18.3	37.5	0	3.2	36.7	71	0	33.2	66.2	0	0	0	64
Total %	0	17.2	1.6	0	10.9	4.7	9.4	0	1.6	12.5	32.8	0	3.1	6.2	0	0	0	64

Start Time	Galileo Galilei Way From North				Main St From East				Vassar St From South				Main St From West				In. Total	
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
04:45 PM	0	3	1	0	0	1	0	1	0	0	2	4	0	0	1	0	0	13
Total	0	4	1	0	2	0	2	0	0	2	6	0	1	0	0	0	0	18
05:00 PM	0	1	0	0	1	0	1	0	0	2	3	0	0	0	0	0	0	8
05:15 PM	0	1	0	0	1	0	1	0	0	1	2	0	1	1	0	0	0	9
05:30 PM	0	1	0	0	1	0	1	0	0	1	2	0	1	0	0	0	0	6
05:45 PM	0	1	0	0	0	0	1	0	0	4	12	0	2	1	0	0	0	7
Total	0	4	0	0	2	1	4	0	0	4	12	0	2	1	0	0	0	30
06:00 PM	0	1	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0	7
06:15 PM	0	2	0	0	1	0	0	0	1	2	1	0	0	2	0	0	0	9
Grand Total	0	11	1	0	43.7	18.3	37.5	0	3.2	36.7	71	0	33.2	66.2	0	0	0	64
Total %	0	17.2	1.6	0	10.9	4.7	9.4	0	1.6	12.5	32.8	0	3.1	6.2	0	0	0	64



File Name : 16460002
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Accurate Counts
978-664-2565

File Name : 16460002
Site Code : 16460002
Date : 8/8/2014
Page No : 4

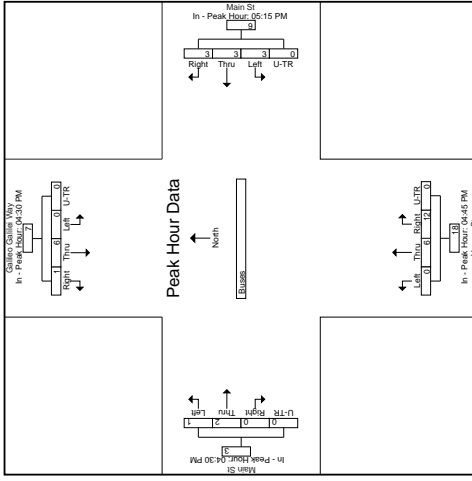
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 8/8/2014
Page No : 3

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

Start Time	Galileo/Galileo Way From North				Main St From East				Vassar St From South				Main St From West							
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR				
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	04:30 PM				04:45 PM				04:50 PM				04:55 PM							
+0 mins.	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	0	0	0
+15 mins.	0	3	1	0	1	0	1	0	0	2	0	3	0	2	3	0	0	1	0	0
+30 mins.	0	1	0	0	1	0	0	0	0	1	2	0	0	1	2	0	0	0	0	0
+45 mins.	0	6	1	0	7	3	3	0	9	0	6	12	0	18	1	2	0	0	0	0
Total Volume	0	857	143	0	33.3	33.3	33.3	0	33.3	66.7	0	33.3	66.7	0	0	0	0	0	0	0
% App. Echl	0.000	300.000	250.000	0.000	4.138	375.000	375.000	0.000	563.000	750.000	0.000	750.000	750.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



Accurate Counts
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File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

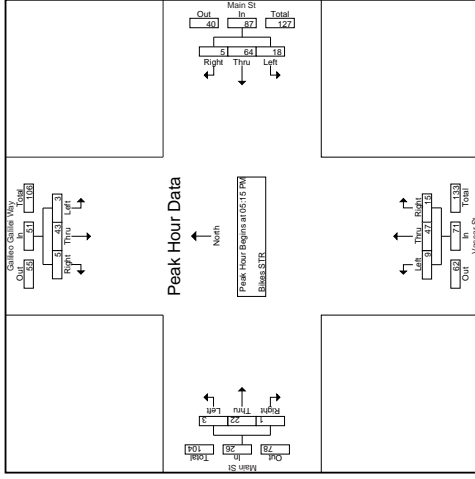
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No : 1

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Groups Printed- Bikas STR

Start Time	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:55 PM	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
05:00 PM	0	8	3	2	12	0	1	9	4	3	7	0	19
05:15 PM	0	15	1	4	15	0	2	7	9	0	3	0	26
05:30 PM	1	10	1	5	15	1	5	12	3	2	5	0	60
05:45 PM	2	7	0	3	20	3	1	12	1	1	10	0	60
05:55 PM	3	40	5	14	62	4	9	40	17	6	25	0	225
Total	0	11	3	6	14	1	1	16	2	0	4	1	59
06:00 PM	1	5	0	6	10	0	3	11	4	1	8	2	51
06:15 PM	5	62	10	28	99	5	17	84	29	9	48	4	400
06:30 PM	6	82	10	38	95	3	8	60	27	14	70	6	400
06:45 PM	1	15	2	7	24.8	1.2	4.2	2.1	7.2	2.2	1.2	1	51
Total %	1.2	15.5	2.5	7	24.8	1.2	4.2	2.1	7.2	2.2	1.2	1	51

Start Time	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM to 05:15 PM	0	15	1	4	15	0	2	7	9	18	0	3	56
05:15 PM to 05:30 PM	1	10	1	5	15	1	5	12	3	20	2	5	60
05:30 PM to 05:45 PM	2	7	0	3	20	3	1	12	1	19	0	4	59
05:45 PM to 06:00 PM	3	43	5	14	64	5	9	47	15	71	3	22	215
Total Volume	59	84	9	18	94	8	15	66.3	21.1	111.5	84.6	3.8	591
% App. Total	..373	..417	..047	..097	..397	..050	..087	..354	..117	..888	..373	..250	..979



Accurate Counts
978-664-2565

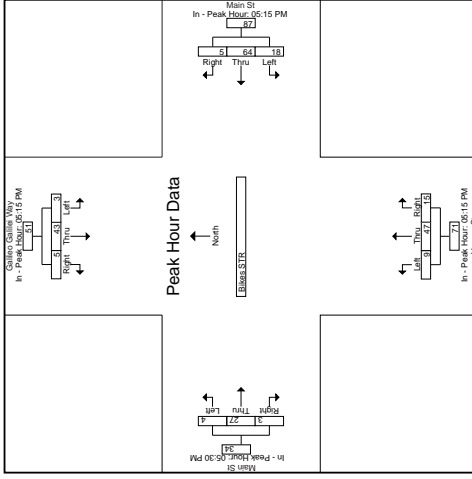
File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 4

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 3

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo/Galileo Way From South			Main St From East			Vassar St From South			Main St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	05:15 PM												
Peak Hour for Each Approach Segment:	16			19			9			18			05:30 PM
+0 mins.	15	1	4	15	0	2	7	9	2	5	0	7	
+15 mins.	1	10	1	12	5	1	12	3	20	1	10	0	11
+30 mins.	2	7	0	9	3	20	1	12	3	14	0	4	5
Total Volume	3	11	5	36	3	26	1	31	15	21	4	11	34
% App. Total	5.9	84.3	9.8	20.7	71.6	5.7	12.7	66.2	21.1	11.8	79.4	8.8	
PHE	.375	.717	.417	.797	.837	.417	.734	.417	.888	.500	.675	.375	.773



Accurate Counts
978-664-2565

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 3

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 4

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

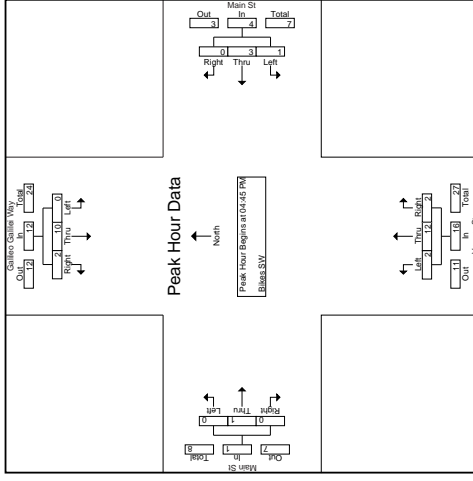
File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No : 2

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Galileo Gallie Way From North				Main St From East				Vassar St From South				Main St From West			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	3	0	3	1	2	0	3	0	1	3	0	1	0	0	1
05:15 PM	0	3	0	3	0	1	0	1	0	3	1	0	0	0	0	0
05:30 PM	0	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Total	0	10	0	10	1	3	0	3	9	2	0	0	1	0	0	3
06:00 PM	0	2	0	2	0	0	0	0	1	1	0	0	0	0	0	0
06:15 PM	0	2	0	2	1	1	1	3	1	1	0	0	1	0	0	1
06:30 PM	0	3	0	3	1	5	0	6	5	3	0	0	8	0	0	8
Grand Total	0	86.7	0	86.7	66.7	16.7	0	83.4	20.7	18.7	0	0	35	0	0	47
App. %	0	86.7	0	86.7	2.1	8.5	0	8.5	10.6	21.7	0	0	6.4	0	0	2.1
Total %	0	27.7	0	27.7	4.3	8.5	0	8.5	11.6	21.7	0	0	16.4	0	0	21.1

Start Time	Galileo Gallie Way From North				Main St From East				Vassar St From South				Main St From West			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	3	0	3	2	0	0	2	0	2	0	0	0	0	0	0
05:15 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	2	0	0	0	0	4	1	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Total	0	10	0	10	2	0	0	2	6	1	0	0	0	0	0	0
06:00 PM	0	2	0	2	0	0	0	0	1	1	0	0	0	0	0	0
06:15 PM	0	2	0	2	1	1	1	3	1	1	0	0	1	0	0	1
06:30 PM	0	3	0	3	1	5	0	6	5	3	0	0	8	0	0	8
Grand Total	0	86.7	0	86.7	66.7	16.7	0	83.4	20.7	18.7	0	0	35	0	0	47
App. %	0	86.7	0	86.7	2.1	8.5	0	8.5	10.6	21.7	0	0	6.4	0	0	2.1
Total %	0	27.7	0	27.7	4.3	8.5	0	8.5	11.6	21.7	0	0	16.4	0	0	21.1

Accurate Counts
978-664-2565

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 4

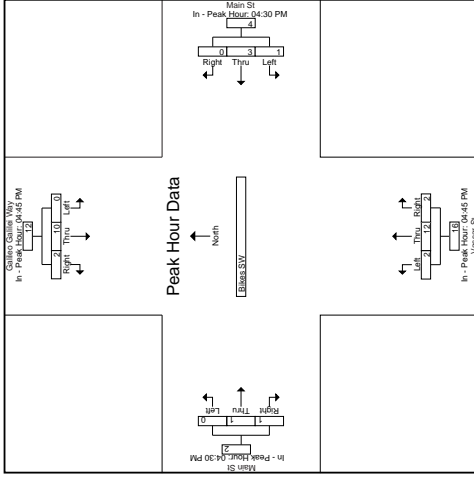
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way From South			Main St From East			Vassar St From South			Main St From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	Peak Hour for Each Approach Begins at:											
+0 mins.	0	1	0	0	0	0	0	0	0	0	0	1
+15 mins.	0	3	0	0	0	0	1	3	0	0	0	0
+30 mins.	0	5	1	2	0	3	1	3	1	5	0	0
Total Volume	0	10	2	2	0	4	2	12	2	16	0	1
% App. Total	0	83.3	16.7	25	75	0	12.5	75	12.5	0	50	50
PHE	.000	.500	.500	.333	.000	.000	.500	.750	.500	.800	.000	.250



File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 4

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
Page No. : 2

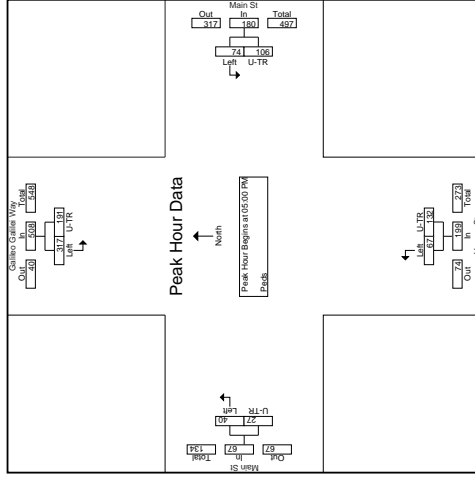
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460002
Site Code : 16460002
Date : 4/8/2014
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N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	SB	WB	WB	SB	WB	WB	SB	WB	WB	SB	WB	WB
04:45 PM	75	39	67	59	31	31	39	39	28	13	434	
Total	158	78	104	90	62	62	78	78	46	16	434	
05:00 PM	81	39	67	59	31	31	39	39	28	13	434	
05:15 PM	70	37	64	55	27	27	35	35	24	8	395	
05:30 PM	91	51	64	64	27	27	43	43	13	7	264	
05:45 PM	75	64	64	64	27	27	26	26	11	4	217	
Total	317	191	264	264	106	106	132	132	40	27	954	
06:00 PM	60	55	55	18	34	34	11	11	8	11	228	
06:15 PM	50	54	54	17	22	22	14	14	18	2	196	
Grand Total	585	367	367	168	95	95	156	156	54	53	1812	
% App. Total	32.3	20.3	20.3	9.3	5.2	5.2	7.5	7.5	2.2	2.9	95.4	

Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	SB	WB	WB	SB	WB	WB	SB	WB	WB	SB	WB	WB
05:00 PM	81	39	67	59	31	31	39	39	28	13	434	
05:15 PM	70	37	64	55	27	27	35	35	24	8	395	
05:45 PM	75	64	64	64	27	27	26	26	11	4	217	
Total Volume	317	191	264	264	106	106	132	132	40	27	954	
% App. Total	32.3	20.3	20.3	9.3	5.2	5.2	7.5	7.5	2.2	2.9	95.4	



Start Time	Groups Printed: Peds											
	Galileo Galilei Way From North			Main St From East			Vassar St From South			Main St From West		
	SB	WB	WB	SB	WB	WB	SB	WB	WB	SB	WB	WB
05:00 PM	81	39	67	59	31	31	39	39	28	13	434	
05:15 PM	70	37	64	55	27	27	35	35	24	8	395	
05:45 PM	75	64	64	64	27	27	26	26	11	4	217	
Total Volume	317	191	264	264	106	106	132	132	40	27	954	
% App. Total	32.3	20.3	20.3	9.3	5.2	5.2	7.5	7.5	2.2	2.9	95.4	

Accurate Counts
978-664-2565

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No. : 4

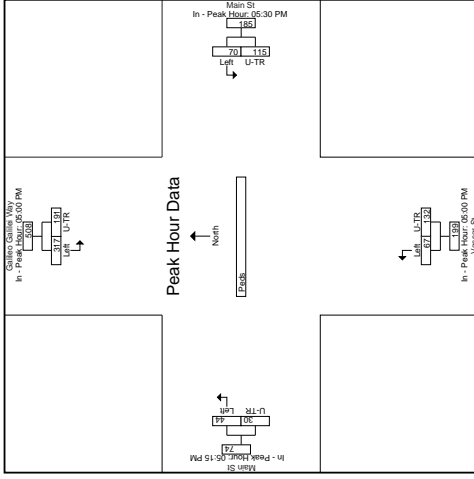
N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 1646002
Site Code : 1646002
Date : 8/8/2014
Page No. : 3

Accurate Counts
978-664-2565

N/S Street : Galileo Way / Vassar St
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Galileo Galilei Way			Main St			Vassar St			Main St			Int. Total
	EB	WB	App. Total	S/B	N/B	App. Total	WB	EB	App. Total	S/B	N/B	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Each Approach (Right):													
+0 mins.	81	39	120	20	27	47	15	45	60	12	12	8	20
+15 mins.	70	37	107	15	32	47	20	18	38	13	7	7	20
+30 mins.	91	51	142	18	24	42	12	13	25	11	4	15	15
+45 mins.	79	44	123	14	21	35	10	11	21	11	1	12	15
Total Volume	317	191	508	70	115	185	67	132	199	44	30	74	74
% App. Total	62.4	37.6	100	14.0	22.6	36.6	13.3	26.2	39.7	11.0	40.5	40.5	40.5
PER	871	746	1617	875	846	1721	838	733	1571	846	682	1528	923



Accurate Counts
978-664-2565

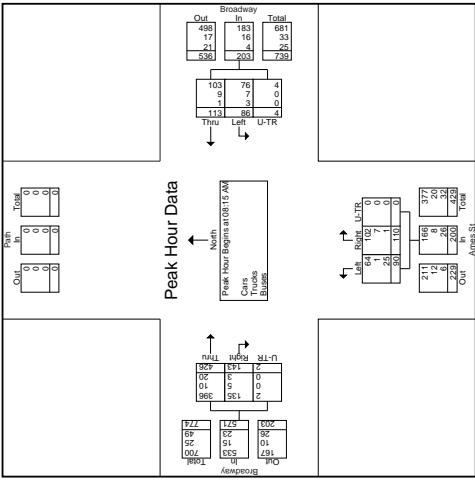
File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Broadway From East			Ames St From South			Broadway From West			Ames St From North			Int. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	Left	Right	U-TR	
07:30 AM	1	1	0	1	1	0	0	0	0	0	0	0	0
07:45 AM	26	3	1	21	18	0	103	22	43	0	0	0	226
Total	45	69	2	42	40	0	158	43	43	1	0	0	400
08:00 AM	16	26	0	27	16	0	96	34	0	0	0	0	216
08:15 AM	14	30	0	25	27	0	105	27	2	0	0	0	240
08:30 AM	31	22	1	18	30	0	110	25	0	0	0	0	237
08:45 AM	21	33	1	26	28	0	107	38	0	0	0	0	254
Total	82	111	3	96	101	0	428	124	2	0	0	0	947
09:00 AM	20	28	2	21	25	0	94	53	0	0	0	0	243
09:15 AM	32	33	1	23	18	0	97	34	0	0	0	0	238
09:30 AM	179	241	8	182	184	0	777	254	0	0	0	0	1828
09:45 AM	5	5	0	4	4	0	12	12	0	0	0	0	30
Total	458	539	11	410	435	0	1583	357	0	0	0	0	3641
% Cars	88.3	91.3	100	69.2	97.4	0	92	94.9	100	100	100	100	89.8
% Trucks	5	5	0	11	11	0	26	26	0	0	0	0	13.7
% Buses	8.4	7.8	0	3.3	3.3	0	3.3	3.3	0	0	0	0	4.7
% Buses	6	3	0	50	3	0	36	3	0	0	0	0	101
% Buses	3.4	1.2	0	27.5	1.6	0	4.6	1.2	0	0	0	0	5.5

Start Time	Broadway From East			Ames St From South			Broadway From West			Ames St From North			Int. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	Left	Right	U-TR	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	44	30	0	28	27	0	51	27	0	0	0	0	249
08:00 AM	21	22	1	51	18	0	48	110	25	0	0	0	237
08:15 AM	31	33	1	26	28	0	54	107	38	0	0	0	254
08:30 AM	20	28	2	50	21	0	46	94	53	0	0	0	243
08:45 AM	36	33	2	203	45	0	200	246	25	0	0	0	974
Total	154	146	7	422	138	0	926	675	250	0	0	0	3599
% Cars	88.3	91.3	100	69.2	97.4	0	92	94.9	100	100	100	100	89.8
% Trucks	5	5	0	11	11	0	26	26	0	0	0	0	13.7
% Buses	8.4	7.8	0	3.3	3.3	0	3.3	3.3	0	0	0	0	4.7
% Buses	6	3	0	50	3	0	36	3	0	0	0	0	101
% Buses	3.4	1.2	0	27.5	1.6	0	4.6	1.2	0	0	0	0	5.5

Accurate Counts
978-664-2565

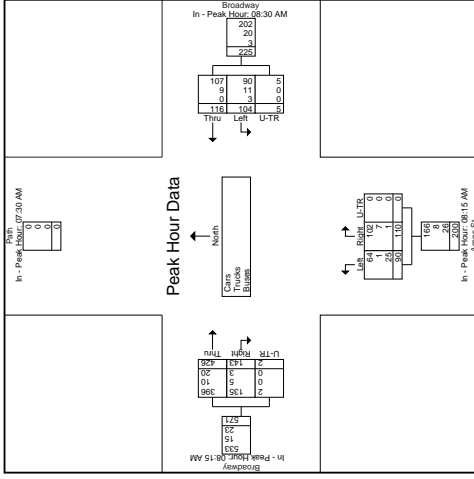
File Name : 1646003
Site Code : 1646003
Count Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Count Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Ames St			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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	54	25	27	52	115	27	52	115	27	144
08:30 AM	55	18	30	48	110	25	48	110	25	135
08:45 AM	50	28	26	54	107	38	54	107	38	145
09:00 AM	60	40	40	60	143	40	60	143	40	173
Total Volume	104	116	5	200	426	143	200	426	143	571
% App. Total	46.2	51.6	2.2	85.3	91.7	25.0	85.3	91.7	25.0	97.1
DHF	81.3	379	693	852	3653	917	852	3653	917	4211
% Cars	86.5	92.2	100	89.8	92.2	100	89.8	92.2	100	93.3
% Trucks	11	9	0	20	11	0	8	10	5	15
% Buses	10.6	7.8	0	8.9	1.1	6.4	4	2.3	3.5	2.6
	2.9	0	0	1.3	27.8	0.9	2.1	4.7	2.1	4



Accurate Counts
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File Name : 1646003
Site Code : 1646003
Count Date : 4/9/2014
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N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
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File Name : 1646003
Site Code : 1646003
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Accurate Counts
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File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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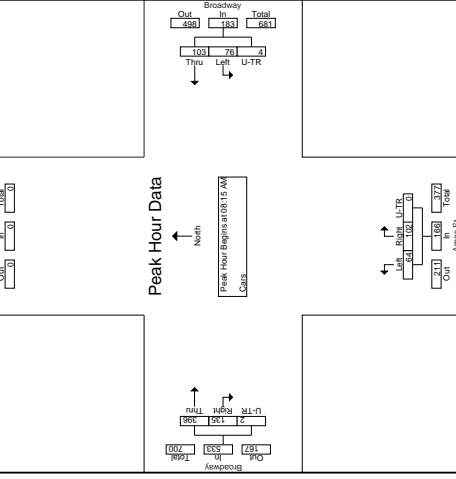
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
07:45 AM	4	27	0	13	16	0	22	41	1	197
Total	41	62	2	26	36	0	141	41	1	350
08:00 AM	14	25	1	20	16	0	89	32	0	107
08:15 AM	13	26	0	18	26	0	109	25	2	219
08:30 AM	27	21	1	12	29	0	101	21	0	212
08:45 AM	18	29	1	21	24	0	99	37	0	229
Total	72	101	3	71	95	0	398	115	2	857
09:00 AM	18	27	2	13	23	0	87	52	0	222
09:15 AM	27	30	1	16	16	0	89	33	0	212
Grand Total	158	220	8	126	170	0	715	241	0.3	1641
App. %	4.6	6.2	0.2	3.4	4.7	0	21.2	7.2	0	43.6
Total %	9.6	13.4	0.5	7.7	10.4	0	43.6	14.7	0.2	

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
08:15 AM	0	26	0	18	26	0	44	109	2	219
08:30 AM	0	21	1	29	41	0	101	21	0	212
09:00 AM	0	18	2	13	23	0	87	52	0	222
Total Volume	0	76	4	64	102	0	166	396	2	882
% App. Total	0.00	41.5	2.2	38.6	61.4	0	92.2	25.3	0.1	952
THP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Accurate Counts
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File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
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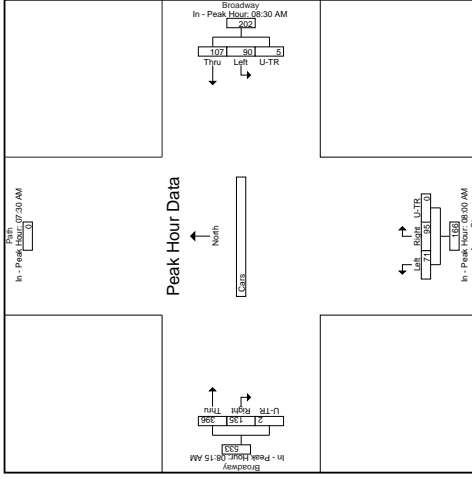
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Broadway			Ames St			Broadway			From West			Int. Total
	Thru	Left	U+TR	Thru	Left	U+TR	Thru	Left	U+TR	Thru	Left	U+TR	Thru	Left	U+TR	
08:30 AM	21	49	1	27	21	1	27	21	16	0	36	109	25	2	136	
08:30 AM	18	48	1	26	18	0	44	26	0	44	101	21	0	0	122	
08:30 AM	27	47	2	29	27	0	41	29	0	41	99	27	0	0	126	
08:30 AM	107	202	5	212	107	0	166	107	95	0	202	396	135	2	533	
Total Volume	44.6	853	2.5	853	44.6	0	853	44.6	85.2	0	169.8	74.3	25.3	0.4	929	
% App. Total	0.000	83.3	0.292	89.2	89.2	0.000	92.2	89.2	81.9	0.000	92.2	90.8	64.9	2.50	929	



Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

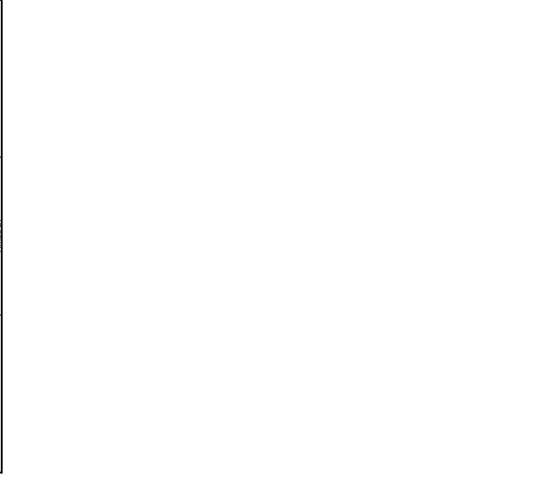
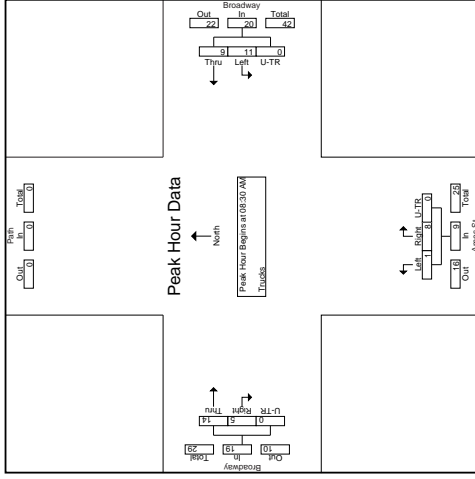
File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Groups Printed: Trucks

Start Time	Broadway From East			Ames St From South			Broadway From West			U-TR		
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:45 AM	1	3	0	1	4	0	1	7	0	0	0	0
Total	3	5	0	4	8	0	2	7	2	0	0	0
08:00 AM	1	1	0	1	3	0	0	2	0	0	0	0
08:15 AM	0	3	0	0	1	0	0	1	2	0	0	0
08:30 AM	3	1	0	0	4	0	0	2	2	0	0	0
08:45 AM	2	4	0	0	3	0	3	1	1	0	0	0
Total	6	9	0	1	10	0	5	6	6	0	0	0
09:00 AM	2	1	0	1	3	0	2	3	1	0	0	0
09:15 AM	4	3	0	0	5	0	1	5	1	0	0	0
09:30 AM	5	6	0	0	11	0	1	26	1	0	0	0
Grand Total	452	545	0	34	726	0	17	719	19	0	0	0
App. %	174	20.9	0	7	30.2	0	12.8	30.2	11.6	0	0	0
Total %												

Start Time	Broadway From East			Ames St From South			Broadway From West			U-TR		
	Left	Thru	U-TR	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
08:30 AM	0	1	0	0	1	0	0	1	0	0	0	0
08:45 AM	0	4	0	0	3	0	0	3	2	1	0	0
09:00 AM	0	2	0	0	0	0	0	2	1	0	0	0
09:15 AM	0	3	0	0	2	0	0	2	1	0	0	0
09:30 AM	0	4	0	0	7	0	0	5	1	0	0	0
Total Volume	0	11	0	0	9	0	0	14	5	0	0	0
% App. Total	0.00	4.5	0.00	0.00	3.7	0.00	0.00	5.3	2.0	0.00	0.00	0.00
TRF	0.00	283	0.00	250	726	0.00	179	719	200	0.00	0.00	0.00



Accurate Counts
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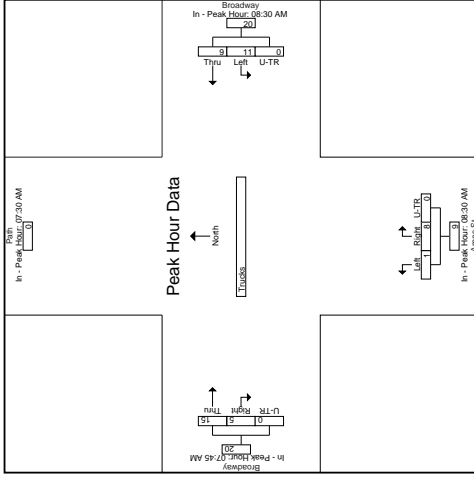
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Site Code : 1646003
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Broadway			Ames St			Broadway			Int. Total
	Left	Thru	App. Total	Left	Thru	App. Total	Right	U+TR	App. Total	Right	U+TR	App. Total	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour For Each Approach Right Side:													
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
+0 mins.	3	1	4	0	0	0	1	0	1	0	0	0	
+15 mins.	0	4	6	0	0	0	3	0	3	2	0	5	
+30 mins.	0	2	3	0	0	0	1	0	1	1	0	2	
Total Volume	0	14	20	0	0	0	8	0	9	15	0	20	
% App. Total	0.00	68.8	563	0.00	0.00	0.00	667	0.00	790	556	635	0.00	
DIV													



Accurate Counts
978-664-2565

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

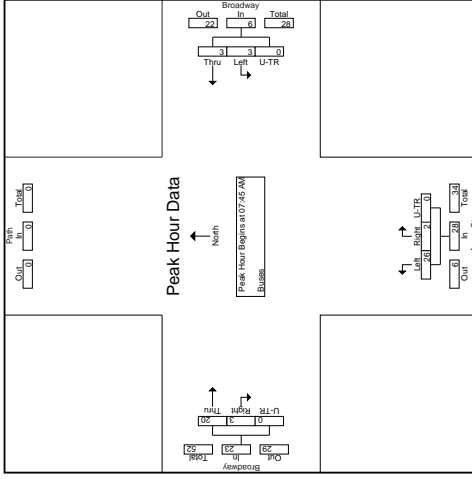
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Site Code : 16460003
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Right	Thru	U-TR	
07:45 AM	0	2	0	2	0	0	0	6	0	17
Total	1	2	0	12	2	0	0	9	0	26
08:00 AM	1	0	0	6	0	0	0	4	0	11
08:15 AM	1	1	0	7	0	0	0	5	1	15
08:30 AM	1	1	0	6	0	0	0	5	2	14
08:45 AM	1	0	0	5	1	0	0	6	0	13
Total	4	1	0	24	1	0	0	20	3	53
09:00 AM	0	0	0	7	0	0	0	4	0	11
09:15 AM	1	0	0	7	0	0	0	3	0	11
Grand Total	6	3	0	93	3	0	0	95	7	101
App. %	66.5	23.2	0	49.5	5.7	0	0	35.6	7.7	35.6
Total %	5.9	3	0	49.5	3	0	0	35.6	3	0

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Right	Thru	U-TR	
07:45 AM	0	2	0	2	0	0	0	6	0	6
08:00 AM	0	1	0	1	0	0	0	4	0	4
08:15 AM	0	1	0	6	0	0	0	5	0	7
08:30 AM	0	1	0	6	0	0	0	5	0	7
08:45 AM	0	3	0	26	2	0	0	20	3	23
Total Volume	0	8	0	92	2	0	0	87	13	83
% App. Total	.000	.750	.000	.750	.025	.000	.000	.778	.153	.831
THP	.000	.375	.000	.375	.013	.000	.000	.375	.040	.358

Peak Hour Analysis: 07:45 AM - 08:45 AM, Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

Accurate Counts
978-664-2565

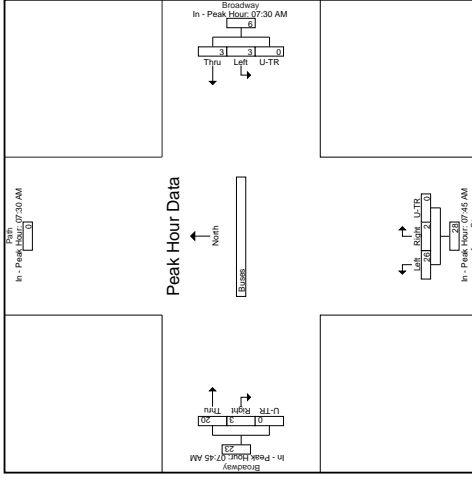
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Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Ames St			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	0	0	2	0	0	0	0	0	6
+0 mins.	0	0	0	2	0	0	0	0	0	4
+15 mins.	0	0	0	7	0	0	6	4	0	6
+30 mins.	0	0	0	1	0	0	7	5	1	6
Total Volume	0	0	0	26	0	0	28	20	3	23
% App. Total	0.00	0.00	0.00	92.9	0.00	0.00	87	13	0	851
DPE	0.00	0.00	0.00	0.750	0.000	0.000	0.778	0.833	0.375	0.851



File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
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Accurate Counts
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File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 2

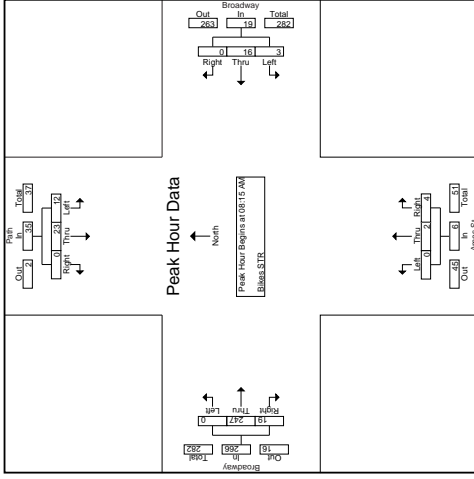
N/S Street : Amos Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

N/S Street : Amos Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Counts Printed- Bikas STR

Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	39
Total	2	1	0	1	1	0	1	1	0	0	0	0	66
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	55
08:15 AM	1	5	0	1	3	0	0	0	0	0	0	0	80
08:30 AM	3	3	0	0	1	0	0	0	0	0	0	0	84
08:45 AM	2	8	0	2	7	0	0	0	0	0	0	0	88
Total	6	18	0	5	11	0	1	1	3	0	0	0	307
09:00 AM	6	7	0	0	5	0	0	1	1	0	0	0	74
09:15 AM	2	6	0	2	2	0	0	0	1	0	0	0	58
09:30 AM	0	6	0	0	19	0	1	3	6	0	0	0	390
Grand Total	33.6	66.2	0	29.6	38	0	10	30	17	0	0	0	505
Total %	3.2	6.3	0	1.6	3.8	0	0.2	0.6	1.2	0	0	0	77.2



Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	39
Total	2	1	0	1	1	0	1	1	0	0	0	0	66
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	55
08:15 AM	1	5	0	1	3	0	0	0	0	0	0	0	80
08:30 AM	3	3	0	0	1	0	0	0	0	0	0	0	84
08:45 AM	2	8	0	2	7	0	0	0	0	0	0	0	88
Total	6	18	0	5	11	0	1	1	3	0	0	0	307
09:00 AM	6	7	0	0	5	0	0	1	1	0	0	0	74
09:15 AM	2	6	0	2	2	0	0	0	1	0	0	0	58
09:30 AM	0	6	0	0	19	0	1	3	6	0	0	0	390
Grand Total	33.6	66.2	0	29.6	38	0	10	30	17	0	0	0	505
Total %	3.2	6.3	0	1.6	3.8	0	0.2	0.6	1.2	0	0	0	77.2

Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	39
Total	2	1	0	1	1	0	1	1	0	0	0	0	66
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	55
08:15 AM	1	5	0	1	3	0	0	0	0	0	0	0	80
08:30 AM	3	3	0	0	1	0	0	0	0	0	0	0	84
08:45 AM	2	8	0	2	7	0	0	0	0	0	0	0	88
Total	6	18	0	5	11	0	1	1	3	0	0	0	307
09:00 AM	6	7	0	0	5	0	0	1	1	0	0	0	74
09:15 AM	2	6	0	2	2	0	0	0	1	0	0	0	58
09:30 AM	0	6	0	0	19	0	1	3	6	0	0	0	390
Grand Total	33.6	66.2	0	29.6	38	0	10	30	17	0	0	0	505
Total %	3.2	6.3	0	1.6	3.8	0	0.2	0.6	1.2	0	0	0	77.2

Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	39
Total	2	1	0	1	1	0	1	1	0	0	0	0	66
08:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	55
08:15 AM	1	5	0	1	3	0	0	0	0	0	0	0	80
08:30 AM	3	3	0	0	1	0	0	0	0	0	0	0	84
08:45 AM	2	8	0	2	7	0	0	0	0	0	0	0	88
Total	6	18	0	5	11	0	1	1	3	0	0	0	307
09:00 AM	6	7	0	0	5	0	0	1	1	0	0	0	74
09:15 AM	2	6	0	2	2	0	0	0	1	0	0	0	58
09:30 AM	0	6	0	0	19	0	1	3	6	0	0	0	390
Grand Total	33.6	66.2	0	29.6	38	0	10	30	17	0	0	0	505
Total %	3.2	6.3	0	1.6	3.8	0	0.2	0.6	1.2	0	0	0	77.2

Accurate Counts
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File Name : 1646003
Site Code : 1646003
Count Date : 4/9/2014
Page No : 4

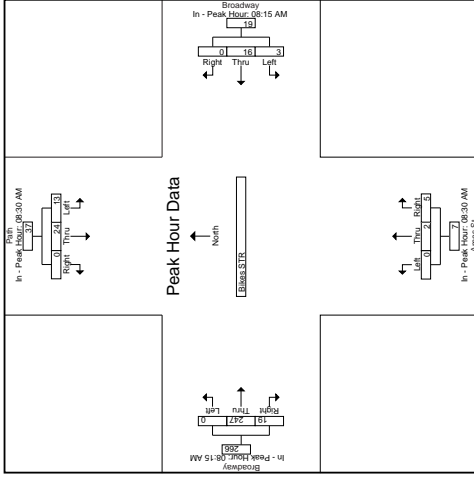
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Count Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Peak North			Broadway East			Ames St East			Broadway West			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour For Each Approach Equals:															
+0 mins.	3	0	6	0	0	4	0	0	1	0	0	0	69	1	70
+15 mins.	2	8	10	0	1	1	0	0	3	0	0	3	73	3	76
+30 mins.	6	7	13	2	2	9	0	1	1	2	0	58	8	8	66
Total Volume	13	25	37	2	16	19	0	2	5	7	0	247	19	19	266
% App. Total	35.1	64.9	0	15.8	84.2	0	0	28.6	71.4	4	0	92.9	7.1	7.1	87.5
PHE	542	750	0	373	571	0	0	500	417	483	0	846	494	494	875



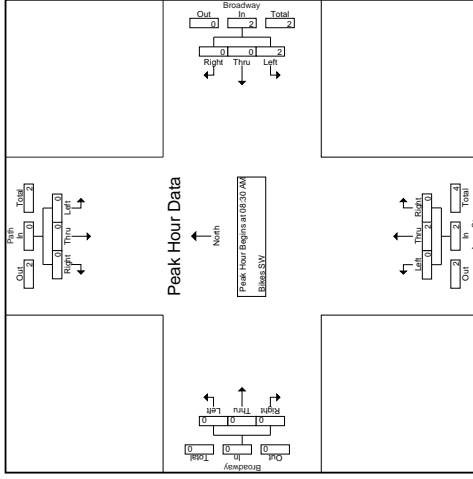
Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Survey Date : 4/9/2014
Page No : 2

N/S Street : Amos Street
E/W Street : Broadway
City/Town/Village, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Survey Date : 4/9/2014
Page No : 1

N/S Street : Amos Street
E/W Street : Broadway
City/Town/Village, MA
Weather : Clear



Grounds Printed- Bikes SW												
Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:45 AM	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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	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
Total	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
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	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

Broadway From East												
Start Time	Path From North			Broadway From East			Amos St From South			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:45 AM to 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 09:15 AM	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	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
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Est	0	0	0	0	0	0	0	0	0	0	0	0
THP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Survey Date : 4/9/2014
Page No : 1

N/S Street : Amos Street
E/W Street : Broadway
City/Town/Village, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
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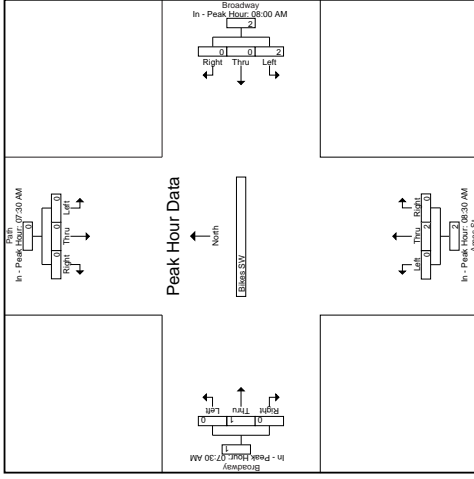
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
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Accurate Counts
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N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Peak North			Broadway From East			Ames St From South			Broadway From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour For Each Approach Equals:													
+0 mins. (07:30 AM)	0	0	0	0	0	0	0	0	0	0	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	1	0	0	1	0	0	0	0	0	0
Total Volume	0	0	0	1	0	0	1	0	0	0	0	0	0
% App. Total	0	0	0	100	0	0	100	0	0	0	100	0	100
PHE	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.250	.000	.250



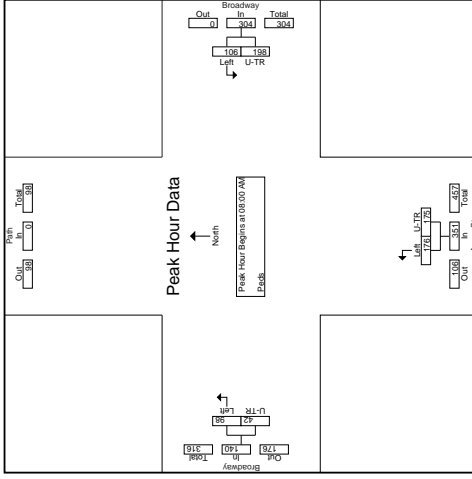
Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Groups Printed: Peds.

Start Time	Broadway From East		Ames St From South		Broadway From West		In. Total
	SE	WB	WB	SE	SE	WB	
07:45 AM	20	57	36	16	13	180	
Total	34	88	70	21	317		
08:00 AM	20	66	47	23	206		
08:15 AM	34	56	31	11	204		
08:30 AM	31	49	40	9	200		
08:45 AM	21	27	57	18	186		
Total	106	198	175	98	795		
09:00 AM	33	20	26	12	142		
09:15 AM	28	30	26	11	161		
Grand Total	201	336	297	160	1415		
App. Total	21	23.7	47	21			
Total %	14.2	11.3	16.3	6.3			

Start Time	Broadway From East		Ames St From South		Broadway From West		App. Total	In. Total
	SE	WB	WB	SE	SE	WB		
08:00 AM	66	86	46	47	93	26	206	
08:15 AM	34	56	31	11	78	36	204	
08:30 AM	21	27	44	19	101	27	186	
Total Volume	106	198	176	175	351	140	795	
% App. Total	14.9	16.1	16.8	16.3	35.3	17.6	37.0	
PHT	.779	.844	.869	.854				

Peak Hour Analysis: 08:00 AM to 08:30 AM, Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:00 AM

Accurate Counts
978-664-2565

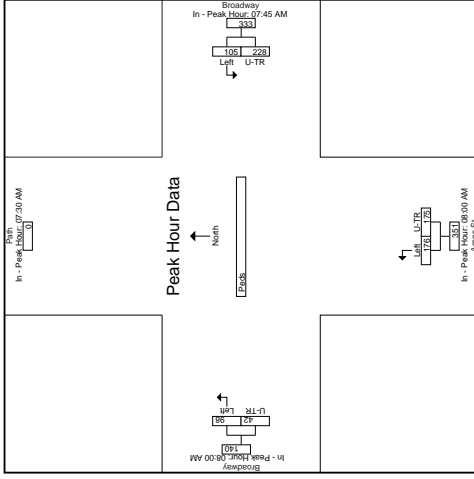
File Name : 1646003
Site Code : 1646003
Print Date : 4/9/2014
Page No. : 4

N/S Street : Ames Street
E/W Street : Broadway
City/Town/Village : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Print Date : 4/9/2014
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N/S Street : Ames Street
E/W Street : Broadway
City/Town/Village : Cambridge, MA
Weather : Clear

Start Time	From North		From South		From West		From East		From SE		From SW		Int. Total
	App. Total	SE	App. Total	WB	App. Total	EB	App. Total	NB	App. Total	SB	App. Total	SW	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour For Each Approach Begins at:	07:30 AM		07:45 AM		08:00 AM		08:00 AM		08:00 AM		08:00 AM		
+0 mins.	0	20	57	46	77	47	78	23	93	23	3	26	
+15 mins.	0	20	66	47	86	31	25	11	78	25	11	36	
+30 mins.	0	34	56	39	90	40	10	9	79	32	9	41	
Total Volume	0	105	228	176	333	175	531	98	351	98	42	140	
% App. Total	0.001	31.5	68.5	50.1	49.9	768	389.9	766	389.9	553	854		
PHF		.772	.854	.936	.923	.768	.869	.766	.869	.553	.854		



Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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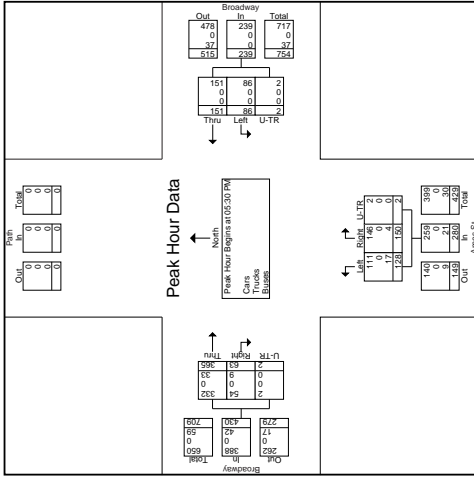
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Broadway From East				Ames St From South				Broadway From West				Int. Total
	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	
04:30 PM	0	34	0	34	0	28	0	28	14	0	0	14	230
04:45 PM	17	34	0	51	0	28	0	28	14	0	0	14	230
Total	17	68	0	85	0	56	0	56	28	0	0	28	430
06:00 PM	10	37	0	47	34	43	0	77	17	17	0	34	536
06:15 PM	13	35	0	48	38	29	0	67	16	16	0	32	211
06:30 PM	24	39	0	63	41	41	0	82	14	14	0	28	235
06:45 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
06:55 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
Total	71	149	1	221	134	153	0	287	63	63	0	126	933
06:00 PM	22	41	1	64	43	46	2	91	21	21	1	42	265
06:15 PM	25	33	0	58	23	23	0	46	10	10	0	20	216
06:30 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:45 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:55 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
Total	579	1154	1	1734	1154	687	4	1841	508	508	1	1017	7166
% Cars	144	283	2	429	233	279	2	514	110	110	2	222	1736
% Trucks	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
% Trucks	1	1	0	1	0.8	3	0	3.8	0.1	0.1	0	0.1	0.3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.7	0.4	0	1.1	2.8	2.4	0	5.2	1.6	1.6	0	3.2	5.6



Start Time	Broadway From East				Ames St From South				Broadway From West				Int. Total
	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	
04:30 PM	0	34	0	34	0	28	0	28	14	0	0	14	230
04:45 PM	17	34	0	51	0	28	0	28	14	0	0	14	230
Total	17	68	0	85	0	56	0	56	28	0	0	28	430
06:00 PM	10	37	0	47	34	43	0	77	17	17	0	34	536
06:15 PM	13	35	0	48	38	29	0	67	16	16	0	32	211
06:30 PM	24	39	0	63	41	41	0	82	14	14	0	28	235
06:45 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
06:55 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
Total	71	149	1	221	134	153	0	287	63	63	0	126	933
06:00 PM	22	41	1	64	43	46	2	91	21	21	1	42	265
06:15 PM	25	33	0	58	23	23	0	46	10	10	0	20	216
06:30 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:45 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:55 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
Total	579	1154	1	1734	1154	687	4	1841	508	508	1	1017	7166
% Cars	144	283	2	429	233	279	2	514	110	110	2	222	1736
% Trucks	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
% Trucks	1	1	0	1	0.8	3	0	3.8	0.1	0.1	0	0.1	0.3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.7	0.4	0	1.1	2.8	2.4	0	5.2	1.6	1.6	0	3.2	5.6

Start Time	Broadway From East				Ames St From South				Broadway From West				Int. Total
	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	Left	Thru	U-Turn	Total	
04:30 PM	0	34	0	34	0	28	0	28	14	0	0	14	230
04:45 PM	17	34	0	51	0	28	0	28	14	0	0	14	230
Total	17	68	0	85	0	56	0	56	28	0	0	28	430
06:00 PM	10	37	0	47	34	43	0	77	17	17	0	34	536
06:15 PM	13	35	0	48	38	29	0	67	16	16	0	32	211
06:30 PM	24	39	0	63	41	41	0	82	14	14	0	28	235
06:45 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
06:55 PM	15	38	1	54	25	40	0	65	16	16	0	32	233
Total	71	149	1	221	134	153	0	287	63	63	0	126	933
06:00 PM	22	41	1	64	43	46	2	91	21	21	1	42	265
06:15 PM	25	33	0	58	23	23	0	46	10	10	0	20	216
06:30 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:45 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
06:55 PM	145	284	0	429	293	196	2	492	126	126	0	252	1846
Total	579	1154	1	1734	1154	687	4	1841	508	508	1	1017	7166
% Cars	144	283	2	429	233	279	2	514	110	110	2	222	1736
% Trucks	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
% Trucks	1	1	0	1	0.8	3	0	3.8	0.1	0.1	0	0.1	0.3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.7	0.4	0	1.1	2.8	2.4	0	5.2	1.6	1.6	0	3.2	5.6

Accurate Counts
978-664-2565

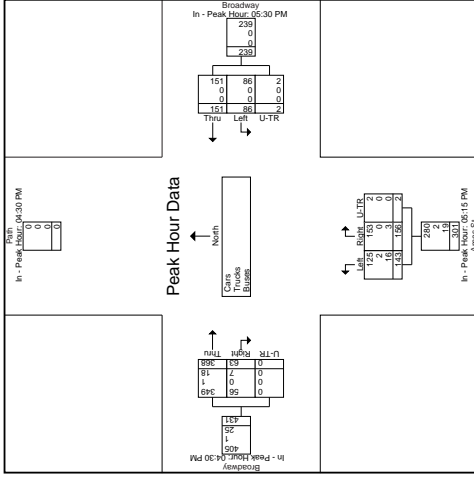
File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No. : 4

N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No. : 3

N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			From South			Ames St			Broadway			Int. Total
	Left	U+TR	App. Total	Left	U+TR	App. Total	Right	U+TR	App. Total	Right	U+TR	App. Total	
05:30 PM	0	0	0	63	0	63	29	0	29	0	0	0	107
06:00 PM	0	0	0	54	0	54	41	0	41	0	0	0	105
06:30 PM	0	0	0	64	0	64	40	0	40	0	0	0	123
07:00 PM	0	0	0	239	0	239	143	0	143	0	0	0	431
Total Volume	0	0	0	934	0	934	518	0	518	0	0	0	1471
% App. Total	0.00	0.00	0.00	93.4	0.00	93.4	51.8	0.00	51.8	0.00	0.00	0.00	100.00
DHF	0	0	0	934	0	934	518	0	518	0	0	0	1471
% Cars	0	0	0	100	0	100	100	0	100	0	0	0	100
% Trucks	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



Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

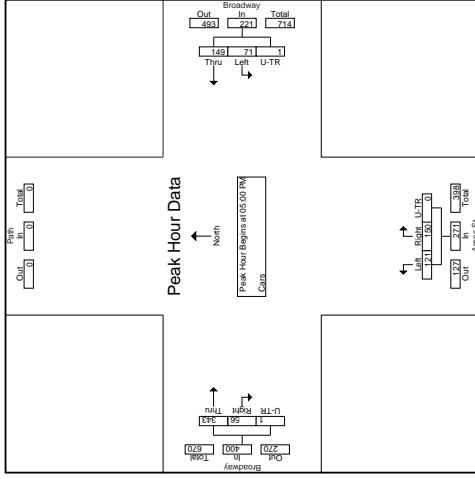
File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Groups Printed: Cars

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	7	3	0	24	4	0	13	4	0	215
04:45 PM	17	5	0	43	0	0	85	2	0	402
Total	26	60	0	56	62	0	171	27	0	546
05:00 PM	19	37	0	33	42	0	100	15	0	202
05:15 PM	13	35	0	33	29	0	78	14	0	225
05:30 PM	24	39	0	34	41	0	75	12	0	219
05:45 PM	15	38	1	21	38	0	90	15	1	892
Total	71	149	1	121	150	0	343	56	1	243
06:00 PM	22	41	1	37	45	2	78	16	1	199
06:15 PM	25	33	0	19	22	0	89	11	0	1756
Grand Total	144	293	2	233	279	2	881	110	2	
App. Total	8.3	16.3	0.1	43.4	51.7	0.1	39.2	13.2	0.1	
Total %				13.4	16.1		6.3	5.3	0.1	

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
05:00 PM	19	37	0	33	42	0	75	100	0	115
05:15 PM	13	35	0	33	29	0	62	78	0	92
05:30 PM	24	39	0	34	41	0	79	90	0	219
05:45 PM	15	38	1	21	38	0	59	90	1	892
Total Volume	71	149	1	121	150	0	271	343	1	406
% App. Total	23.1	67.4	0.3	44.6	55.4	0	85.3	85.3	14	0.2
TRF	0.00	0.140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

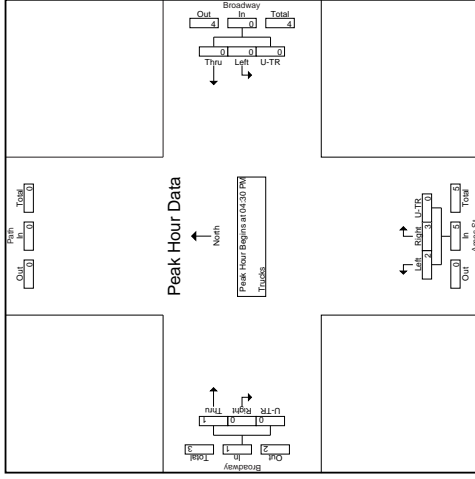
File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Groups Printed: Trucks

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	
04:30 PM	0	0	0	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	2	0	1	0	0	4
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	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
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	0	2	0	1	0	0	6
App. %	0	0	0	0	46	0	100	0	0	6
Total %	0	0	0	31.3	50	0	16.7	0	0	6

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	
04:30 PM	0	0	0	0	1	0	1	0	0	2
04:45 PM	0	0	0	0	2	0	2	0	0	2
04:55 PM	0	0	0	0	0	0	2	0	0	2
05:15 PM	0	0	0	2	0	0	2	0	0	6
Total Volume	0	0	0	2	3	0	5	1	0	11
% App. Total	.000	.000	.000	.250	.375	.000	.625	.100	.000	.750



Accurate Counts
978-664-2565

File Name : 1646003
Site Code : 1646003
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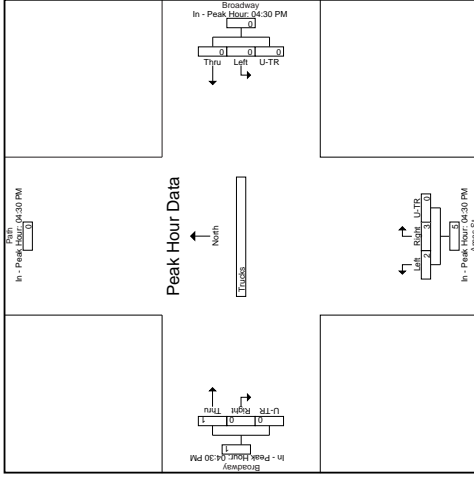
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Broadway			Ames St			Broadway			Int. Total	
	App. Total	Left	Thru	Thru	U+TR	App. Total	Left	Thru	Right	U+TR	App. Total	Right		U+TR
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	2	0	0	0	0	2
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	3	0	0	0	0	3
% App. Total	0	0	0	0	0	0	0	0	60	0	0	0	0	60
DIV	.000	.000	.000	.000	.000	.000	.250	.375	.000	.625	.250	.000	.000	.250



Accurate Counts
978-664-2565

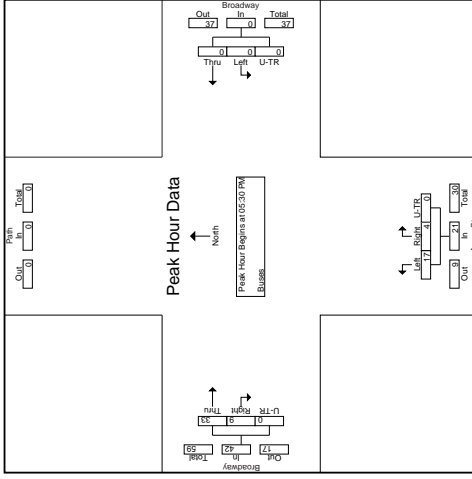
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Site Code : 16460003
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	
05:30 PM	0	0	0	1	2	0	0	1	0	24
05:45 PM	0	0	0	4	6	0	6	1	0	13
06:00 PM	0	0	0	7	2	0	10	3	0	10
06:15 PM	0	0	0	1	0	0	6	2	0	7
06:30 PM	0	0	0	3	0	0	2	2	0	10
06:45 PM	0	0	0	3	0	0	5	2	0	10
06:55 PM	0	0	0	4	2	0	7	1	0	14
Total	0	0	0	11	3	0	20	7	0	41
06:00 PM	0	0	0	6	1	0	10	5	0	22
06:15 PM	0	0	0	4	1	0	11	1	0	17
Grand Total	1	1	0	28	7	0	51	16	0	104
App. %	50	50	0	26.9	20	0	74	21.6	0	104
Total %	1	1	0	26.9	6.7	0	49	15.4	0	104

Start Time	Broadway From East			Ames St From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Right	U-TR	Thru	Right	U-TR	
05:30 PM	0	0	0	3	0	0	5	2	0	10
05:45 PM	0	0	0	4	2	0	6	7	0	14
06:00 PM	0	0	0	4	1	0	5	1	0	12
06:15 PM	0	0	0	4	1	0	11	1	0	17
Total Volume	0	0	0	17	4	0	33	9	0	63
% App. Total	0	0	0	81	19	0	76.6	21.4	0	104
TPE	.000	.000	.000	.268	.500	.000	.750	.450	.000	.316

Accurate Counts
978-664-2565

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
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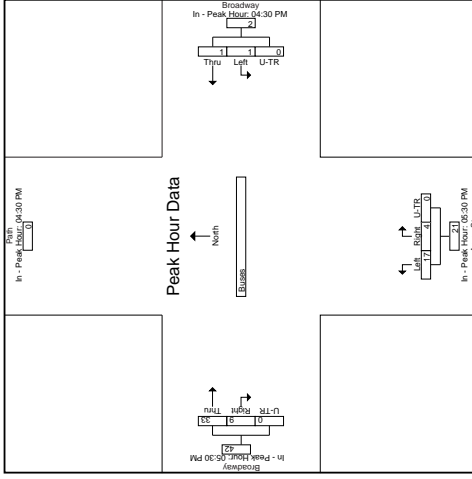
N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North			Ames St			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1										
Peak Hour for East Approach Begins at:										
04:30 PM	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
DIV	0.00	25.0	75.0	0.00	500	708	500	0.00	750	750



Start Time	From North			Ames St			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1										
Peak Hour for East Approach Begins at:										
04:30 PM	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0
DIV	0.00	25.0	75.0	0.00	500	708	500	0.00	750	750

Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
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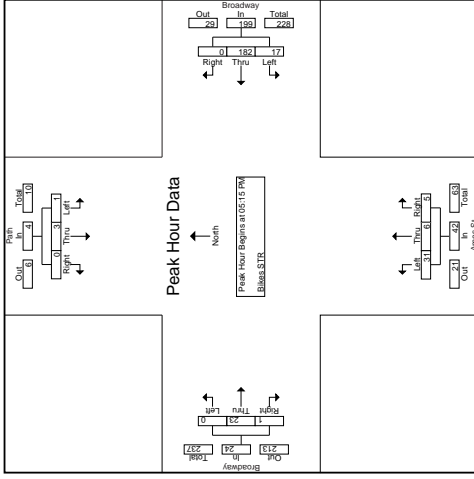
N/S Street : Amos Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No : 1

Accurate Counts
978-664-2565

N/S Street : Amos Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Path From North						Broadway From East						Amos St From South						Broadway From West														
	Left	Thru	Right	App.	Total	In. Total	Left	Thru	Right	App.	Total	Left	Thru	Right	App.	Total	Left	Thru	Right	App.	Total	Left	Thru	Right	App.	Total	In. Total						
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:00 PM	1	2	0	0	3	26	0	0	0	0	6	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:15 PM	0	0	0	0	0	23	0	0	0	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:30 PM	0	0	0	0	0	46	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:45 PM	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total	1	2	0	0	3	103	0	0	0	40	7	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:00 PM	1	0	0	0	1	6	0	0	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM	0	0	0	0	0	38	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM	0	0	0	0	0	26	0	0	0	29	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM	0	0	0	0	0	61	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	63.9	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00 PM	1	0	0	0	1	6	0	0	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM	0	0	0	0	0	38	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM	0	0	0	0	0	26	0	0	0	29	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	0	0	0	0	0	61	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	1	63.9	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM	1	0	0	0	1	6	0	0	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM	0	0	0	0	0	38	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	26	0	0	0	29	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	61	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	63.9	0	0	0	13.8	3.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Accurate Counts
978-664-2565

File Name : 16460003
Site Code : 16460003
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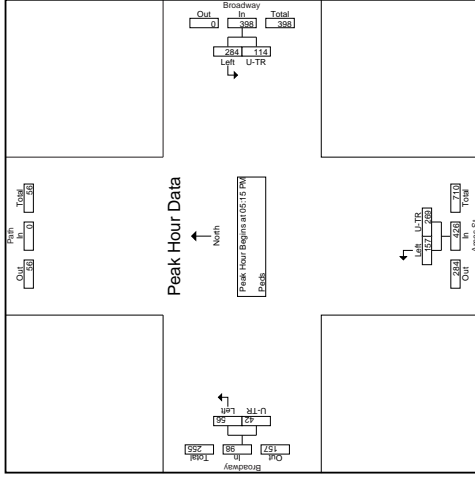
N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460003
Site Code : 16460003
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Broadway From East				Ames St From South				Broadway From West				In. Total
	SB	NB	App. Total	SE	WB	EB	App. Total	WB	NB	App. Total	SE		
04:45 PM	52	14	66	0	24	75	99	18	9	27	190		
Total	135	27	162	40	119	23	363						
05:00 PM	87	33	120	23	87	6	161	16	6	22	232		
05:15 PM	95	20	115	20	65	6	131	6	6	12	212		
05:30 PM	64	29	93	33	54	9	106	16	6	22	205		
05:45 PM	76	39	115	51	265	16	321	10	10	20	351		
Total	322	121	443	127	487	48	920						
06:00 PM	49	26	75	53	91	10	160	25	6	31	254		
06:15 PM	33	23	56	33	35	7	75	6	6	12	137		
Grand Total	197	107	304	253	510	88	851	48	24	72	1674		
App. %	7.2	3.8	11.0	9.1	18.7	1.0	23.1	0.5	0.9	3.4	58.5		
Total %	32.2	11.8	44.0	15.1	30.5	5.2	92.0						

Start Time	Broadway From East				Ames St From South				Broadway From West				In. Total
	SB	NB	App. Total	SE	WB	EB	App. Total	WB	NB	App. Total	SE		
05:15 PM	95	20	115	20	65	85	145	6	6	12	212		
05:30 PM	64	29	93	33	54	87	144	9	16	25	205		
06:00 PM	49	26	75	53	91	144	254	25	10	35	254		
Total Volume	284	114	398	157	269	426	56	42	98	92	922		
% App. Total	71.4	28.6	100.0	36.9	65.1	57.1	42.9	7.0	7.0	7.0	9.0		
PHI	.747	.721	.865	.741	.739	.740	.658	.658	.658	.658	.658		



Accurate Counts
978-664-2565

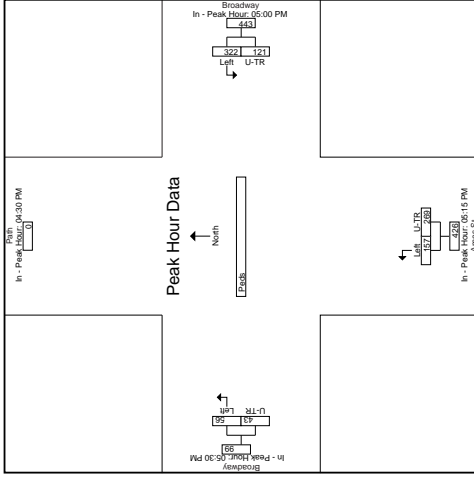
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Site Code : 1646003
Print Date : 4/9/2014
Page No. : 4

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646003
Site Code : 1646003
Print Date : 4/9/2014
Page No. : 3

N/S Street : Ames Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	From North		From East		From South		From West		From SE		From SW		Int. Total
	App. Total	SE	NB	EB	WB	SB	WB	EB	WB	SB	WB	SB	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:	04:30 PM	05:00 PM	05:15 PM	05:30 PM	05:15 PM	05:30 PM	05:15 PM	05:30 PM	05:15 PM	05:30 PM	05:15 PM	05:30 PM	
+0 mins.	0	87	33	120	20	65	85	16	9	25			
+15 mins.	0	95	20	115	33	54	87	10	16	26			
+30 mins.	0	64	29	93	51	89	110	0	28	15			
+45 mins.	0	32	121	413	157	269	426	43	56	99			
Total Volume	0	72.7	27.3	365.9	65.1	739	740	43.4	56.6	707			
% App. Total	.000	.847	.776	.921	.741	.739	.740	.672	.500	.707			



Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Count Date : 4/9/2014
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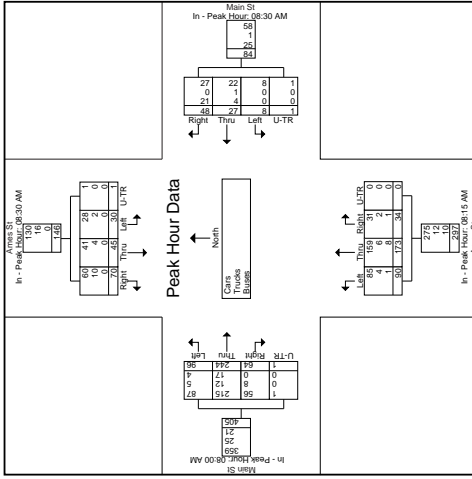
N/S Street : Ames Street
EW Street : Main Street
Location : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Count Date : 4/9/2014
Page No. : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Main Street
Location : Cambridge, MA
Weather : Clear

Start Time	Ames St East-North			Ames St East-South			Main St East-West			Main St West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
08:30 AM	42	21	1	23	42	6	0	71	19	56	18	0
+10 mins.	7	12	1	24	44	6	0	74	23	56	13	1
+15 mins.	6	12	0	24	44	6	0	74	23	56	13	1
+45 mins.	15	19	0	23	43	8	0	70	35	54	14	0
Total Volume	30	45	2	94	173	34	0	297	96	244	64	1
% App. Total	20.5	30.8	1.4	65.2	114.4	23.7	0.0	100.0	65.2	168.2	45.8	0.2
Cars	28	41	1	85	159	31	0	276	87	215	56	1
% Cars	93.3	91.1	50.0	94.4	91.9	91.2	0	92.6	90.6	88.1	87.5	100
Trucks	2	4	0	4	6	2	0	12	5	4	8	0
% Trucks	6.7	8.4	0.0	4.4	3.8	5.9	0	4.0	5.4	1.6	12.5	0
Buses	0	0	0	0	0	1	0	10	4	17	0	0
% Buses	0	0	0	0	0	2.9	0	3.4	4.2	7	0	0



Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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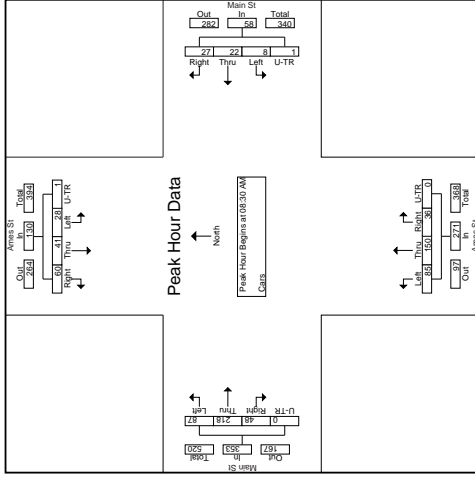
N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Grains Printed - Cus																
	Ames St From North			Main St From East			Ames St From South			Main St From West							
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
07:45 AM	11	14	9	0	6	4	0	16	31	7	0	15	50	16	0	179	
Total	17	21	21	0	10	8	0	30	57	13	0	31	90	26	0	324	
08:00 AM	4	15	0	0	6	7	0	17	29	3	0	17	51	16	0	169	
08:15 AM	7	9	14	0	3	8	0	21	40	6	0	22	50	13	1	193	
08:30 AM	7	9	17	1	6	7	1	23	42	6	0	15	69	15	0	219	
08:45 AM	6	10	13	0	2	4	1	24	40	12	0	33	45	12	0	212	
Total	24	30	39	1	4	19	33	65	131	27	0	87	215	56	1	759	
09:00 AM	11	13	12	0	2	5	0	17	37	7	0	19	51	9	0	185	
09:15 AM	4	9	18	0	3	10	4	0	21	31	1	0	20	53	12	0	196
09:30 AM	6	10	13	0	2	5	0	9	16	6	0	15	27	10	0	157	
09:45 AM	11	13	12	0	9	41	50	1	153	276	58	0	157	409	103	1	1498
Total	23	30	45	0	8	40	49	1	314	567	119	0	234	61	15	4	1498
Approach %	3.7	4.9	7.3	0.1	0.6	2.7	3.3	0.1	10.2	18.4	3.9	0.1	10.5	27.3	6.9	0.1	

Start Time	Ames St From East																
	Ames St From North			Main St From East			Ames St From South			Main St From West							
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
06:30 AM	6	10	13	0	2	5	0	17	37	7	0	19	51	9	0	185	
06:45 AM	11	13	12	0	9	41	50	1	153	276	58	0	157	409	103	1	1498
Total	17	23	25	0	11	96	50	1	326	333	57	0	316	512	112	1	1499
Approach %	3.7	4.9	7.3	0.1	0.6	2.7	3.3	0.1	10.2	18.4	3.9	0.1	10.5	27.3	6.9	0.1	



Start Time	Ames St From North	Main St From East	Ames St From South	Main St From West
07:45 AM	17	21	21	21
08:00 AM	4	15	0	0
08:15 AM	7	9	14	0
08:30 AM	7	9	17	1
08:45 AM	6	10	13	0
Total	24	30	39	1

Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 4

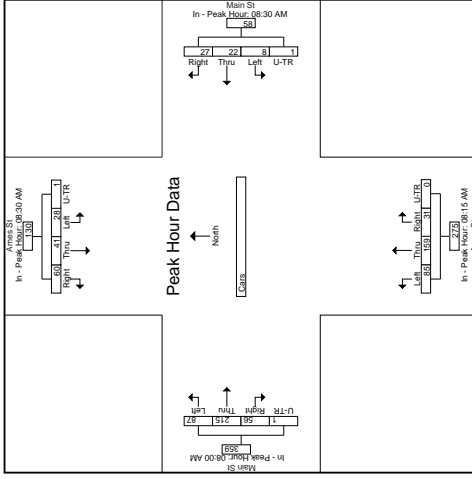
N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West							
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1																	
08:30 AM	9	17	1	6	7	1	15	21	40	6	0	67	17	51	16	0	84
+10 mins.	6	10	0	4	11	0	17	23	42	6	0	71	22	50	13	1	86
+15 mins.	4	9	0	2	4	0	17	17	37	7	0	61	15	45	12	0	80
+45 mins.	1	3	0	3	10	4	10	17	27	7	0	61	33	45	12	0	80
Total Volume	28	41	60	22	27	1	58	85	159	31	0	275	87	215	56	1	359
% App. Opp.	21.5	31.5	46.2	0.8	13.9	37.9	46.6	1.7	30.9	57.8	11.3	0	24.2	59.9	16.6	0.3	
PHF	.636	.788	.833	.250	.803	.667	.550	.614	.260	.263	.946	.000	.806	.779	.373	.260	.807



Accurate Counts
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File Name : 16460004
Site Code : 16460004
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N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

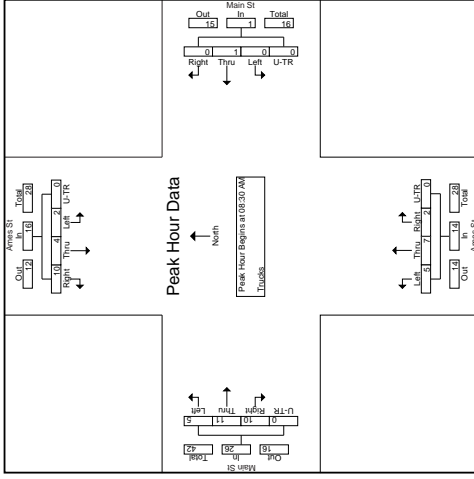
Groups Printed: Tracks

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
07:45 AM	0	1	5	0	1	0	0	0	0	0	0	0	0	5
08:00 AM	0	1	2	0	0	0	1	1	1	0	1	1	1	16
08:15 AM	1	0	1	0	0	0	1	0	0	0	2	0	0	5
08:30 AM	0	0	8	0	0	0	1	0	0	3	6	4	0	22
08:45 AM	0	0	0	0	0	0	0	2	1	0	1	3	2	0
Total	1	2	11	0	0	0	3	2	0	5	12	8	0	48
09:00 AM	1	0	1	0	0	0	2	4	1	0	0	2	2	14
09:15 AM	1	0	1	0	0	0	2	1	0	0	1	0	2	10
09:30 AM	3	6	18	0	0	0	10	10	4	0	7	15	13	88
Grand Total	11.1	22.2	66.7	0	0	0	41.7	41.7	16.7	0	20	42.9	37.1	0
Total %	3.4	6.8	20.5	0	0	0	11.4	11.4	4.5	0	8	17	14.8	0

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	2	0	0	0	0	0	2	1	0	3	2	0	6
09:00 AM	1	0	1	0	0	0	2	4	1	0	7	0	2	14
Total Volume	2	4	10	0	0	0	5	7	2	0	14	5	11	26
% App. Total	12.5	25	62.5	0	0	0	36.7	50	14.3	0	19.2	42.3	38.5	0
PHF	.500	.500	.313	.000	.000	.000	.250	.625	.438	.000	.500	.417	.468	.000
														.500

Peak Hour Analysis from 07:30 AM to 09:15 AM - Peak 1 of 1
 Peak Hour Begins at Section Begins at 08:30 AM

Start Time	Left	Thru	Right	U-TR	App. Total	In. Total
08:30 AM	0	0	0	0	0	0
08:45 AM	0	2	0	0	2	8
09:00 AM	1	0	1	0	2	10
Grand Total	1	2	1	0	4	22



Accurate Counts
978-664-2565

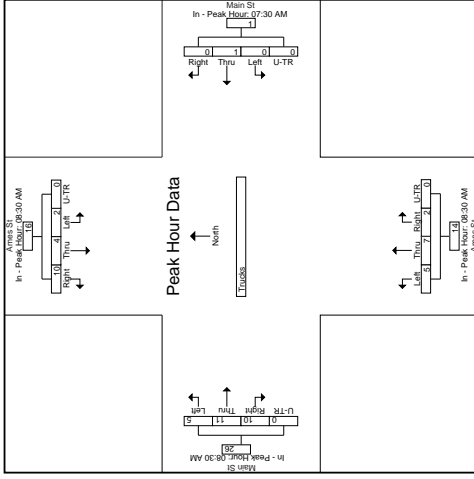
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Site Code : 16460004
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
07:30 AM	0	8	0	0	0	0	0	0	0	0	1	0
+10 mins.	0	2	0	0	1	0	0	2	1	0	3	1
+15 mins.	1	0	0	0	0	0	0	4	0	0	3	1
+45 mins.	2	4	10	0	1	5	7	2	0	14	5	11
Total Volume	25	69.5	16	0	10	36.7	50	14.3	0	11.2	42.3	38.5
% App. Topt	12.5	34.75	8	0	5	18.35	7.15	2.075	0	5.6	21.15	19.25
PHF	0.50	0.50	0.50	0.00	0.20	0.20	0.20	0.20	0.00	0.50	0.50	0.50



Accurate Counts
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File Name : 16460004
Site Code : 16460004
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N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Accurate Counts
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File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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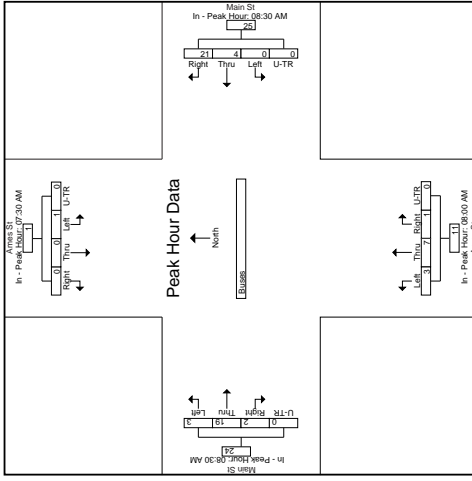
N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	100	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.250	.000	.000	.280	.000	.000	.781	.375	.000	.917	.792	.250	.897



Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	100	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.250	.000	.000	.280	.000	.000	.781	.375	.000	.917	.792	.250	.897

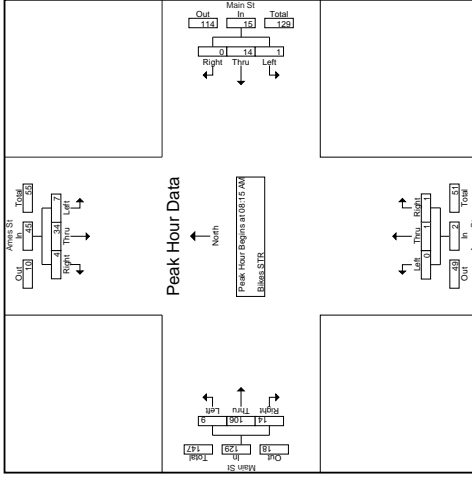
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In_Totl
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	3	1	0	2	0	0	2	0	9	2	0	22
08:15 AM	4	4	0	0	3	0	0	0	0	2	26	1	41
08:30 AM	0	3	0	0	4	0	0	0	0	1	23	4	35
08:45 AM	1	12	3	0	3	0	0	0	0	3	33	3	59
Total	6	22	4	0	12	0	0	2	0	12	64	10	157
08:00 AM	2	15	1	0	4	0	0	1	0	3	24	6	56
08:15 AM	0	9	0	0	4	0	0	1	0	4	15	0	39
08:30 AM	0	7	0	0	1	0	0	0	0	0	14	0	21
08:45 AM	1	12	3	0	23	0	1	7	2	18	148	18	283
Grand Total	3	33	4	0	32	0	1	8	2	25	206	32	507
Approach %	12.3	76.9	10.8	4.2	95.8	0	10	70	20	9.8	80.4	9.8	283
Total %	2.8	17.7	2.5	0.4	8.1	0	0.4	2.5	0.7	6.4	52.3	6.4	157

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In_Totl
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
08:15 AM	0	3	0	0	0	0	0	0	0	0	2	26	41
08:30 AM	0	3	0	0	3	0	0	0	0	1	23	4	35
08:45 AM	1	12	3	0	3	0	0	0	0	3	33	3	59
Total	1	18	3	0	6	0	0	0	0	4	82	10	181
% App. Total	15.6	75.6	8.9	6.7	93.3	0	0	50	50	7	82.2	10.9	809
PHE	458	267	333	250	250	250	250	250	250	500	750	453	809

Accurate Counts
978-664-2565

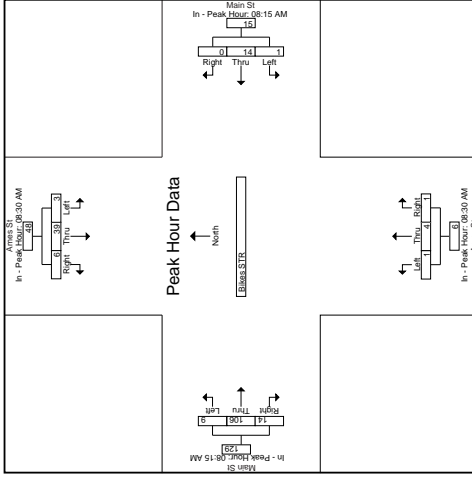
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Site Code : 16460004
Print Date : 4/9/2014
Page No. : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Print Date : 4/9/2014
Page No. : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St - From North			Ames St - From South			Main St - From West			Main St - From East		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins At:												
-05:00 AM	3	0	3	0	0	0	0	0	0	0	0	0
+0 mins.	1	12	3	0	4	0	0	0	0	0	0	0
+15 mins.	2	15	1	0	3	0	0	0	0	0	0	0
+30 mins.	3	39	6	0	15	1	4	1	6	0	0	0
Total Volume	6.2	81.2	12.5	0	93.3	6.7	16.7	7.0	10.6	14	0	0
% App. Total	.375	.850	.500	.000	.388	.250	.333	.250	.375	.750	.000	.527



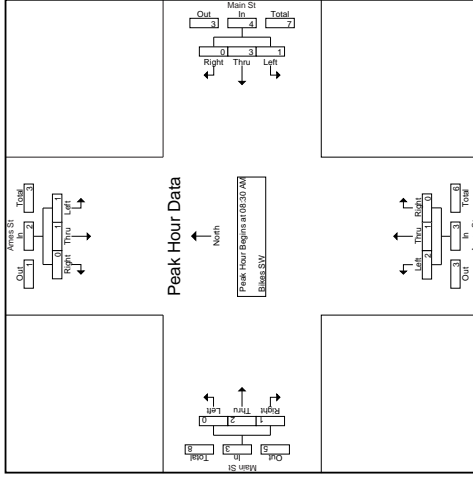
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Groups: Printeds, Bikes, SW

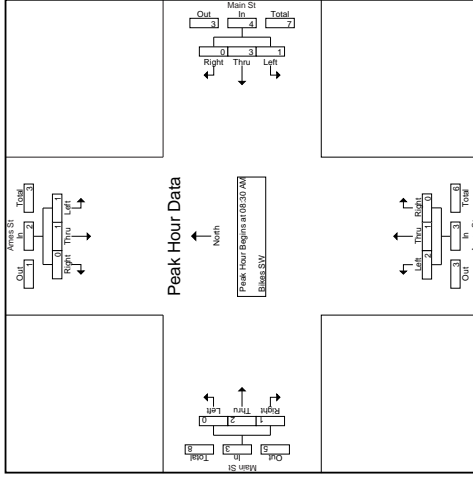
Start Time	Ames St From North			Ames St From South			Main St From East			Main St From West			In_Tot	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	0	0	0	0	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	5
08:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	0	2	1	0	0	0	0	0	0	0	15
Grand Total	33.3	66.7	0	25	75	0	66.7	33.3	0	0	0	80	20	155
Approach %	6.7	13.3	0	6.7	20	0	13.3	6.7	0	0	0	26.7	6.7	100

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West			In_Tot	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	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	0
Grand Total	1	0	0	2	0	0	0	0	0	0	0	0	0	6
Approach %	25	0	0	50	0	0	0	0	0	0	0	0	0	100
Total Volume	50	50	0	25	75	0	66.7	33.3	0	0	0	66.7	33.3	150
% App. Total	.250	.250	.000	.125	.375	.000	.333	.167	.000	.000	.000	.444	.222	1.000

Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Groups: Printeds, Bikes, SW

Start Time	Ames St From North			Ames St From South			Main St From East			Main St From West			In_Tot	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	0	0	0	0	0	0	0	0	0	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	5
08:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	0	2	1	0	0	0	0	0	0	0	15
Grand Total	33.3	66.7	0	25	75	0	66.7	33.3	0	0	0	80	20	155
Approach %	6.7	13.3	0	6.7	20	0	13.3	6.7	0	0	0	26.7	6.7	100

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West			In_Tot	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	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	0
Grand Total	1	0	0	2	0	0	0	0	0	0	0	0	0	6
Approach %	25	0	0	50	0	0	0	0	0	0	0	0	0	100
Total Volume	50	50	0	25	75	0	66.7	33.3	0	0	0	66.7	33.3	150
% App. Total	.250	.250	.000	.125	.375	.000	.333	.167	.000	.000	.000	.444	.222	1.000

Accurate Counts
978-664-2565

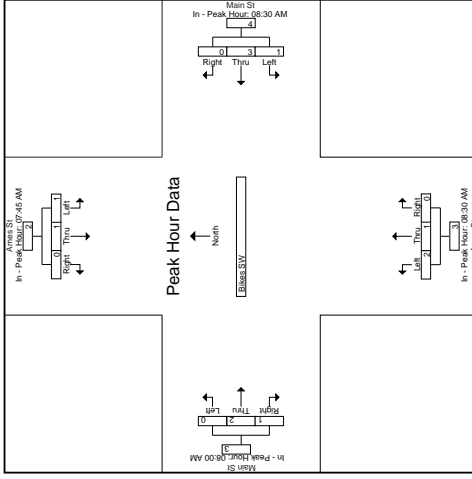
File Name : 16460004
Site Code : 16460004
Start Date : 4/9/2014
Page No. : 4

N/S Street : Amos Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Start Date : 4/9/2014
Page No. : 3

N/S Street : Amos Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Amos St - From South			Amos St - From East			Main St - From West			Main St - From East		
	Left	Right	App. Total	Left	Right	App. Total	Left	Right	App. Total	Left	Right	App. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins At:												
-0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+5 mins.	0	1	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	1	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	2	0	0	0	0	0	0	0	0	0
+20 mins.	1	0	2	0	0	0	0	0	0	0	0	0
Total Volume	1	0	2	0	0	0	0	0	0	0	0	0
% App. Total	50	0	100	0	0	0	0	0	0	0	0	0
PHF	.250	.000	.500	.250	.000	.250	.000	.375	.000	.250	.000	.250



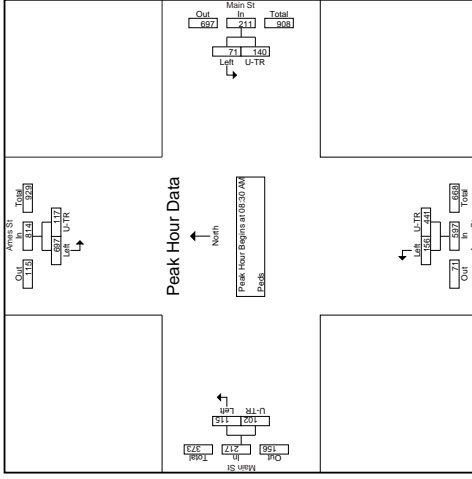
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Print Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Print Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North		Ames St From South		Main St From East		Main St From West		In. Total
	WB	EB	WB	EB	SB	NB	SB	NB	
08:00 AM	174	33	17	34	0	26	0	10	282
08:15 AM	162	42	18	37	12	18	5	12	216
08:30 AM	207	40	25	39	15	25	38	27	445
08:45 AM	174	33	17	34	0	26	0	10	282
Total	697	148	52	144	27	79	43	62	1471
Grand Total									
Approach %									
Total Volume									
% App. Total									
PHF									

Start Time	Ames St From North		Ames St From South		Main St From East		Main St From West		In. Total
	WB	EB	WB	EB	SB	NB	SB	NB	
08:00 AM	15	25	39	86	40	99	21	38	445
08:15 AM	5	31	39	132	36	124	18	22	483
08:30 AM	26	31	41	99	57	140	21	38	590
08:45 AM	15	25	39	86	40	99	21	38	445
Total	61	112	158	397	173	462	81	102	1638
Grand Total									
Approach %									
Total Volume									
% App. Total									
PHF									

Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
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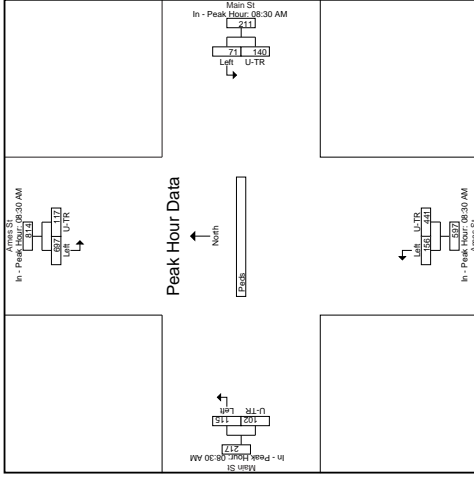
N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North		Main St From East		Ames St From South		Main St From West		Int. Total
	WB	EB	WB	EB	WB	EB	WB	EB	
08:30 AM	26	215	25	40	86	38	125	38	65
+0 mins.	189	188	31	36	132	171	171	15	53
+15 mins.	172	188	31	36	132	171	171	15	53
+45 mins.	172	188	31	36	132	171	171	15	53
Total Volume	697	814	71	140	441	597	597	115	102
% App. Total	85.6	14.4	33.6	66.4	26.1	73.9	63	47	2835
PHF	.322	.686	.683	.660	.676	.651	.673	.757	.671



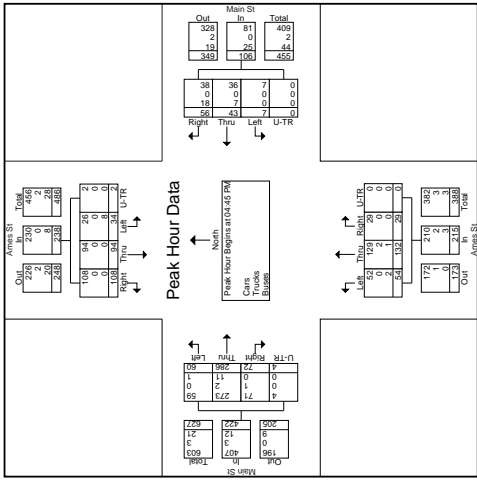
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
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N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Groups Printed: Cars - Trucks - Buses

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			Int. Total				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
04:45 PM	8	20	30	0	11	17	0	8	32	4	0	14	59	17	0	221	
05:00 PM	9	23	27	1	20	24	0	24	50	7	0	30	75	16	4	286	
05:15 PM	6	32	22	0	2	6	14	0	15	31	6	0	11	78	22	0	245
05:30 PM	11	19	29	1	2	9	12	0	15	32	13	0	15	74	17	0	249
05:45 PM	8	22	25	0	0	7	15	0	8	29	4	0	12	56	15	2	204
Total	35	86	103	2	39	54	0	54	129	29	0	58	265	70	6	864	
06:00 PM	7	21	22	0	1	8	10	0	16	28	7	0	14	53	13	0	200
06:15 PM	6	23	26	0	4	7	15	0	17	25	14	0	10	55	17	0	229
06:30 PM	6	18	24	0	1	7	10	0	11	19	11	0	11	47	13	0	173
Approach %	15.3	41	10.7	0.7	6.3	39.2	54.5	0	27.8	59	14.2	0	14.7	67.6	16.8	0.8	775.9
Total %	3.8	19.2	10.7	0.2	0.7	4.1	5.7	0	6.2	12.9	3.2	0	6.2	28.7	7.1	0.3	318.3
Cars	51	162	190	0	12	63	89	0	101	228	57	0	107	488	126	6	1683
Trucks	17	10	9	0	1	1	1	0	1	3	1	0	1	3	1	0	34
% Trucks	0	0	0.5	0	0	0	0	0	0	0	0	0	0	1.2	0.8	0	0.5
Buses	17	0	0	0	0	0	0	0	6	0	0	0	4.5	20	1	0	95
% Buses	25	0	0	0	0	0	0	0	5.4	0.4	0	0	4.5	3.9	0.8	0	5.3

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			Int. Total				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right					
04:45 PM	8	20	30	0	11	17	0	8	32	4	0	14	59	17	0	221	
05:00 PM	9	23	27	1	20	24	0	24	50	7	0	30	75	16	4	286	
05:15 PM	6	32	22	0	2	6	14	0	15	31	6	0	11	78	22	0	245
05:30 PM	11	19	29	1	2	9	12	0	15	32	13	0	15	74	17	0	249
05:45 PM	8	22	25	0	0	7	15	0	8	29	4	0	12	56	15	2	204
Total	34	94	108	2	39	54	0	54	129	29	0	58	265	70	6	864	
% App. Total	14.3	39.5	45.4	0.8	6.6	40.6	59.8	0	25.1	61.4	13.5	0	21.5	60	28.6	7.2	4.22
Cars	28	94	108	2	29	36	88	0	81	129	29	0	210	59	27.3	7.1	4.07
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3
Buses	8	0	0	0	0	0	0	0	2	1	0	0	1.1	1	0	0	12
% Buses	23.5	0	0	0	0	0	0	0	3.7	0.8	0	0	1.7	3.8	0	0	2.8

Peak Hour for Entire Intersection Begins at 04:45 PM

Start Time	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total					
04:45 PM	8	20	30	0	58	1	11	17	0	29	8	32	4	0	44	14	59	17	0	90	221
05:00 PM	9	23	27	1	60	2	17	13	0	32	16	37	6	0	59	20	75	16	4	115	286
05:15 PM	6	32	22	0	60	0	2	6	14	32	15	31	6	0	60	15	74	17	0	105	245
05:30 PM	11	19	29	1	60	2	9	12	0	23	15	32	13	0	60	15	74	17	0	105	249
05:45 PM	8	22	25	0	55	0	0	7	15	29	8	29	4	0	41	12	56	15	2	95	204
Total	34	94	108	2	238	7	43	56	0	106	54	132	29	0	215	60	286	72	4	422	981
% App. Total	14.3	39.5	45.4	0.8	60.6	6.6	40.6	59.8	0	25.1	61.4	13.5	0	21.5	60	28.6	7.2	4	4.22	9.97	
Cars	28	94	108	2	230	7	36	88	0	81	129	29	0	210	59	27.3	7.1	4	407	928	
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	
Buses	8	0	0	0	8	0	0	0	0	2	1	0	0	3	1	0	0	0	0	12	
% Buses	23.5	0	0	0	3.4	0	16.3	32.1	0	23.6	3.7	0.8	0	1.4	1.7	3.8	0	0	0	2.8	

Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
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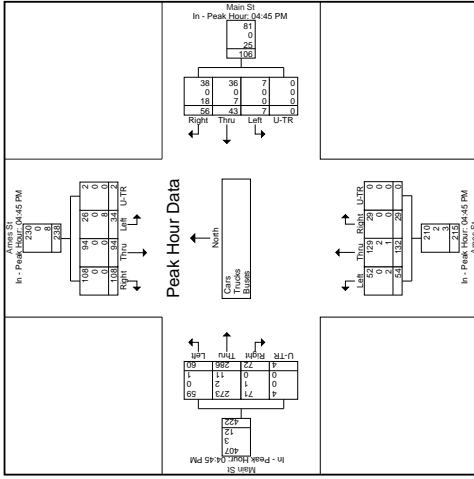
N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Ames St From East			Ames St From South			Main St From West			In-Total						
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right							
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	Peak Hour for Edge/Approach/Right Side																		
Peak Hour	30	0	58	11	17	0	29	8	32	4	4	0	44	14	59	17	0	90	
+10 mins.	8	20	30	1	17	0	29	8	32	4	4	0	44	14	59	17	0	90	
+15 mins.	9	23	27	1	13	0	32	16	37	6	6	0	59	20	75	16	4	115	
+20 mins.	11	26	37	2	14	0	35	15	40	6	6	0	60	15	75	16	4	115	
+25 mins.	11	26	37	2	14	0	35	15	40	6	6	0	60	15	74	17	0	108	
+30 mins.	11	26	37	2	14	0	35	15	40	6	6	0	60	15	74	17	0	108	
Total/Volume	34	94	108	2	238	7	43	56	0	106	54	132	29	0	215	60	286	72	4
% App. Total	14.3	39.5	45.4	0.8	6.6	40.6	52.9	0	6.9	25.1	61.4	13.5	0	14.2	67.8	17.1	0.9	4.22	
% Cars	72.8	94	108	2	230	7	36	88	0	81	52	129	29	0	210	59	273	71	4
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	23.5	0	0	0	16.3	32.1	0	23.6	3.7	0.8	0	0	1.4	1.7	3.8	0	0	2.8	



Accurate Counts
978-664-2565

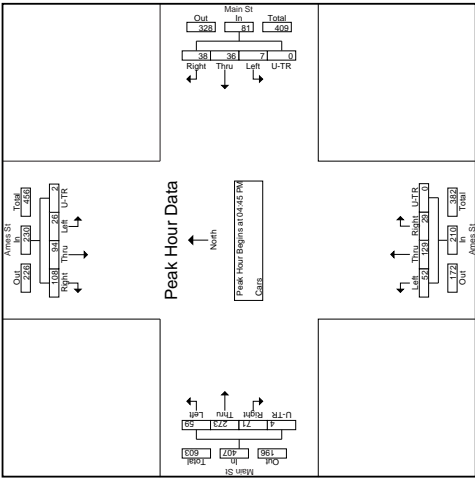
File Name : 16460004
Site Code : 16460004
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Survey Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Times	Ames St From North				Main St From East				Grains/Princed Cus				Ames St From South				Main St From West				Inp. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	6	20	30	0	1	9	11	0	8	29	4	0	14	54	17	0	203	4	0	0	367
Total	15	42	40	1	1	17	15	0	22	46	7	0	29	104	28	0	387	4	0	0	367
06:00 PM	7	23	27	1	2	16	9	0	15	37	6	0	19	73	16	4	285	4	0	0	290
06:15 PM	4	32	22	0	2	4	9	0	14	31	6	0	11	73	22	0	230	4	0	0	230
06:30 PM	9	19	29	1	2	7	9	0	15	32	13	0	15	73	16	0	240	4	0	0	240
06:45 PM	8	22	23	0	0	6	10	0	8	29	4	0	10	53	15	2	191	4	0	0	191
Total	28	86	102	2	0	33	37	0	52	129	29	0	55	272	69	6	916	4	0	0	916
08:00 PM	5	21	22	0	1	7	6	0	11	28	7	0	14	49	13	0	184	4	0	0	184
08:15 PM	3	23	26	0	4	6	6	0	16	25	4	0	9	63	16	0	216	4	0	0	216
08:30 PM	5	12	16	0	1	6	6	0	10	20	5	0	10	46	11	0	165	4	0	0	165
08:45 PM	12	42.7	44.6	0.7	8.3	43.8	47.9	0	26.2	58.1	14.6	0	14.7	67.1	17.3	0.8	685	4	0	0	685
Total %	3	10.8	11.3	0.2	0.7	3.7	4.1	0	6	13.5	3.4	0	6.4	29	7.5	0.4	310	4	0	0	310



Start Times	Ames St From North				Main St From East				Ames St From South				Main St From West				Inp. Total				
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	6	20	30	0	1	9	11	0	8	29	4	0	14	54	17	0	203	4	0	0	367
Total	15	42	40	1	1	17	15	0	22	46	7	0	29	104	28	0	387	4	0	0	367
06:00 PM	7	23	27	1	2	16	9	0	15	37	6	0	19	73	16	4	285	4	0	0	290
06:15 PM	4	32	22	0	2	4	9	0	14	31	6	0	11	73	22	0	230	4	0	0	230
06:30 PM	9	19	29	1	2	7	9	0	15	32	13	0	15	73	16	0	240	4	0	0	240
06:45 PM	8	22	23	0	0	6	10	0	8	29	4	0	10	53	15	2	191	4	0	0	191
Total	28	86	102	2	0	33	37	0	52	129	29	0	55	272	69	6	916	4	0	0	916
08:00 PM	5	21	22	0	1	7	6	0	11	28	7	0	14	49	13	0	184	4	0	0	184
08:15 PM	3	23	26	0	4	6	6	0	16	25	4	0	9	63	16	0	216	4	0	0	216
08:30 PM	5	12	16	0	1	6	6	0	10	20	5	0	10	46	11	0	165	4	0	0	165
08:45 PM	12	42.7	44.6	0.7	8.3	43.8	47.9	0	26.2	58.1	14.6	0	14.7	67.1	17.3	0.8	685	4	0	0	685
Total %	3	10.8	11.3	0.2	0.7	3.7	4.1	0	6	13.5	3.4	0	6.4	29	7.5	0.4	310	4	0	0	310



Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Count Date : 4/9/2014
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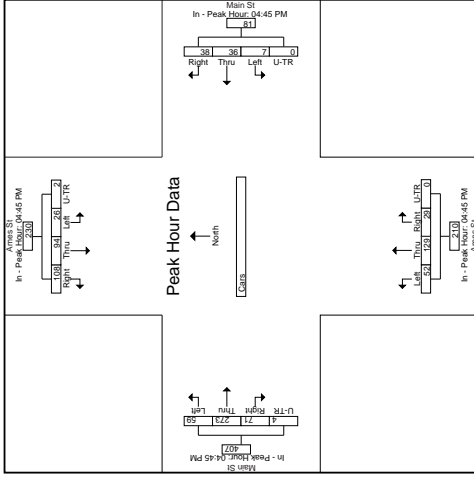
N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Count Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North				Ames St From East				Ames St From South				Main St From West									
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR						
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																						
Peak Hour for Edge/Approach/Baggage Bt:																						
6-10 mins.	6	20	30	0	56	0	11	9	11	0	21	0	4	29	4	0	41	14	54	17	0	85
+15 mins.	7	23	27	1	58	2	16	9	0	27	15	37	6	0	58	19	73	16	4	112	12	112
+30 mins.	8	22	26	0	58	2	15	7	0	18	15	32	13	0	60	15	73	16	0	104	12	104
+45 mins.	9	11	22	1	38	2	7	9	0	18	15	32	13	0	60	15	73	16	0	104	12	104
Total Volume	28	94	108	2	230	7	36	38	0	81	52	129	29	0	210	59	273	71	4	407	24	407
% App. Toph	11.3	40.9	47	0.9	86.5	44.4	46.9	0	0	24.8	61.4	13.8	0	0	14.5	67.1	17.4	1	0	0	0	0
PHF	.722	.734	.800	.500	.891	.875	.864	.000	.750	.887	.872	.858	.000	.875	.778	.835	.897	.260	.988	0	0	0



Accurate Counts
978-664-2565

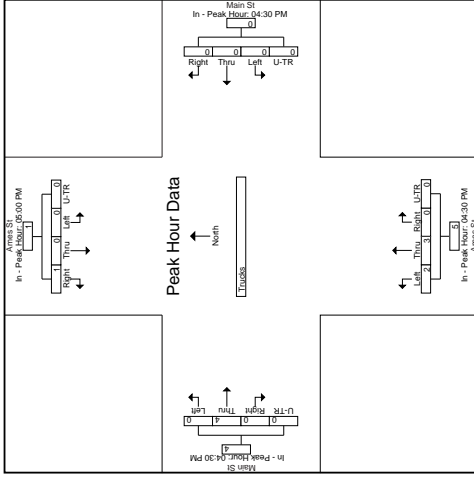
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Site Code : 16460004
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Ames St From South			Main St From East			Main St From West			In - Peak	Thru	Left	U-TR	Appx. Total	In - Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right						
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour for Eager/Bright/Bright BH:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

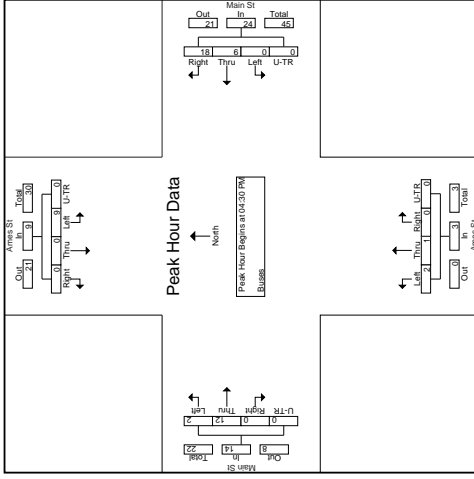
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear



Counts Printed - Buses

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	2	0	0	2	0	0	0	0	0	0	4	0	15
04:45 PM	2	0	0	2	0	0	0	0	0	0	4	0	15
Total	5	0	0	5	0	0	0	0	0	0	8	0	30
05:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	11
05:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	14
05:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	8
05:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	12
Total	7	0	0	7	0	0	0	0	0	0	0	0	49
06:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	13
06:15 PM	17	0	0	17	0	0	0	0	0	0	0	0	85
06:30 PM	100	0	0	100	0	0	0	0	0	0	0	0	53
Approach %	17.9	0	0	17.9	0	0	0	0	0	0	0	0	1.1
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

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	2	0	0	2	0	0	0	0	0	0	4	0	15
04:45 PM	2	0	0	2	0	0	0	0	0	0	4	0	11
05:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	14
05:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	8
05:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	12
05:45 PM	2	0	0	2	0	0	0	0	0	0	0	0	13
Total	100	0	0	100	0	0	0	0	0	0	0	0	53
% App. (Opp)													
PHE	.750	.000	.000	.750	.000	.000	.750	.000	.000	.750	.000	.000	.833

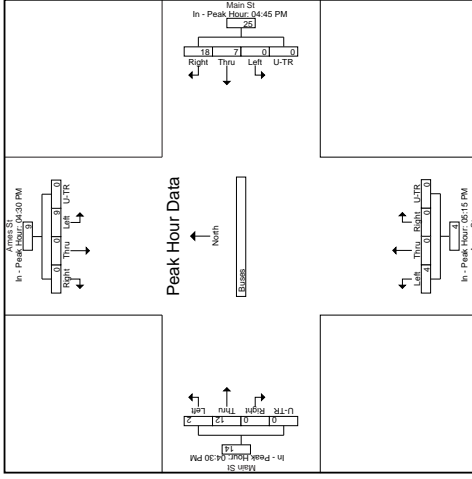
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

Start Time	Ames St From North			Ames St From South			Main St From East			Main St From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Eager/Bogard/Bright St:												
+10 mins.	3	0	0	3	0	0	0	0	0	1	0	0
+15 mins.	2	0	0	2	0	0	0	0	0	0	0	0
+45 mins.	2	0	0	2	0	0	0	0	0	0	0	0
Total Volume	9	0	0	9	0	0	0	0	0	4	2	12
% App. Topt	100	0	0	100	0	0	0	0	0	14.3	85.7	0
PHF	.750	.000	.000	.750	.000	.000	.000	.000	.000	.333	.500	.000



Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

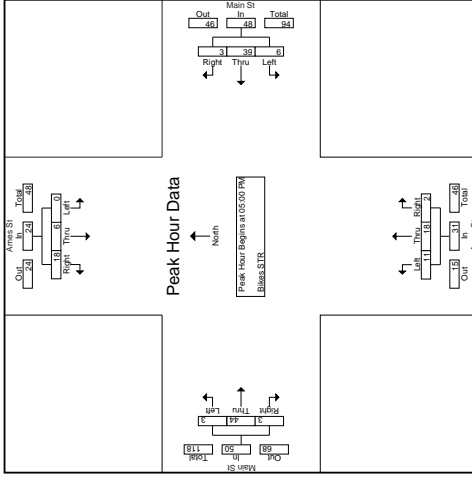
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Site Code : 16460004
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Survey Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	0	0	2	7	1	1	5	0	2	12	0	33
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8	7	32
06:45 PM	0	0	3	0	6	2	3	2	0	0	6	7	28
Total	0	4	19	0	27	7	12	13	2	4	26	25	124
Approach %	0	20.5	79.5	7.3	82.9	9.8	34.8	58.7	6.5	9.8	81.7	6.5	28.9
Total %	0	3.2	12.4	2.4	27.3	3.2	6.4	10.8	1.2	3.2	26.9	2.8	105

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:00 PM	0	0	0	2	7	1	2	2	2	0	6	1	26
05:15 PM	0	2	6	0	10	1	3	8	2	1	9	0	42
05:30 PM	0	2	4	0	11	1	4	3	0	0	11	0	36
05:45 PM	0	2	5	4	11	0	3	2	0	0	12	3	42
Total	0	6	18	6	39	3	11	16	2	3	44	3	152
06:00 PM	0	0	6	0	7	1	2	2	2	0	6	1	26
06:15 PM	0	1	5	0	6	2	3	3	0	2	6	7	32
06:30 PM	0	3	5	0	8	2	4	6	0	2	8		

Accurate Counts
978-664-2565

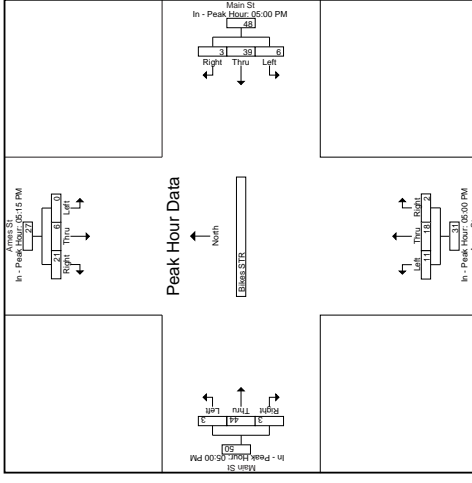
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Site Code : 16460004
Date Time : 4/9/2014
Page No. : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date Time : 4/9/2014
Page No. : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St - East			Main St - East			Ames St - West			Main St - West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	8	10	1	10	1	5	0	0	2	12	0	14
Peak Hour for East Approach Begins at:	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	2	4	6	1	1	8	2	13	1	9	10
+15 mins.	0	2	5	6	4	1	2	0	7	0	12	15
+30 mins.	0	2	5	6	4	1	2	0	7	0	12	15
Total Volume	0	6	21	27	11	18	2	31	3	44	3	50
% App. Total	0	22.2	77.8	84.4	37.5	62.5	58.1	6.5	58.1	37.5	6.5	88.6
PHF	.000	.750	.375	.844	.375	.625	.581	.250	.586	.375	.617	.833



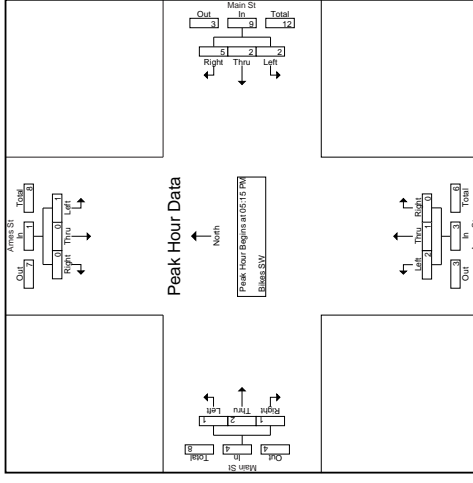
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear



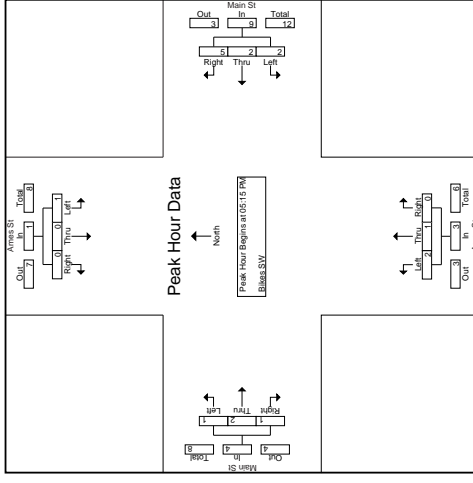
Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	2	1	0	0	0	0	0	0	0	3
Total	0	0	0	2	1	0	0	0	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	2	2	1	0	0	1	1	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	3	2	1	0	1	1	1	0	13
06:00 PM	1	0	0	2	2	0	0	0	0	1	0	0	5
06:15 PM	0	0	0	1	6	4	0	0	2	0	0	0	3
06:30 PM	0	0	0	6	14	14	0	0	22	22	0	0	31
Total	1	0	0	14.5	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Approach %	100	0	0	19.4	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Total %	3.2	0	0	6.5	19.4	19.4	3.2	6.5	6.5	16.1	6.5	0	65.5

Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	2	1	0	0	0	0	0	0	0	3
Total	0	0	0	2	1	0	0	0	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	2	2	1	0	0	1	1	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	3	2	1	0	1	1	1	0	13
06:00 PM	1	0	0	2	2	0	0	0	0	1	0	0	5
06:15 PM	0	0	0	1	6	4	0	0	2	0	0	0	3
06:30 PM	0	0	0	6	14	14	0	0	22	22	0	0	31
Total	1	0	0	14.5	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Approach %	100	0	0	19.4	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Total %	3.2	0	0	6.5	19.4	19.4	3.2	6.5	6.5	16.1	6.5	0	65.5

Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Main St From East			Ames St From South			Main St From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	2	1	0	0	0	0	0	0	0	3
Total	0	0	0	2	1	0	0	0	0	0	0	0	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	2	2	1	0	0	1	1	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	3	2	1	0	1	1	1	0	13
06:00 PM	1	0	0	2	2	0	0	0	0	1	0	0	5
06:15 PM	0	0	0	1	6	4	0	0	2	0	0	0	3
06:30 PM	0	0	0	6	14	14	0	0	22	22	0	0	31
Total	1	0	0	14.5	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Approach %	100	0	0	19.4	42.9	57.7	14.3	28.6	22.2	59.6	18.1	0	65.5
Total %	3.2	0	0	6.5	19.4	19.4	3.2	6.5	6.5	16.1	6.5	0	65.5

Accurate Counts
978-664-2565

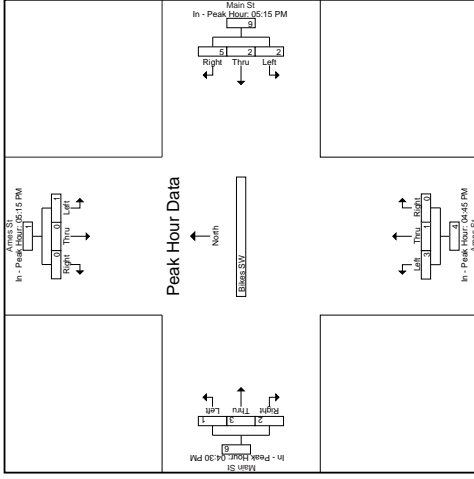
File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St - From South			Main St - From East			Ames St - From South			Main St - From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0
+0 mins.	0	0	0	2	2	4	0	0	0	0	0	0
+15 mins.	0	0	0	1	0	3	1	0	0	0	0	0
+30 mins.	0	0	0	1	0	2	0	0	2	0	0	0
+45 mins.	0	0	0	2	5	9	3	1	0	4	1	3
Total Volume	1	0	0	22.2	56.6	98.3	7.5	25	0	16.7	50	33.3
% App. Total	.000	.000	.000	.300	.750	.983	.098	.312	.000	.215	.625	.375
PHF	.250	.000	.000	.350	.825	.983	.125	.250	.000	.250	.375	.500



File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
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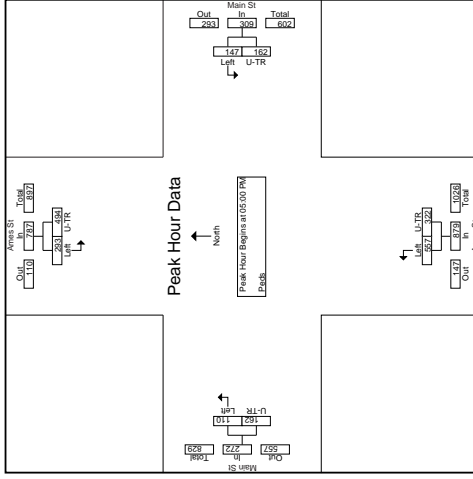
Accurate Counts
978-664-2565

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Main Street
City : Cambridge, MA
Weather : Clear



Start Time	Ames St				Main St				Grains/Pineck Peak				
	From North	From South	From East	From West	From North	From South	From East	From West	From North	From South	From East	From West	Int. Total
05:00 PM	60	139	38	42	149	91	21	26	566				
05:15 PM	51	113	32	35	142	71	30	36	510				
05:30 PM	86	150	33	38	127	82	26	55	597				
05:45 PM	86	150	33	38	127	82	26	55	597				
Total	283	484	147	162	597	322	110	162	2247				
06:00 PM	92	103	37	29	129	46	8	46	480				
06:15 PM	69	116	38	36	124	60	28	26	462				
06:30 PM	57	99	26	31	103	40	11	26	362				
Approach %	39.5	60.5	45.9	54.1	63.7	36.3	41.4	59.6	4141				
Total %	13.9	21.3	6.4	7.6	26.5	14.6	4.4	6.3					

Start Time	Ames St				Main St				Grains/Pineck Peak				
	From North	From South	From East	From West	From North	From South	From East	From West	From North	From South	From East	From West	Int. Total
05:00 PM	60	139	38	42	149	91	21	26	566				
05:15 PM	51	113	32	35	142	71	30	36	510				
05:30 PM	86	150	33	38	127	82	26	55	597				
05:45 PM	86	150	33	38	127	82	26	55	597				
Total	283	484	147	162	597	322	110	162	2247				
06:00 PM	92	103	37	29	129	46	8	46	480				
06:15 PM	69	116	38	36	124	60	28	26	462				
06:30 PM	57	99	26	31	103	40	11	26	362				
Approach %	39.5	60.5	45.9	54.1	63.7	36.3	41.4	59.6	4141				
Total %	13.9	21.3	6.4	7.6	26.5	14.6	4.4	6.3					

Start Time	Ames St				Main St				Grains/Pineck Peak				
	From North	From South	From East	From West	From North	From South	From East	From West	From North	From South	From East	From West	Int. Total
05:00 PM	60	139	38	42	149	91	21	26	566				
05:15 PM	51	113	32	35	142	71	30	36	510				
05:30 PM	86	150	33	38	127	82	26	55	597				
05:45 PM	86	150	33	38	127	82	26	55	597				
Total	283	484	147	162	597	322	110	162	2247				
% of 2001 Total	37.2	62.8	47.6	52.4	63.4	36.6	61.9	40.4	59.6	27.2	22.47		
PHF	0.763	0.823	0.835	0.862	0.849	0.855	0.816	0.833	0.840	0.840			

Accurate Counts
978-664-2565

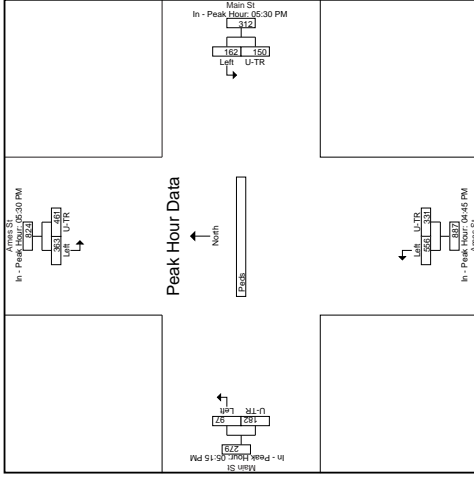
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Site Code : 16460004
Print Date : 4/9/2014
Page No. : 4

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

File Name : 16460004
Site Code : 16460004
Print Date : 4/9/2014
Page No. : 3

N/S Street : Ames Street
EW Street : Main Street
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North		Main St From East		Ames St From South		Main St From West		Int. Total
	WB	EB	NB	SB	WB	EB	NB	SB	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Each Approach Direction:									
04:30 PM	86	150	33	38	71	138	87	225	05:15 PM
+0 mins.	96	188	44	47	91	149	91	240	05:30 PM
+15 mins.	92	183	39	43	84	142	82	213	05:45 PM
+30 mins.	88	176	36	40	78	137	77	206	06:00 PM
+45 mins.	81	165	33	36	71	127	71	194	06:15 PM
Total Volume	363	460	162	150	312	556	331	887	34.8
% App. Total	44.1	55.9	19.7	18.3	38.3	67.7	40.3	109.3	65.2
PHF	395	768	384	798	897	333	369	736	863



Accurate Counts
978-664-2565

File Name : 16460005
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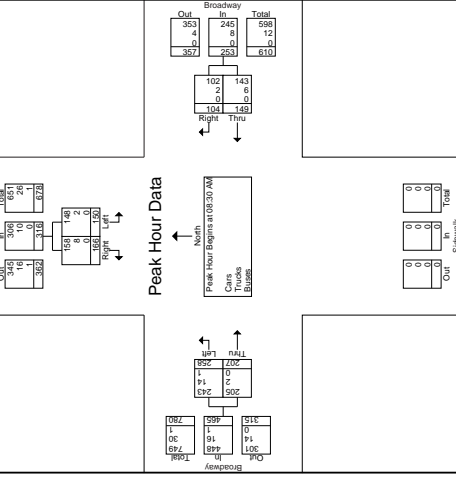
N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St		Broadway		Broadway		Broadway		In. Total
	From North	From South	From East	From West	From East	From West	From East	From West	
08:30 AM	30	27	36	21	59	49	233	233	
08:35 AM	35	42	42	16	59	71	239	239	
08:40 AM	37	48	36	23	74	60	278	278	
08:45 AM	47	45	35	27	60	55	265	265	
Total	171	159	120	62	252	235	1019	1019	
08:00 AM	30	27	36	22	72	50	237	237	
08:15 AM	35	42	42	16	59	46	250	250	
08:30 AM	37	48	36	23	74	60	278	278	
Approach %	51.7	48.3	61.7	36.3	51.6	49.4	1862	1862	
Total %	17.5	16.4	12.9	8.1	23.3	21.9	83.3	83.3	
Cars	300	247	247	155	432	402	1895	1895	
% Trucks	38.1	39.7	37.7	36.1	36.2	36.7	60	60	
% Buses	1.2	5.3	2.8	1.9	4.8	1.6	3.1	3.1	
% Buses	0	4	0	0	3	0	0.7	0.7	



Start Time	Third St		Broadway		Broadway		Broadway		In. Total
	From North	From South	From East	From West	From East	From West	From East	From West	
08:30 AM	48	37	59	60	134	278	278	278	
08:35 AM	45	35	62	55	115	269	269	269	
08:40 AM	46	36	74	42	116	250	250	250	
08:45 AM	46	36	74	42	116	250	250	250	
Total Volume	150	149	253	207	465	1034	1034	1034	
% App. Total	47.5	59.9	41.1	30.5	30.0	66.8	66.8	66.8	
Cars	148	143	245	205	448	999	999	999	
% Cars	98.7	96.8	98.1	96.8	96.3	96.6	96.6	96.6	
Trucks	1.2	4.1	2.8	1.2	3.1	3.1	3.1	3.1	
% Trucks	0.8	2.7	1.1	0.6	0.6	0.3	0.3	0.3	
% Buses	0	0	0	0	0	0	0	0	
% Buses	0	0	0	0	0	0	0	0	

Peak Hour for Entire Intersection Begins at 08:30 AM

Accurate Counts
978-664-2565

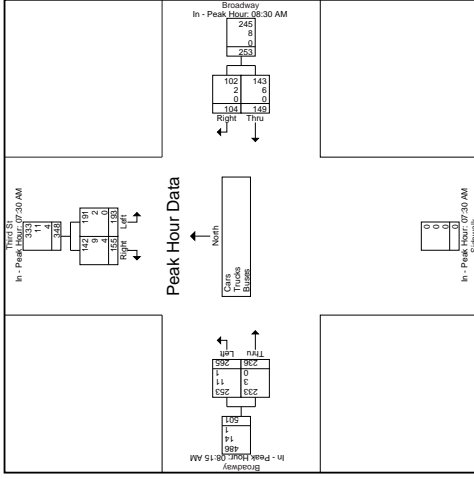
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Site Code : 16460005
Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
Page No. : 3

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North		Broadway From West		From South		Broadway From East		Int. Total
	Left	Right	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM to 09:15 AM - Peak 1 of 1					07:30 AM				08:15 AM
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1									
Peak Hour for Each Approach Begins At:									
07:30 AM									
+0 mins.	46	51	36	23	59	59	71	130	
+15 mins.	55	43	35	27	62	60	74	134	
+30 mins.	55	38	35	22	55	55	60	115	
+45 mins.	42	30	27	13	44	37	50	112	
Total Volume	193	155	348	104	253	265	236	501	
% App. Total	56.5	44.5	59.9	41.1	59.9	47.1	47.1	63.5	
% Cns	91	142	333	103	245	233	233	486	
% Trucks	99	91.6	96	2	96.8	98.7	97	97	
% Buses	2	5.9	6	0	3.0	1.3	14	14	
% Other	1	4	0	0	0	0	1	2.1	
% Buses	0	2.6	0	0	0	0.4	0	0.2	



Accurate Counts
978-664-2565

File Name : 16460005
Site Code : 16460005
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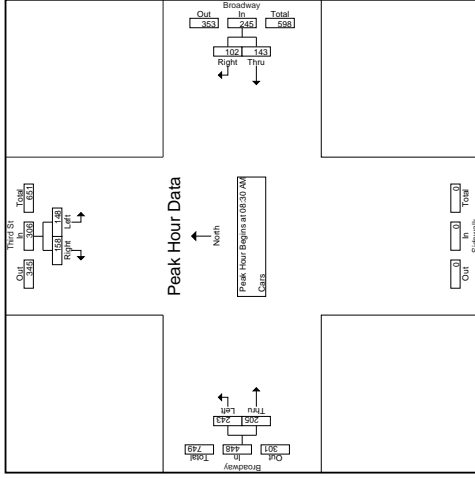
N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North				Broadway From East				Broadway From West				In. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	55	39	7	101	56	21	75	152	56	47	100	203	437
07:45 AM	44	34	28	106	28	16	44	110	56	47	100	203	437
08:00 AM	42	28	20	90	20	16	36	72	56	70	126	192	354
08:15 AM	37	47	35	119	35	23	58	116	73	59	132	264	574
08:30 AM	45	53	33	131	33	27	60	123	54	54	108	216	456
08:45 AM	100	152	82	334	82	62	144	396	230	230	460	920	1880
Total	30	26	21	77	35	21	56	116	68	50	118	230	498
08:00 AM	30	26	21	77	35	21	56	116	68	50	118	230	498
08:15 AM	38	40	31	109	40	23	63	123	48	42	90	180	380
08:30 AM	36	36	18	90	36	18	54	108	48	42	90	180	380
08:45 AM	53	46	13	112	46	8	54	100	50	48	98	196	412
Approach %	53.1	46.9	11.4	51.4	61.4	36.6	48.4	50.6	48.4	48.4	48.4	48.4	48.4
Total %	17.9	15.8	4.2	17.9	15.8	4.2	17.9	15.8	4.2	17.9	15.8	4.2	17.9

Start Time	Third St From North				Broadway From East				Broadway From West				In. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	55	39	7	101	56	21	75	152	56	47	100	203	437
07:45 AM	44	34	28	106	28	16	44	110	56	47	100	203	437
08:00 AM	42	28	20	90	20	16	36	72	56	70	126	192	354
08:15 AM	37	47	35	119	35	23	58	116	73	59	132	264	574
08:30 AM	45	53	33	131	33	27	60	123	54	54	108	216	456
08:45 AM	100	152	82	334	82	62	144	396	230	230	460	920	1880
Total	30	26	21	77	35	21	56	116	68	50	118	230	498
% of 2009 Total	48.4	59.4	41.6	24.5	54.2	45.8	48.4	48.4	48.4	48.4	48.4	48.4	48.4
PHF	0.22	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23



Accurate Counts
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File Name : 1646005
Site Code : 1646005
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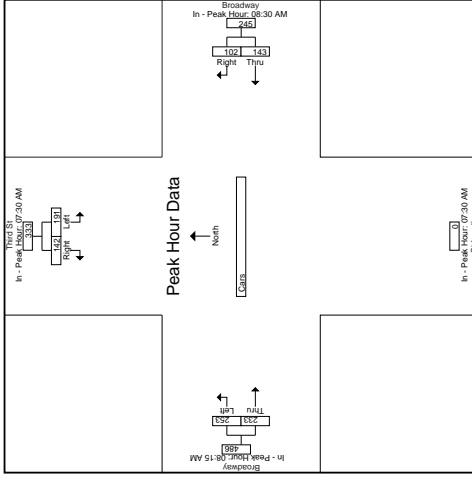
N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646005
Site Code : 1646005
Print Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From South		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Left	Thru	Right	
07:30 AM	41	91	35	23	58	70	128
08:30 AM	39	94	33	27	60	59	132
+0 mins.	4	70	31	31	64	54	118
+15 mins.	42	70	40	31	66	50	118
Total Volume	191	333	143	102	245	233	488
% App. Total	57.4	42.6	59.4	41.6	52.1	47.9	920
PHF	.268	.266	.264	.263	.263	.262	



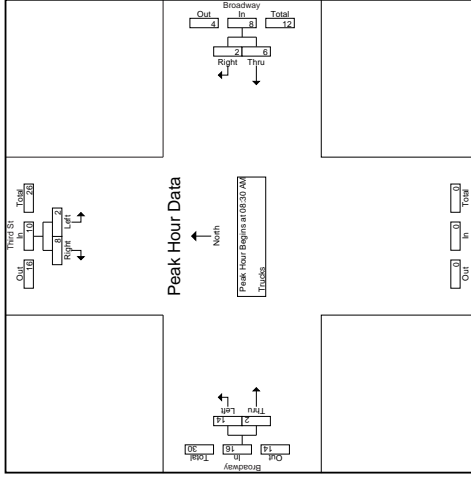
Accurate Counts
978-664-2565

File Name : 16460005
Site Code : 16460005
Print Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Print Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Groups Printed - Trucks

Start Time	Third St From North		Broadway From East		Broadway From West		In. Total
	Left	Right	Thru	Left	Right	Thru	
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	2	0	4	4	2	8
Total	0	2	0	4	4	2	16
08:00 AM	1	2	0	0	1	2	6
08:15 AM	0	1	1	1	1	1	4
08:30 AM	0	1	1	0	1	1	4
08:45 AM	2	0	2	2	5	5	12
Total	3	6	4	0	8	11	26
08:00 AM	0	1	1	1	4	0	7
08:15 AM	0	4	2	4	2	7	11
08:30 AM	19	81	70	22	759	24.1	60
Approach %	6.7	28.3	11.7		38.7	11.7	

Start Time	Third St From North		Broadway From East		Broadway From West		App. Total	In. Total
	Left	Right	Thru	Left	Right	Thru		
07:30 AM	0	0	0	0	0	0	0	0
07:45 AM	0	2	0	0	0	0	2	2
08:00 AM	1	1	1	0	1	1	4	4
08:15 AM	0	1	1	2	0	0	4	4
08:30 AM	0	1	1	0	4	0	6	6
08:45 AM	2	0	2	3	0	0	7	7
Total	3	6	7	5	5	1	27	27
% Peak Total	20	75	25	0	87.5	12.5	34	34
PHF	.250	.500	.625	.750	.667	.000	.667	.708

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

Accurate Counts
978-664-2565

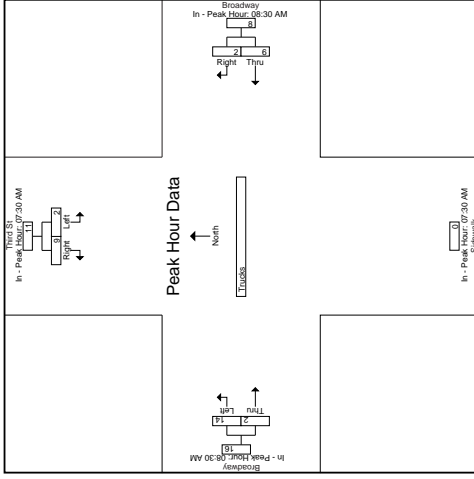
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Site Code : 1646005
Date Time : 4/9/2014
Page No : 4

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646005
Site Code : 1646005
Date Time : 4/9/2014
Page No : 3

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St		Broadway		Broadway		Broadway		Int. Total
	Left	Right	Thru	Right	Thru	From East	From West		
07:30 AM	4	0	1	0	0	0	0	0	2
08:30 AM	2	0	2	0	0	0	0	0	6
09:15 AM	1	2	1	1	2	0	0	0	4
Total Volume	7	2	4	1	2	0	0	0	16
% App. Total	81.8	25	75	25	25	0	0	0	100
PHF	.500	.563	.550	.500	.667	.000	.000	.000	.500



Accurate Counts
978-664-2565

File Name : 1646005
Site Code : 1646005
Date Time : 4/9/2014
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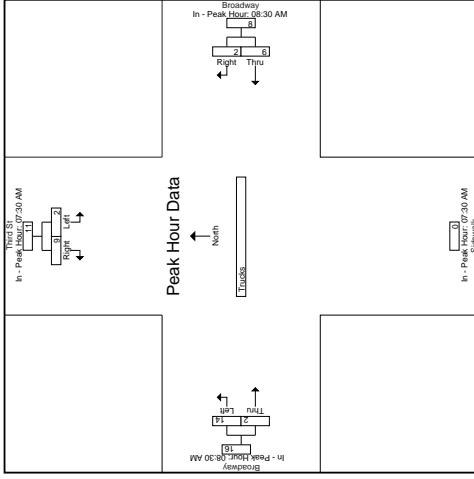
N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St		Broadway		Broadway		Broadway		Int. Total
	Left	Right	Thru	Right	Thru	From East	From West		
07:30 AM	4	0	1	0	0	0	0	0	2
08:30 AM	2	0	2	0	0	0	0	0	6
09:15 AM	1	2	1	1	2	0	0	0	4
Total Volume	7	2	4	1	2	0	0	0	16
% App. Total	81.8	25	75	25	25	0	0	0	100
PHF	.500	.563	.550	.500	.667	.000	.000	.000	.500

Accurate Counts
978-664-2565

File Name : 1646005
Site Code : 1646005
Date Time : 4/9/2014
Page No : 4

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Accurate Counts
978-664-2565

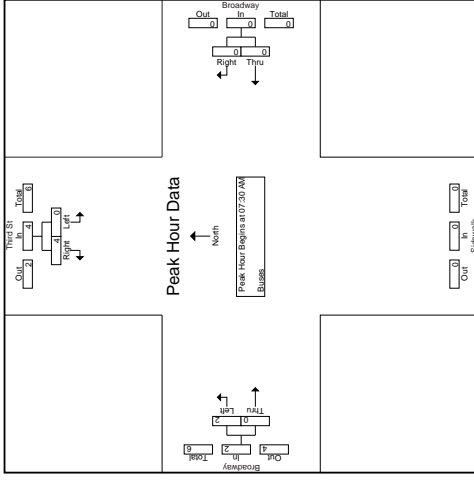
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Site Code : 16460005
Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
Page No : 1

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North		Broadway From East		Broadway From West		In. Total
	Left	Right	Thru	Left	Right	Thru	
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	2	0	0	0	0	2
Total	0	3	0	0	0	0	3
08:00 AM	0	0	0	0	2	0	2
08:15 AM	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	1	0	1
Total	0	1	0	0	3	0	4
08:00 AM	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	100	0	0	100	0	100
Approach %	0	57.1	0	0	42.9	0	57.1
Total %	0	0	0	0	0	0	0



Start Time	Third St From North		Broadway From East		Broadway From West		In. Total
	Left	Right	Thru	Left	Right	Thru	
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	2	0	0	0	0	2
08:00 AM	0	0	0	0	2	0	2
08:15 AM	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	1	0	1
08:45 AM	0	100	0	0	100	0	100
Total	0	4	0	0	100	0	104
% Peak Total	0.000	500	0.000	0.000	250	0.000	750

Accurate Counts
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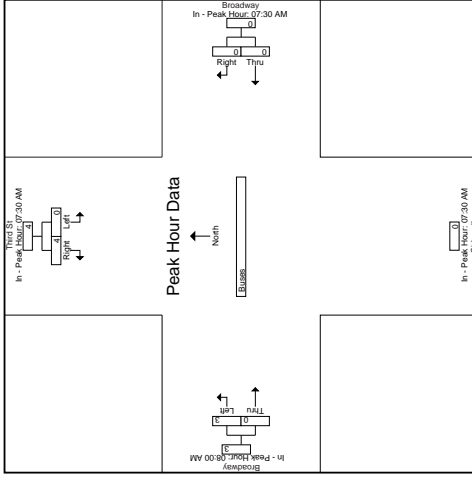
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Print Date : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Third St From South		Broadway From East		Broadway From West		Int. Total
	Left	Right	Thru	Left	Thru	Right	
07:30 AM	1	0	0	0	0	0	2
+5 mins.	2	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0
+45	0	0	0	0	0	0	0
Total Volume	4	0	0	0	0	0	3
% App. Total	.000	.500	.000	.000	.000	.000	.375
PHF							



Accurate Counts
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N/S Street : Third Street
E/W Street : Broadway
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Weather : Clear

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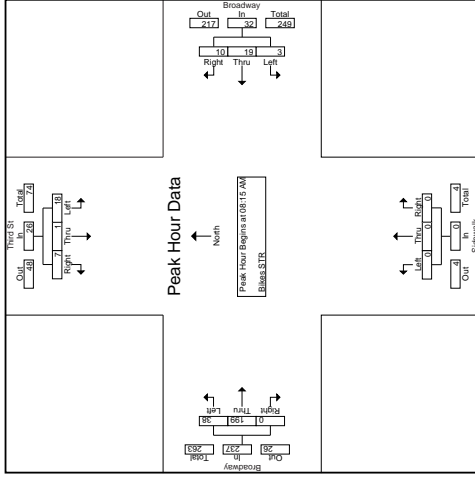
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E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North			Broadway From East			Skateway From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	3	0	0	0	0	0	0	0	0	0	0	0	44
07:45 AM	3	0	0	3	1	0	0	1	0	0	0	0	44
Total	6	0	0	3	1	0	0	1	0	0	0	0	88
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	55
08:15 AM	7	0	0	0	0	0	0	0	0	0	0	0	80
08:30 AM	4	0	0	3	4	2	0	0	0	0	0	0	80
08:45 AM	6	0	0	5	6	3	0	0	0	0	0	0	72
Total	18	0	0	8	10	5	0	0	0	0	0	0	207
09:00 AM	1	1	3	0	5	4	0	0	0	0	0	0	63
09:15 AM	3	0	2	3	4	4	0	0	0	0	0	0	53
09:30 AM	2	0	4	3	27	4	0	0	0	0	0	0	36
Total	6	1	9	6	36	12	0	0	0	0	0	0	152
Approach %	65.9	2.3	31.8	12.8	57.4	29.9	0	0	0	0	0	0	46.9
Total %	6.2	0.2	3	1.3	5.8	3	0	0.2	0	0	0	0	46.9

Start Time	Third St From North			Broadway From East			Skateway From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : 16460005
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

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Site Code : 16460005
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

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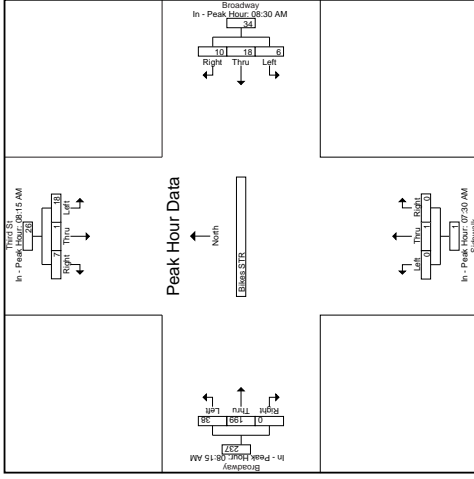
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From East			Broadway From East			Subway From South			Broadway From West			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1	07:30 AM														
Peak Hour for Each Approach Begins At:	08:15 AM														
+0 mins.	0	1	8	0	3	4	0	0	0	0	0	0	56	0	67
+15 mins.	4	0	4	0	5	4	0	1	0	0	1	7	60	0	67
+30 mins.	0	0	3	0	4	4	0	0	0	0	0	13	36	0	46
+45 mins.	0	1	7	0	4	7	0	0	0	0	0	0	38	199	237
Total Volume	18	1	26	0	16	10	0	1	0	0	1	16	84	0	884
% App. Total	69.2	3.6	26.9	17.6	52.9	29.4	0	100	0	0	280	731	259	0	884
PHF	0.63	0.250	0.583	0.000	0.300	0.625	0.000	0.280	0.000	0.280	0.731	0.629	0.000	0.000	0.884



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N/S Street : Third Street
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Weather : Clear

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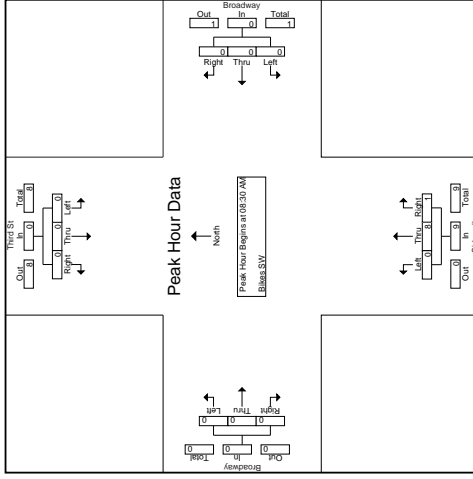
Accurate Counts
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File Name : 16460005
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
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City : Cambridge, MA
Weather : Clear



Start Time	Groups: Printeds, Bikes, SW											
	Third St From North			Broadway From East			Skatewalk From South			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	2	0	0	0	0
Total	1	0	0	0	0	0	0	4	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	4	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	3	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	92.9	7.1	0	0	0
Total %	100	0	0	0	0	0	0	86.7	6.7	0	0	0
Approach %	6.7	0	0	0	0	0	0	0	0	0	0	0

Start Time	Groups: Printeds, Bikes, SW											
	Third St From North			Broadway From East			Skatewalk From South			Broadway From West		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:30 AM	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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	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
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	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
% Appr. PHE	.000	.000	.000	.000	.000	.000	.000	.000	.250	.563	.000	.000
Intr. 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

Accurate Counts
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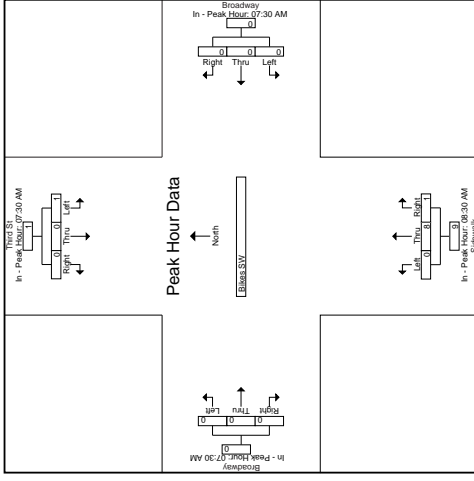
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St - East			Broadway - East			Subway - East			Broadway - West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins At:													
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	100	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



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N/S Street : Third Street
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Weather : Clear

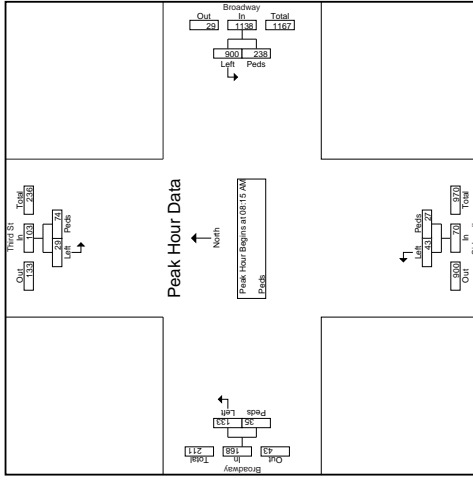
Accurate Counts
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N/S Street : Third Street
E/W Street : Broadway
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Third St			Broadway			Sidewalk			Broadway		
	WB	EB	App. Total	SB	EB	App. Total	WB	EB	App. Total	SB	EB	App. Total
07:30 AM	19	25	177	158	37	51	10	3	31	33	4	35
07:45 AM	16	16	83	29	3	41	6	3	9	10	10	20
Total	35	41	260	187	40	92	16	6	40	43	14	57
08:00 AM	6	22	158	158	37	8	8	41	33	4	295	
08:15 AM	8	16	217	205	64	11	6	6	45	9	372	
08:30 AM	9	30	205	64	6	3	3	30	0	0	347	
08:45 AM	6	11	227	65	14	14	8	31	8	6	398	
Total	29	79	627	220	21.9	1.6	38.6	8.6	74.1	25.9	1382	
09:00 AM	6	17	231	183	37	12	10	27	20	20	372	
09:15 AM	8	19	183	37	9	5	2	26	8	7	308	
09:30 AM	7	20	183	37	9	5	2	26	8	7	308	
Total	36.6	63.4	78.1	21.9	64.2	35.8	74.1	8.6	8.6	3	2407	
Approach %	3.1	5.4	58.9	16.5	1.6	1.6	1.6	1.6	1.6	1.6	3	

Start Time	Third St			Broadway			Sidewalk			Broadway		
	WB	EB	App. Total	SB	EB	App. Total	WB	EB	App. Total	SB	EB	App. Total
08:15 AM	6	24	60	217	11	6	6	17	15	0	54	
08:30 AM	9	30	205	64	6	3	3	30	0	0	30	
08:45 AM	6	11	247	65	14	14	8	22	31	6	37	
09:00 AM	6	17	231	49	12	10	2	27	20	6	47	
Total	28.2	71.8	911.5	312	67.5	7.95	20.8	73.9	49.8	7.73	8.95	
PHF	.806	.817	.660	.912	.768	.795	.739	.498	.773	.773	.895	

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

Accurate Counts
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File Name : 16460005
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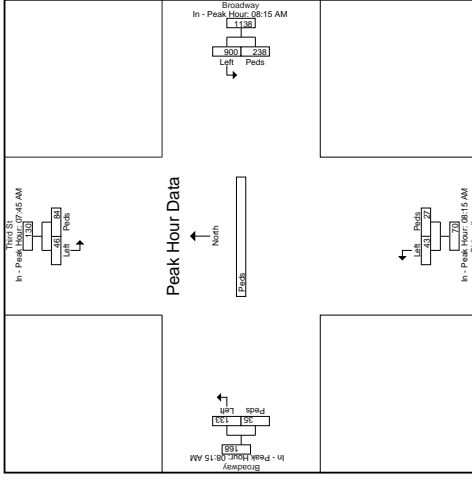
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E/W Street : Broadway
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N/S Street : Third Street
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City : Cambridge, MA
Weather : Clear

Start Time	Third St From North		Broadway From East		Subway From South		Broadway From West		Int. Total
	WB	EB	WB	EB	WB	EB	WB	EB	
07:45 AM	16	26	217	60	11	6	17	45	54
+5 mins.	19	41	205	64	3	3	9	30	30
+10 mins.	16	30	289	66	1	1	30	27	37
+15 mins.	9	21	241	45	12	10	22	20	47
Total Volume	46	64	900	238	43	27	70	133	165
% App. Total	35.4	64.6	79.1	20.9	67.4	38.6	75.2	20.8	48.8
PHF	-.605	-.200	-.911	-.315	-.788	-.675	-.795	-.738	-.778



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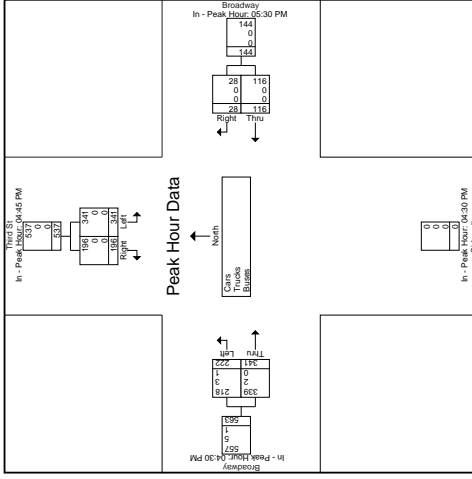
N/S Street : Third Street
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Accurate Counts
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N/S Street : Third Street
EW Street : Broadway
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Weather : Clear

Start Time	Third St From South		Broadway From West		Broadway From East		App. Total	Int. Total
	Left	Right	Thru	Left	Thru	App. Total		
04:30 PM to 05:15 PM - Peak 1 of 1	41	131	29	0	0	0	124	
04:45 PM	86	135	34	0	0	0	133	
+0 mins.	82	137	33	0	0	0	133	
+5 mins.	82	142	29	0	0	0	140	
+10 mins.	65	147	37	0	0	0	140	
Total Volume	341	537	116	0	0	0	563	
% App. Total	60.5	95.5	20.6	0.0	0.0	0.0	100.0	
Cars	341	537	116	0	0	0	563	
% Cars	100	100	100	0	0	0	100	
Trucks	0	0	0	0	0	0	0	
% Trucks	0	0	0	0	0	0	0	
Buses	0	0	0	0	0	0	0	
% Buses	0	0	0	0	0	0	0	



Accurate Counts
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N/S Street : Third Street
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Accurate Counts
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N/S Street : Third Street
E/W Street : Broadway
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Weather : Clear

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
04:30 PM	90	41	21	21	7	77	53	289	484	
04:45 PM	90	41	21	21	7	77	53	289	484	
Total	180	82	42	42	14	154	106	578	968	
05:00 PM	86	49	30	30	6	61	59	87	317	
05:15 PM	83	41	28	28	3	68	68	91	314	
05:30 PM	82	65	24	24	5	51	67	294	314	
05:45 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	
06:00 PM	90	43	28	28	5	45	68	88	280	
06:15 PM	85	29	29	29	6	41	69	89	277	
06:30 PM	67	36	44	44	8	40	60	60	237	
Total	63.1	36.9	80.7	80.7	19.3	39.4	60.6	60.6	237	
Approach %	27.6	16.1	9.2	9.2	2.2	17.6	27.2	27.2		

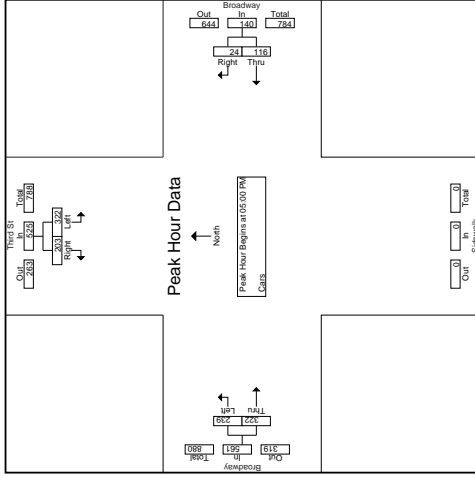
Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
06:30 PM	83	41	28	28	3	68	68	91	314	
06:45 PM	82	65	24	24	5	51	67	294	314	
07:00 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
07:00 PM	83	41	28	28	3	68	68	91	314	
07:15 PM	82	65	24	24	5	51	67	294	314	
07:30 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
07:30 PM	83	41	28	28	3	68	68	91	314	
07:45 PM	82	65	24	24	5	51	67	294	314	
08:00 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
08:00 PM	83	41	28	28	3	68	68	91	314	
08:15 PM	82	65	24	24	5	51	67	294	314	
08:30 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Right	Left	Thru	Right		
08:30 PM	83	41	28	28	3	68	68	91	314	
08:45 PM	82	65	24	24	5	51	67	294	314	
09:00 PM	77	48	34	34	10	61	77	301	301	
Total	322	203	116	116	24	239	322	1226	1226	



File Name : 16460005
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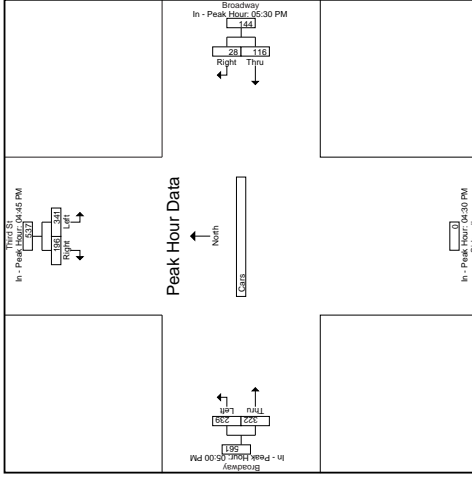
N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Print Date : 4/9/2014
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Accurate Counts
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From South		Broadway From East		From South		Broadway From West		Int. Total
	Left	Right	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1									
04:30 PM	41	131	24	5	29	0	59	87	146
+0 mins.	86	135	34	10	44	0	68	91	159
+15 mins.	82	141	28	8	37	0	61	77	138
+45 mins.	82	147	29	8	37	0	61	77	138
Total Volume	341	537	116	28	144	0	239	322	561
% App. Total	63.5	36.5	19.4	19.4	49.6	0	49.6	57.4	88.2
PHF	.347	.754	.853	.200	.818	.000	.373	.885	



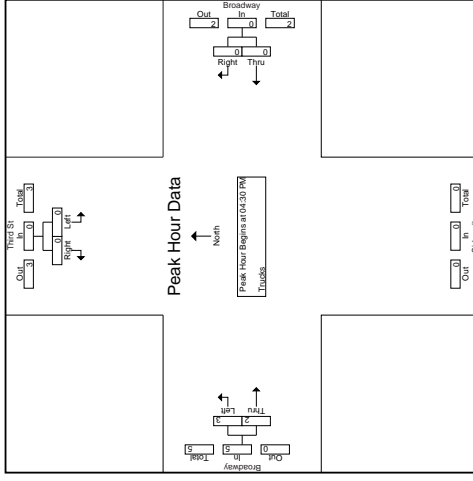
Accurate Counts
978-664-2565

File Name : 16460005
Site Code : 16460005
Print Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Left	Right	Thru	Left	Right	
04:30 PM	0	0	0	0	0	0	0	2	0	2
04:45 PM	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	0	0	0	4	0	4
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	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
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
06:30 PM	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	60	40	5
Total %	0	0	0	0	0	0	0	60	40	5

Start Time	Third St From North			Broadway From East			Broadway From West			In. Total
	Left	Thru	Right	Thru	Left	Right	Thru	Left	Right	
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
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	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0

Accurate Counts
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File Name : 16460005
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
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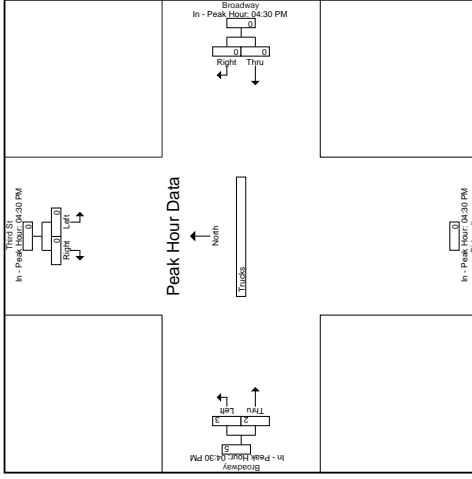
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Site Code : 1646005
Date : 4/9/2014
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646005
Site Code : 1646005
Date : 4/9/2014
Page No : 3

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From South		Broadway From East		From South		Broadway From West		Int. Total
	Left	Right	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	Peak Hour for Each Approach (Signal)								
04:30 PM	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	.000	.000	.000	.000	.000	.000	.000	.000	.000
PHF									.625



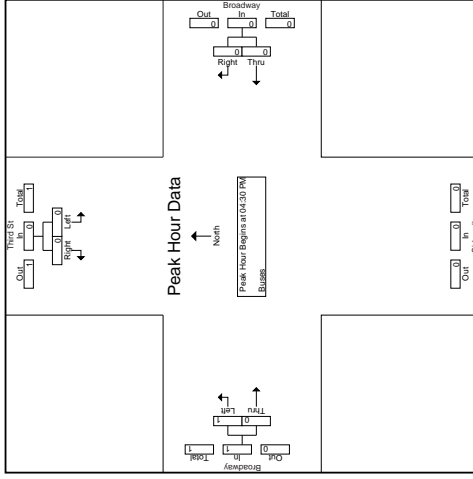
Accurate Counts
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File Name : 16460005
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Counts Printed - Buses

Start Time	Third St From North		Broadway From East		Broadway From West		In. Total
	Left	Right	Thru	Right	Left	Thru	
04:30 PM	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	1
Total	0	0	0	0	1	0	1
06:00 PM	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0
Approach %	0	0	0	0	100	0	2
Total %	0	0	0	0	100	0	0

Start Time	Third St From North		Broadway From East		Broadway From West		Apx. Total	In. Total
	Left	Right	Thru	Right	Left	Thru		
04:30 PM	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
% Approach	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250

Accurate Counts
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File Name : 16460005
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N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
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File Name : 1646005
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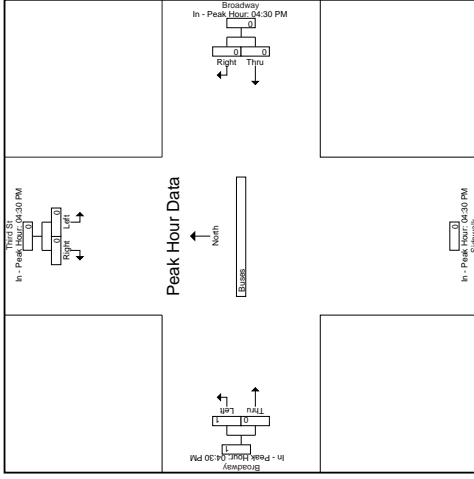
N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 1646005
Site Code : 1646005
Survey Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Third St From South		Broadway From East		From South		Broadway From West		Int. Total
	Left	Right	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Each Approach (Signal):									
04:30 PM									
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	.000	.000	.000	.000	.000	.000	.000	.000	.000
PHF									.250



Accurate Counts
978-664-2565

File Name : 16460005
Site Code : 16460005
Survey Date : 4/9/2014
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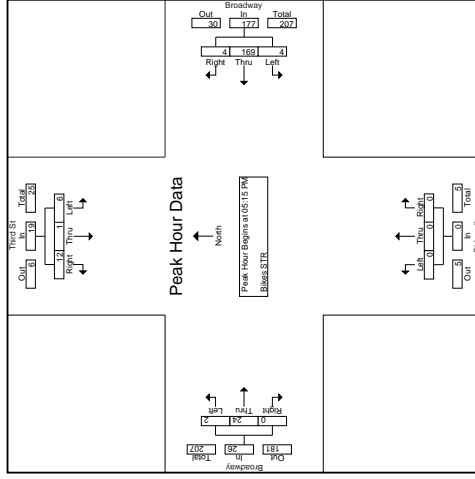
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E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Survey Date : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

Start Time	Third St From North			Broadway From East			Skateway From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	6	0	0	17	3	0	0	0	2	2	0	31
Total	0	10	0	0	23	6	0	0	0	4	6	0	50
05:00 PM	2	0	5	1	31	3	0	0	0	1	5	0	48
05:15 PM	1	0	2	0	52	0	0	0	0	0	7	0	62
05:30 PM	3	0	3	1	40	0	0	0	0	0	3	0	50
05:45 PM	1	3	0	0	33	2	0	0	0	0	5	0	45
Total	7	1	13	2	156	5	0	0	0	1	20	0	205
06:00 PM	1	0	4	3	44	2	0	0	0	2	9	0	65
06:15 PM	1	0	2	1	39	0	0	0	0	7	8	0	54
06:30 PM	0	0	0	0	25	0	0	0	0	0	0	0	25
06:45 PM	0	0	0	0	19	0	0	0	0	0	0	0	19
Total	2	0	6	4	127	2	0	0	0	9	17	0	155
Approach %	23.1	2.6	74.4	2.5	91.9	5.6	0	0	0	14	96	0	374
Total %	2.4	0.3	7.6	1.9	70.1	4.3	0	0	0	1.9	11.5	0	259

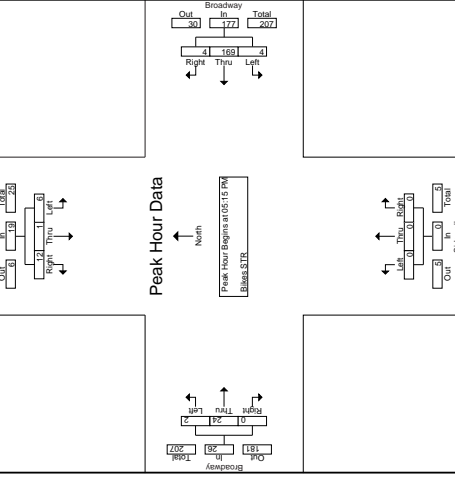
Start Time	Third St From North			Broadway From East			Skateway From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	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
Approach %	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



Accurate Counts
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File Name : 16460005
Site Code : 16460005
Survey Date : 4/9/2014
Page No. : 1

N/S Street : Third Street
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear



Accurate Counts
978-664-2565

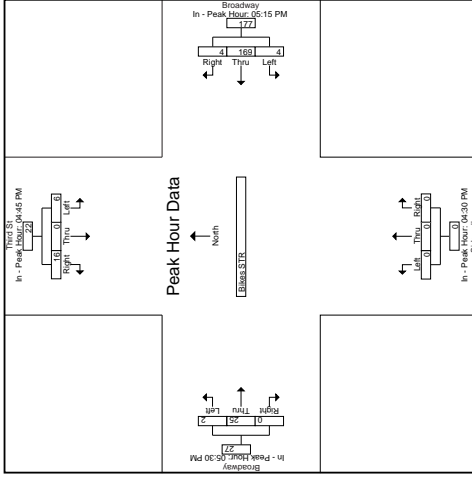
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Site Code : 16460005
Date of Count : 4/9/2014
Page No : 4

N/S Street : Third Street
E/W Street : Broadway
City/Town/Village : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date of Count : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City/Town/Village : Cambridge, MA
Weather : Clear

Start Time	Third St - From South			Broadway - From East			Subway - From South			Broadway - From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for East Approach Begins at:													
04:30 PM	0	6	0	52	0	0	0	0	0	0	0	3	0
+0 mins.	2	0	5	41	0	0	0	0	0	0	0	5	0
+15 mins.	1	0	2	30	0	0	0	0	0	0	0	8	0
+30 mins.	3	0	8	24	0	0	0	0	0	0	0	18	0
Total Volume	6	0	16	177	0	0	0	0	0	0	0	25	0
% App. Total	27.3	0	72.7	77.7	0	0	0	0	0	0	0	7.4	0
PHF	.500	.000	.667	.798	.333	.813	.500	.851	.000	.000	.250	.694	.000



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N/S Street : Third Street
E/W Street : Broadway
City/Town/Village : Cambridge, MA
Weather : Clear

Accurate Counts
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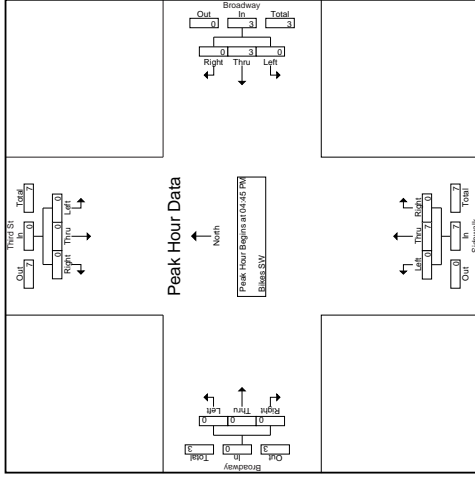
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EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date Time : 4/9/2014
Page No : 1

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North				Broadway From East				Skatewalk From South				Broadway From West				In. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	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	0	0	0	0	0
05:30 PM	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %																		
% App.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Start Time	Third St From South				Broadway From West				Skatewalk From East				Broadway From East				In. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	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	0	0	0	0	0
05:30 PM	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %																		
% App.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Accurate Counts
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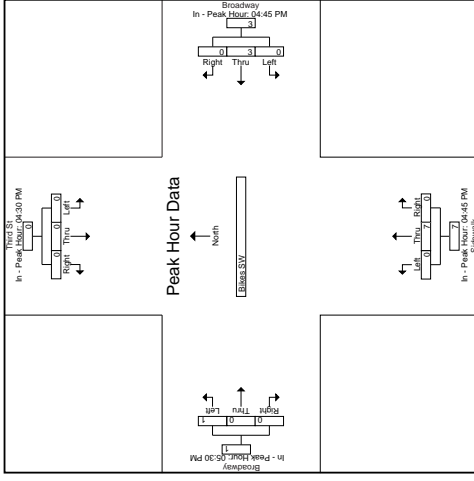
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Count Date : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Count Date : 4/9/2014
Page No : 3

N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Third St - From South			Broadway - From East			Salem St - From South			Broadway - From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

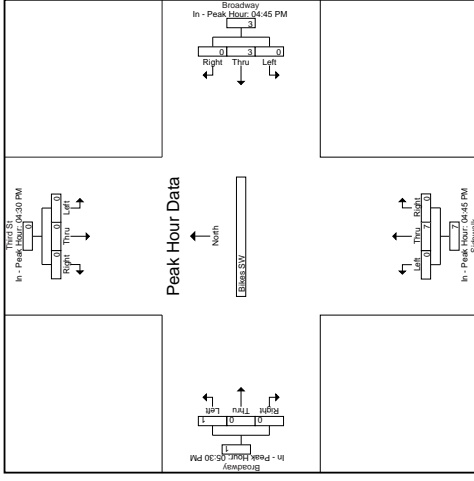


Accurate Counts
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File Name : 16460005
Site Code : 16460005
Count Date : 4/9/2014
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N/S Street : Third Street
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Third St - From South			Broadway - From East			Salem St - From South			Broadway - From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



Accurate Counts
978-664-2565

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
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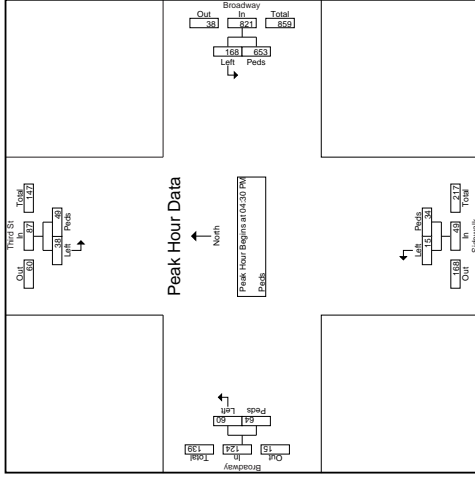
N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
Site Code : 16460005
Date : 4/9/2014
Page No. : 1

N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North		Broadway From East		Sidewalk From South		Broadway From West		NB	WB	Int. Total
	WB	EB	SB	NB	WB	EB	SB	NB			
04:30 PM	10	19	89	320	12	18	39	40	325	22	325
04:45 PM	11	19	89	320	12	18	39	40	325	22	325
Total	21	38	178	640	24	36	78	80	650	44	650
05:00 PM	13	20	26	209	0	12	15	9	198	26	198
05:15 PM	9	9	26	124	3	3	6	15	197	15	197
05:30 PM	9	25	31	124	4	5	4	27	229	27	229
05:45 PM	19	19	63	593	7	22	13	28	287	28	287
Total	48	74	175	593	14	42	38	79	1042	79	1042
06:00 PM	13	20	26	87	0	4	23	26	188	26	188
06:15 PM	28	25	75	122	4	0	10	20	270	20	270
06:30 PM	10	12	26	112	30	4	10	20	206	20	206
06:45 PM	10	10	24	75.6	40	60	38.8	60.2	329	60.2	329
Approx %	48.1	53.9	24.4	75.6	40	60	38.8	60.2	329	60.2	329
Total %	5.2	6.1	17.6	54.3	1.5	2.2	5.3	8	60.2	8	60.2

Start Time	Third St From North		Broadway From East		Sidewalk From South		Broadway From West		NB	WB	Int. Total
	WB	EB	SB	NB	WB	EB	SB	NB			
04:30 PM	15	15	6	161	0	14	22	10	46	530	
04:45 PM	11	21	6	248	11	17	17	22	39	325	
05:00 PM	10	31	6	282	0	12	15	9	24	329	
05:15 PM	11	20	3	150	3	6	6	15	21	197	
05:30 PM	8	8	3	82	3	48	48.4	51.6	124	1087	
% of 2007 Total	43.7	55.3	20.5	79.5	30.6	69.4	48.4	51.6	124	1087	
PHF	.864	.953	.702	.791	.625	.708	.721	.692	.767	.775	



File Name : 16460005
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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Third Street
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

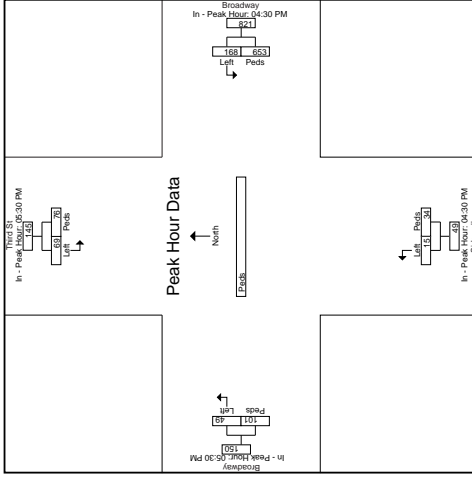
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Site Code : 16460005
Date : 4/9/2014
Page No. : 4

N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460005
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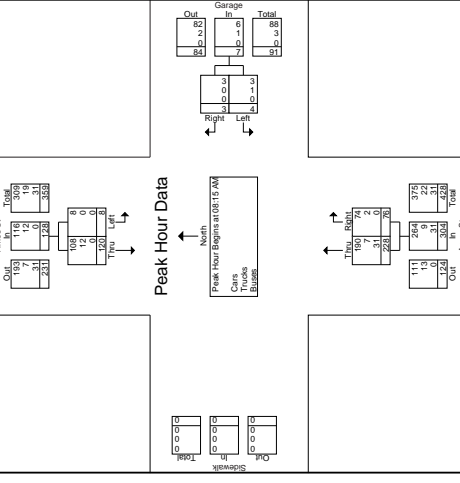
N/S Street : Third Street
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Third St From North		Broadway From NB		Subway From South		Broadway From WB		Int. Total
	WB	EB	NB	SB	EB	WB	NB	SB	
04:30 PM	34	25	132	161	8	6	14	4	
05:30 PM	19	38	188	248	11	17	13	28	
+15 mins.	13	50	210	282	12	20	13	33	
+45	20	40	270	350	12	16	12	28	
Total Volume	69	76	168	653	34	49	49	101	150
% App. Total	47.6	52.4	20.5	79.5	30.6	69.4	39.7	67.3	
PHF	0.16	0.260	0.21	0.283	0.28	0.25	0.221	0.33	0.265



Accurate Counts
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Accurate Counts
978-664-2565



Start Time	From North				From East				From South				In. Total
	Ames St		Garage		Ames St		Garage		Ames St		Garage		
	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	
07:45 AM	0	2	1	2	1	1	0	1	1	2	3	1	91
Total	4	63	2	2	2	81	25	177					
08:00 AM	3	32	2	41	2	44	16	100					
08:15 AM	2	20	2	17	2	56	17	98					
08:30 AM	1	37	1	1	1	57	17	114					
08:45 AM	1	28	1	0	0	64	22	116					
Total	7	117	6	6	6	221	72	429					
09:00 AM	4	35	0	1	1	51	20	111					
09:15 AM	3	31	1	2	1	45	11	93					
09:30 AM	18	256	9	11	11	238	28	810					
Grand Total	35	504	14	14	14	491	125	1111					
% Cars	16	220	6	10	10	328	125	705					
% Trucks	2	89	0	0	0	82	13	187					
% Buses	0	3	0	0	0	57	0	60					
Total	111	913	33	33	33	467	138	1651					
% Trucks	11	128	0	0	0	143	0	160					
% Buses	0	1.2	0	0	0	15.3	0	17.7					

Start Time	From North				From East				From South				In. Total
	Ames St		Garage		Ames St		Garage		Ames St		Garage		
	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	
08:30 AM	2	5	1	2	1	5	1	8	86	2	5	0	98
08:45 AM	1	28	0	1	0	64	22	86	116	0	7	0	116
09:00 AM	4	35	1	1	1	51	20	77	111	0	0	0	111
Total	7	68	2	4	2	120	43	171	313	0	7	0	313
PHF	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2
% Cars	8	108	3	3	3	190	74	264	386	0	0	0	386
% Trucks	0	9	0	0	0	85	9	94	137	0	0	0	137
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	117	3	3	3	275	83	358	523	0	0	0	523
% Trucks	0	10.0	0	0	0	14.3	2.6	3.1	5.0	0	0	0	5.0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	13.6	0	10.2	15.0	0	0	0	15.0

Accurate Counts
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File Name : 16460006
Site Code : 16460006
Print Date : 4/9/2014
Page No. : 4

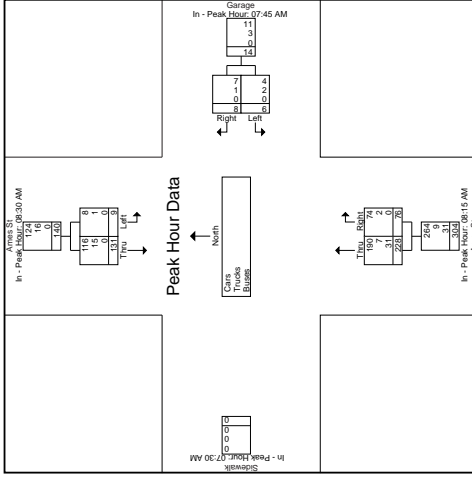
N5 Street : Ames Street
EW Street : Garage
Print Date : 4/9/2014
Weather : Clear

File Name : 16460006
Site Code : 16460006
Print Date : 4/9/2014
Page No. : 3

Accurate Counts
978-664-2565

N5 Street : Ames Street
EW Street : Garage
Print Date : 4/9/2014
Weather : Clear

Start Time	Ames St		Garage		Ames St		From West	
	Left	From North	From Right	From South	From Right	From South	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
08:30 AM								
-0 mins.	37	38	07:45 AM	1	2	56	17	73
+15 mins.	28	29		4	4	57	17	74
+30 mins.	35	39		2	1	64	22	86
+45 mins.	4	3		8	8	228	76	304
Total Volume	9	131	140	6	21	75	25	
% App. Total	6.4	93.6	43.9	57.1	8	83	30.1	36.1
DIF	-563	885	397	-750	500	891	864	884
% Cars	88.9	88.5	88.6	87.2	87.5	83.3	97.4	86.8
% Trucks	11.1	11.5	11.4	12.5	12.5	3.1	2.6	3
% Buses	0	0	0	0	0	13.6	0	10.2



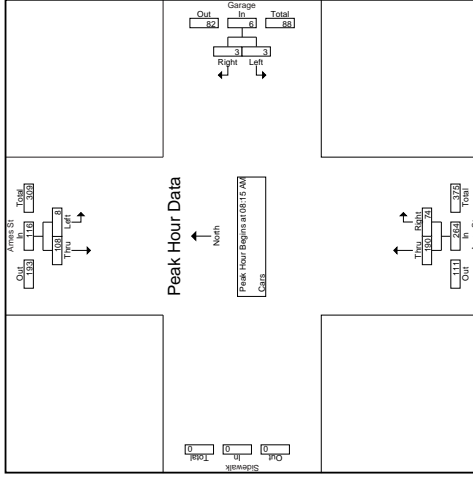
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
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N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Amos St From North		Garage From East		Amos St From South		In. Total
	Left	Thru	Left	Thru	Right	Thru	
07:45 AM	0	34	1	1	1	15	80
Total	3	56	2	1	64	25	151
08:00 AM	3	28	1	1	38	15	89
08:15 AM	2	20	1	1	47	17	88
08:30 AM	1	31	1	1	49	16	99
08:45 AM	1	24	1	0	53	21	100
Total	7	103	4	6	187	69	376
09:00 AM	4	33	0	1	41	20	99
09:15 AM	2	28	0	2	36	11	79
Grand Total	16	230	6	10	328	125	705
App. %	2.3	33.2	0.9	1.4	46.5	17.7	
Total %	2.3	33.2	0.9	1.4	46.5	17.7	

Start Time	Amos St From North		Garage From East		Amos St From South		App. Total	From West	In. Total
	Left	Thru	Left	Thru	Right	Thru			
08:15 AM to 09:15 AM - Peak 1 of 1	0	22	1	1	17	64	0	88	
08:15 AM	1	31	1	1	16	65	0	99	
08:30 AM	1	22	0	2	49	61	0	99	
09:00 AM	4	33	0	1	41	64	0	99	
Total Volume	8	108	3	6	190	264	0	386	
% App. Total	6.9	93.1	50	72	38	892	0.000	965	
PHI	318	784	350	750	896	892	0.000	965	

Peak Hour Analysis: 08:15 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:15 AM

Accurate Counts
978-664-2565

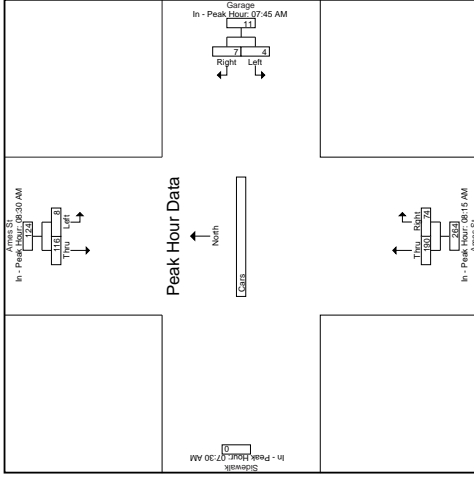
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Site Code : 1646006
Print Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
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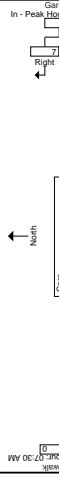
N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		Int. Total	
	Left	From North	From East	From South	From Right	From South	From West	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
Peak Hour for Each Approach Begins at:								
-0 mins.	31	32	07:45 AM	1	17	64	0	
+15 mins.	24	25	08:15 AM	4	47	65	0	
+30 mins.	39	37		1	51	74	0	
+45 mins.	4	3		1	193	264	0	
Total Volume	8	124		7	72	28		
% App. Total	6.5	36.4		63.6	72	28		
PHF	.879	.838	1.000	.438	.896	.881	.892	
							.000	



Peak Hour Data

North
Garage



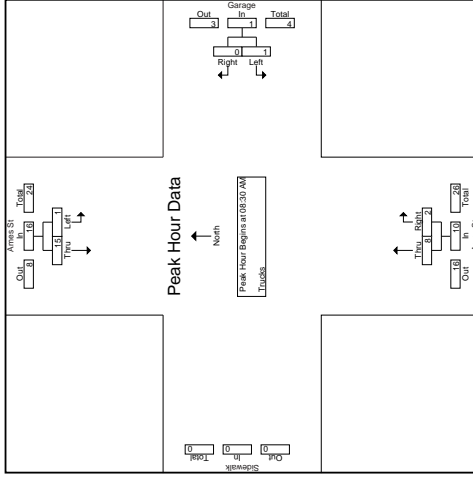
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Print Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Garage From East			Ames St From South			In. Total
	Left	Thru	Right	Left	Thru	Right	Thru	Right		
07:45 AM	0	2	0	0	1	0	0	0	3	
Total	0	6	0	0	1	0	4	0	12	
08:00 AM	0	2	0	1	0	0	1	1	5	
08:15 AM	0	0	0	1	0	0	0	0	1	
08:30 AM	0	6	0	0	0	0	1	1	8	
08:45 AM	0	4	0	0	0	0	3	1	8	
Total	0	12	0	2	0	0	5	3	22	
09:00 AM	0	2	0	0	0	0	3	0	5	
09:15 AM	1	3	0	1	0	0	1	0	6	
Grand Total	2	23	0	3	0	0	13	1	45	
App. Total	4.4	6.7	0	7.5	0	0	18.3	0	22.2	
Total %	4.4	51.1	0	6.7	0	0	28.9	0	66.7	

Start Time	Ames St From North			Garage From East			Ames St From South			From West App. Total
	Left	Thru	Right	Left	Thru	Right	Thru	Right		
08:30 AM	0	6	0	0	0	0	1	1	2	
08:45 AM	0	4	0	0	0	0	3	0	4	
09:15 AM	1	3	0	1	0	0	1	0	1	
Total Volume	1	15	0	1	0	0	8	2	10	
% App. Total	6.3	93.8	0	100	0	0	80	20	100	
PHF	0.63	0.67	0	0.67	0.250	0.250	0.667	0.500	0.625	
Total	0.63	0.67	0	0.67	0.250	0.250	0.667	0.500	0.625	

Peak Hour Analysis: 08:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:30 AM

Accurate Counts
978-664-2565

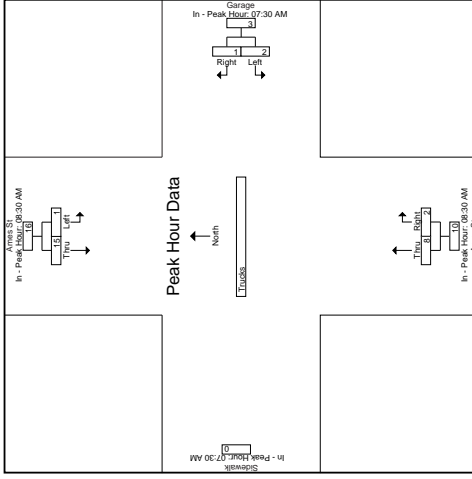
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Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North		Garage From East		Ames St From South		From West	
	Left	Thru	Right	Thru	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
Peak Hour for Each Approach Begins at:								
-0 mins.	6	6	0	0	0	0	0	0
+15 mins.	4	4	1	1	1	1	4	4
+30 mins.	2	2	0	0	0	0	3	3
Total Volume	14	14	1	1	1	1	10	10
% App. Total	6.2	6.2	3.3	3.3	2.0	2.0	6.95	6.95
PHF	.250	.695	.500	.750	.667	.500	.695	.695



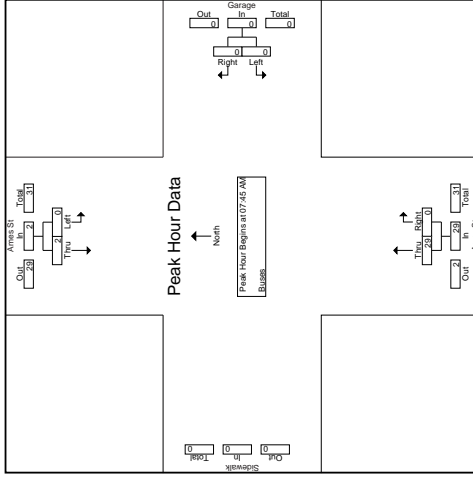
Accurate Counts
978-664-2565

File Name : 16460006
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Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North		Garage From East		Ames St From South		Garage From West		In. Total
	Left	Thru	Left	Thru	Right	Thru	Right	Thru	
07:45 AM	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	13	0	0	14
08:00 AM	0	2	0	0	0	5	0	0	7
08:15 AM	0	0	0	0	0	9	0	0	9
08:30 AM	0	0	0	0	0	7	0	0	7
08:45 AM	0	0	0	0	0	8	0	0	8
Total	0	2	0	0	0	29	0	0	31
09:00 AM	0	0	0	0	0	7	0	0	7
09:15 AM	0	0	0	0	0	8	0	0	8
Grand Total	0	3	0	0	0	57	0	0	60
App. %	0	10	0	0	0	95	0	0	100
Total %	0	5	0	0	0	95	0	0	100

Start Time	Ames St From North		Garage From East		Ames St From South		Garage From West		In. Total
	Left	Thru	Left	Thru	Right	Thru	Right	Thru	
07:45 AM to 09:15 AM - Peak 1 of 1	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	8	0	8	8
08:00 AM	2	0	0	0	0	5	0	5	7
08:15 AM	0	0	0	0	0	8	0	8	8
08:30 AM	0	0	0	0	0	7	0	7	7
Total Volume	2	0	0	0	0	29	0	29	31
% App. Total	100	0	0	0	0	100	0	100	100
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Peak Hour Analysis

Peak Hour for Entire Intersection Begins at 07:45 AM

Peak Hour for Entire Intersection Begins at 07:45 AM

Total Volume

% App. Total

PHF

Accurate Counts
978-664-2565

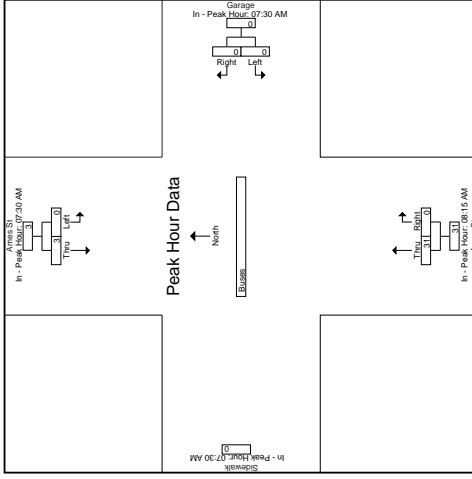
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Date : 4/9/2014
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N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		Int. Total	
	Left	From North	From East	From South	From Right	From South	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
Peak Hour for Each Approach Begins at:								
07:30 AM								
+0 mins.	0	1	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	0	0	0	0	0
+45 mins.	0	2	0	0	0	0	0	0
Total Volume	0	3	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0
PHF	.000	.375	.000	.000	.000	.000	.000	.000



Peak Hour Data

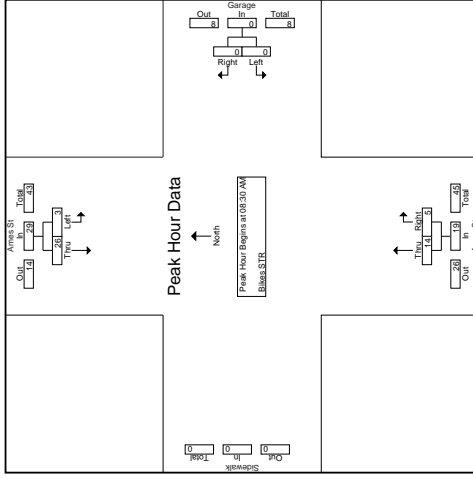
Accurate Counts
978-664-2565

File Name : 16460006
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Print Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Print Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Grouped Printed- Buses STR

Start Time	Ames St From North		Garage From East		Ames St From South		In. Total	
	Left	Thru	Left	Thru	Thru	Right	Right	In. Total
07:45 AM	0	1	0	0	0	3	3	7
Total	1	2	0	0	3	3	3	9
08:00 AM	0	4	0	0	5	0	0	9
08:15 AM	2	7	0	0	2	0	0	11
08:30 AM	0	4	0	0	3	1	1	8
08:45 AM	0	3	0	0	4	0	0	7
Total	2	18	0	0	14	1	1	35
09:00 AM	0	9	0	0	3	2	2	14
09:15 AM	3	10	0	0	4	2	2	19
Grand Total	14	39	0	0	24	5	5	77
App. %	14	86	0	0	24	5	5	77
Total %	7.8	50.6	0	0	31.2	10.4	10.4	

Start Time	Ames St From North		Garage From East		Ames St From South		From West	
	Left	Thru	Left	Thru	Thru	Right	App. Total	In. Total
08:30 AM	0	4	0	0	3	1	4	8
08:45 AM	0	3	0	0	4	0	4	7
09:15 AM	3	10	0	0	2	2	6	19
Total Volume	3	26	0	0	14	5	19	48
% App. Total	89.7	89.7	0	0	73.7	26.3	79.2	65.3
PHF	0.00	0.00	0.00	0.00	0.72	0.51	0.792	0.653

Peak Hour Analysis: 08:30 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:30 AM

Accurate Counts
978-664-2565

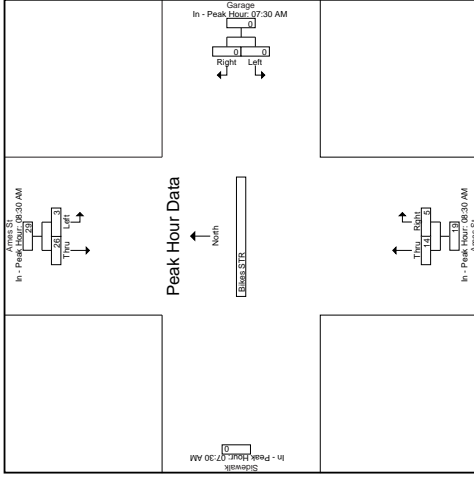
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Site Code : 1646006
Print Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Print Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		Int. Total	
	Left	From North	From East	From South	From Right	From Total	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
Peak Hour for Each Approach Begins at:								
-0 mins.	0	4	0	0	0	3	1	4
+15 mins.	0	3	0	0	0	4	0	4
+30 mins.	0	9	0	0	0	3	2	5
+45 mins.	3	16	0	0	0	14	5	19
Total Volume	10.3	89.7	0	0	0	73.7	26.3	792
% App. Total	1.3	89.7	0.0	0.0	0.0	87.5	65.3	792
PHF	.250	.650	.538	.000	.000	.875	.653	.792



Accurate Counts
978-664-2565

File Name : 1646006
Site Code : 1646006
Print Date : 4/9/2014
Page No : 3

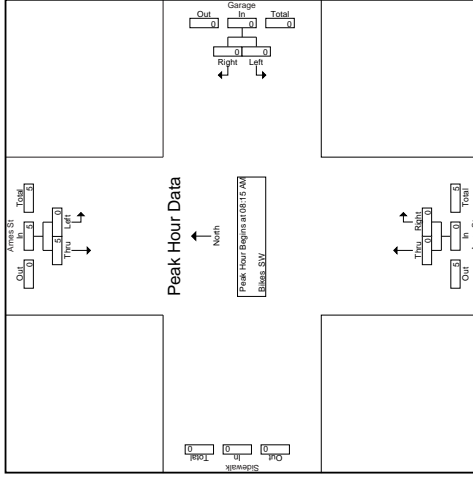
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 2

N5 Street : Ames Street
EW Street : Garage
Location : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N5 Street : Ames Street
EW Street : Garage
Location : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Garage From East			Ames St From South			In. Total
	Left	Thru	Right	Left	Thru	Right	Thru	Right		
07:45 AM	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	
08:00 AM	0	0	0	0	0	0	0	0	0	
08:15 AM	0	1	0	0	0	0	0	0	1	
08:30 AM	0	1	0	0	0	0	0	0	1	
08:45 AM	0	1	0	0	0	0	0	0	1	
Total	0	3	0	0	0	0	0	0	3	
09:00 AM	0	2	0	0	0	0	0	0	2	
09:15 AM	0	0	0	0	0	0	0	0	0	
09:30 AM	0	5	0	0	0	0	0	0	5	
Grand Total	0	10	0	0	0	0	0	0	10	
% App. Total	0	100	0	0	0	0	0	0	100	
Total %	0	100	0	0	0	0	0	0	100	

Start Time	Ames St From North			Garage From East			Ames St From South			In. Total
	Left	Thru	Right	Left	Thru	Right	Thru	Right		
08:15 AM to 09:15 AM - Peak 1 of 1	1	0	0	0	0	0	0	0	1	
08:15 AM	1	0	0	0	0	0	0	0	1	
08:30 AM	1	0	0	0	0	0	0	0	1	
08:45 AM	1	0	0	0	0	0	0	0	1	
09:00 AM	2	0	0	0	0	0	0	0	2	
Total Volume	5	0	0	0	0	0	0	0	5	
% App. Total	100	0	0	0	0	0	0	0	100	
PHF	.653	.000	.000	.000	.000	.000	.000	.000	.653	

Peak Hour Analysis: 08:15 AM to 09:15 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:15 AM

Accurate Counts
978-664-2565

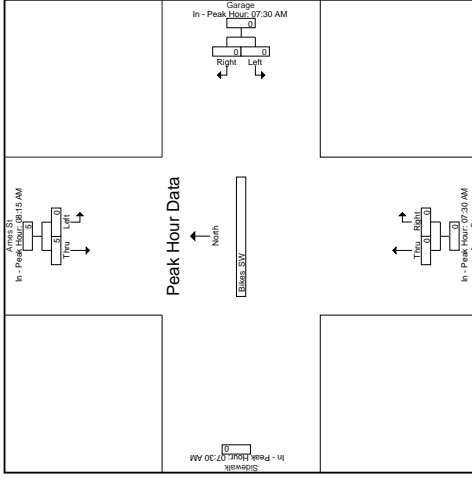
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Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North		Garage From East		Ames St From South		From West	
	Left	Thru	Right	Thru	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1								
Peak Hour for Each Approach Right Side								
+0 mins.	0	1	0	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	0	0
+30 mins.	0	1	0	0	0	0	0	0
Total Volume	0	3	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0
PHF	.000	.635	.000	.000	.000	.000	.000	.000



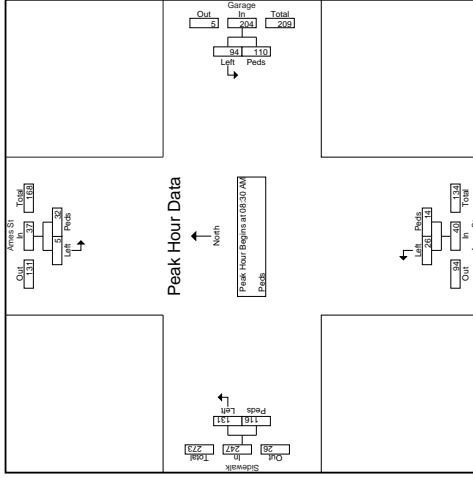
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North				Ames St From South				Garage From East				Garage From West				In. Total
	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB	
07:45 AM	2	3	13	21	4	4	3	9	2	3	21	17	2	3	17	72	
Total	2	15	23	38	6	4	4	25	27	140							
08:00 AM	2	5	13	14	7	10	9	71									
08:15 AM	6	14	13	25	1	2	21	14	96								
08:30 AM	5	16	23	34	6	6	21	22	127								
08:45 AM	0	4	26	23	10	8	28	33	132								
Total	13	39	75	96	24	12	89	78	426								
09:00 AM	0	9	20	21	2	3	54	35	144								
09:15 AM	0	3	25	32	8	28	26	125	125								
Grand Total	15	66	143	187	40	40	196	196	835								
% App. Total	18	81	171	224	48	48	215	199	355								
Total %	1.8	7.9	17.1	22.4	4.8	4.8	21.5	21.5	19.9								

Start Time	Ames St From North				Ames St From South				Garage From East				Garage From West				In. Total
	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB	
08:30 AM	5	16	34	57	6	0	6	43	127								
08:45 AM	0	4	26	49	8	18	28	61	132								
09:15 AM	0	3	25	57	3	11	28	54	125								
Total Volume	5	32	84	110	26	14	40	131	116	247	528						
% App. Total	13.5	86.5	46.1	53.9	65	35	53	47	49	317	694						
PHI	.250	.500	.440	.395	.650	.438	.556	.694	.694	.917							

Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

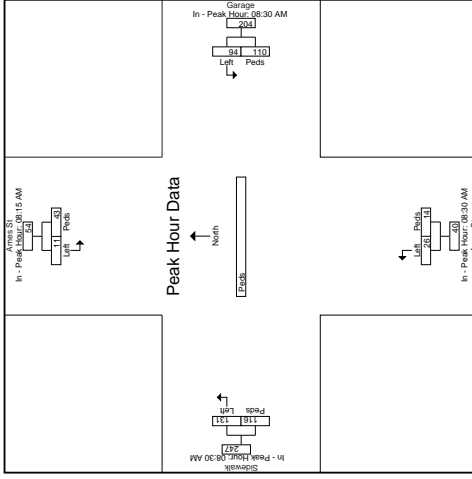
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Site Code : 16460006
Date : 4/9/2014
Page No : 4

N/S Street : Amos Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 3

N/S Street : Amos Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Amos St From North		Garage From East		Amos St From South		Sidewalk From West		Int. Total
	EB	WB	SB	NB	EB	WB	SB	NB	
07:30 AM	6	14	20	23	34	57	0	21	43
+0 mins.	5	16	26	23	10	8	18	28	61
+15 mins.	0	4	20	21	2	3	5	54	89
+30 mins.	0	4	4	21	2	2	5	131	144
Total Volume	11	43	54	110	26	14	40	131	247
% Amp. Total	20.4	79.6	46.1	53.9	65	35	53	47	694
PER	458	677	653	895	895	650	438	606	829



Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

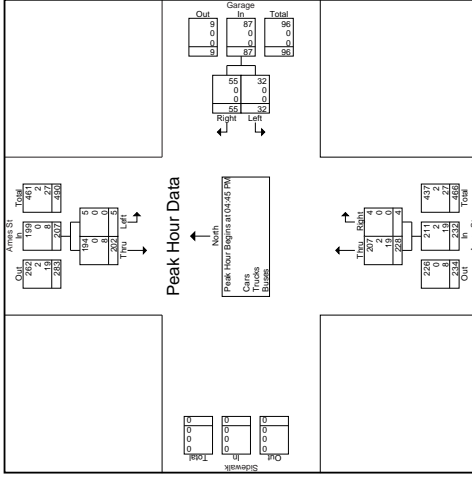
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Print Date : 4/9/2014
Page No. : 2

N/S Street : Amos Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Print Date : 4/9/2014
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Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
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Start Time	Ames St From North		Garage From East		Ames St From South		Int. Total
	Left	Thru	Left	Thru	Thru	Right	
04:30 PM	2	45	8	8	55	2	120
04:45 PM	5	78	17	23	99	3	225
Total							
04:00 PM	1	56	8	13	72	1	151
05:15 PM	1	50	6	19	50	1	127
05:30 PM	1	51	10	15	51	0	128
05:45 PM	1	44	5	10	49	4	113
Total	4	201	29	57	222	6	519
06:00 PM	1	40	11	14	48	3	117
06:15 PM	0	40	6	8	40	2	96
Grand Total	10	379	63	102	409	14	957
Avg. Total	2.1	82.3	13.2	25.5	92.3	3.1	239.3
Total %							
Cars	10	340	63	102	369	14	888
% Cars	100	94.7	100	100	90.2	100	93.8
Trucks	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0
Buses	0	19	0	0	37	0	56
% Buses	0	5.3	0	0	9	0	5.9

Start Time	Ames St From North		Garage From East		Ames St From South		Int. Total
	Left	Thru	Left	Thru	Thru	Right	
04:30 PM	2	45	8	8	55	2	120
05:00 PM	1	50	6	19	51	1	127
05:15 PM	1	51	10	15	51	0	128
05:30 PM	1	44	5	10	49	4	113
Total	5	190	29	57	222	11	585
% Cars	100	94.7	100	100	90.2	100	93.8
% Trucks	0	0	0	0	0	0	0
% Buses	0	5.3	0	0	9	0	5.9

Start Time	Ames St From North		Garage From East		Ames St From South		Int. Total
	Left	Thru	Left	Thru	Thru	Right	
04:30 PM	2	45	8	8	55	2	120
05:00 PM	1	50	6	19	51	1	127
05:15 PM	1	51	10	15	51	0	128
05:30 PM	1	44	5	10	49	4	113
Total	5	190	29	57	222	11	585
% Cars	100	94.7	100	100	90.2	100	93.8
% Trucks	0	0	0	0	0	0	0
% Buses	0	5.3	0	0	9	0	5.9

Accurate Counts
978-664-2565

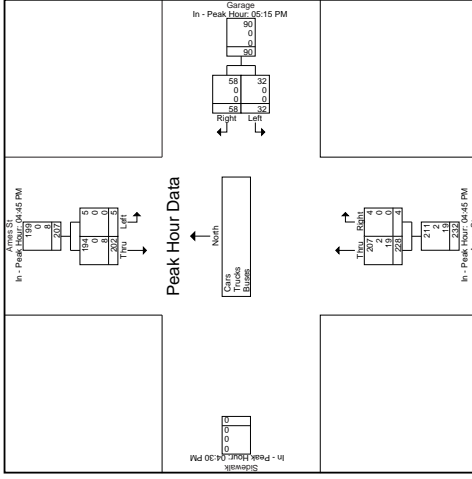
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Print Date : 4/9/2014
Page No. : 4

N5 Street : Amos Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Print Date : 4/9/2014
Page No. : 3

N5 Street : Amos Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Amos St			Garage			Amos St			Int. Total
	Left	From North	Thru	From Right	Thru	From Right	Thru	From Right	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1										
Peak Hour for Each Approach Begins at										
-0 mins.	2	45	47	19	25	55	2	57	0	0
+15 mins.	1	56	57	10	15	72	1	73	0	0
+30 mins.	1	50	51	5	10	35	0	31	0	0
+45 mins.	1	202	207	32	58	228	4	232	0	0
Total Volume	5	202	207	32	58	228	4	232	0	0
% App. Total	2.4	97.6	64.4	35.6	64.4	98.3	1.7	795	0.000	0
DIV	653	900	908	72	900	900	500	909	0	0
% Cars	100	96	96.1	100	100	90.8	100	90.9	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0
% Buses	0	4	3.9	0	0	0	0	8.2	0	0



Accurate Counts
978-664-2565

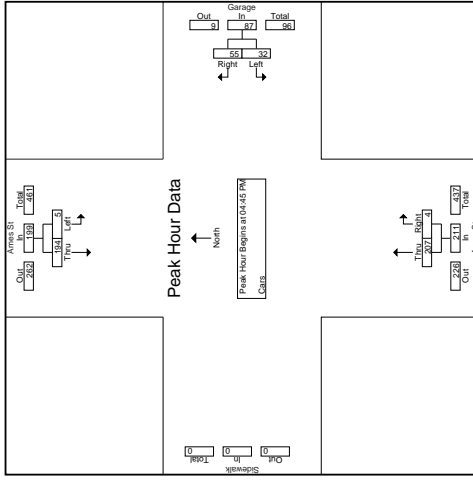
Accurate Counts
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File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North		Garage From East		Ames St From South		In. Total
	Thru	Left	Thru	Right	Thru	Right	
04:45 PM	2	43	8	8	85	2	109
04:45 PM	5	74	17	23	85	3	207
Total	7	117	25	31	170	5	416
05:00 PM	1	48	8	19	67	1	144
05:15 PM	1	49	10	15	48	0	123
05:30 PM	1	41	5	10	43	4	104
05:45 PM	4	192	29	57	204	6	492
Total	10	377	60	102	359	11	888
Grand Total	10	377	60	102	359	11	888
App. %	1.1	37.9	6.8	10.4	35.7	1.2	89.7
Total %	1.1	37.9	6.8	10.4	35.7	1.2	89.7

Start Time	Ames St From North		Garage From East		Ames St From South		App. Total	From West	In. Total
	Thru	Left	Thru	Right	Thru	Right			
04:45 PM	43	45	8	16	46	2	48	0	109
05:00 PM	54	55	8	21	67	1	68	0	144
05:15 PM	49	50	15	25	48	0	48	0	123
05:30 PM	199	199	55	87	207	4	211	0	497
Total Volume	395	399	76	134	268	7	276	0	863
% App. Total	45	45	8	16	46	2	48	0	109
PHI	395	399	76	134	268	7	276	0	863

Peak Hour Analysis: 04:45 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Accurate Counts
978-864-2565

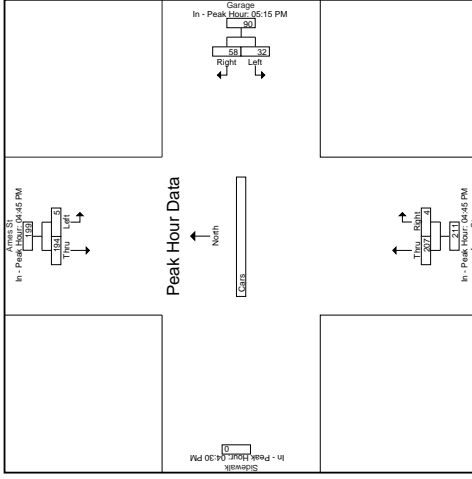
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Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		From West	
	Left	From North	From East	From South	From Right	From South	From West	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1								
Peak Hour for Each Approach Begins at								
+0 mins.	2	43	6	19	25	46	48	0
+15 mins.	1	54	10	15	25	67	1	68
+30 mins.	1	48	5	10	15	46	0	47
+45 mins.	5	194	32	58	90	207	4	211
Total Volume	2.5	97.5	35.6	64.4	90.0	98.1	1.9	100.0
% App. Total	.653	.898	.727	.763	.900	.772	.500	.776
PHF								.000



File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
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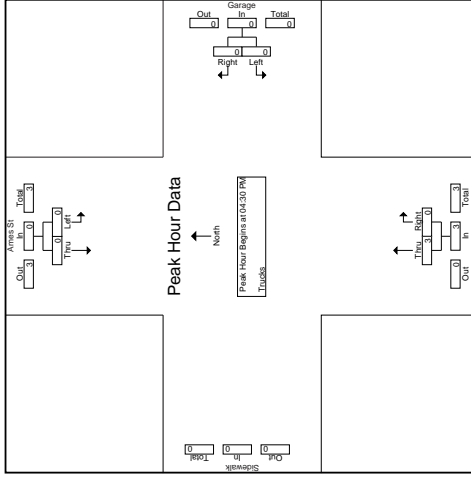
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 2

N5 Street : Ames Street
EW Street : Garage
Location : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N5 Street : Ames Street
EW Street : Garage
Location : Cambridge, MA
Weather : Clear



Start Time	Ames St From North			Garage From East			Ames St From South			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	2	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	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
06:30 PM	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
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
06:30 PM	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	2	0	0	2
App. Total	0	0	0	0	0	0	2	0	0	2
Total %	0	0	0	0	0	0	100	0	0	100

Start Time	Ames St From North			Garage From East			Ames St From South			App. Total	In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
04:30 PM	0	0	0	0	0	0	1	0	0	1	0
04:45 PM	0	0	0	0	0	0	2	0	0	2	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	3	0	0	3	0
% App. Total	0	0	0	0	0	0	100	0	0	100	0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.333	0.000

Peak Hour Analysis: 04:30 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

Accurate Counts
978-664-2565

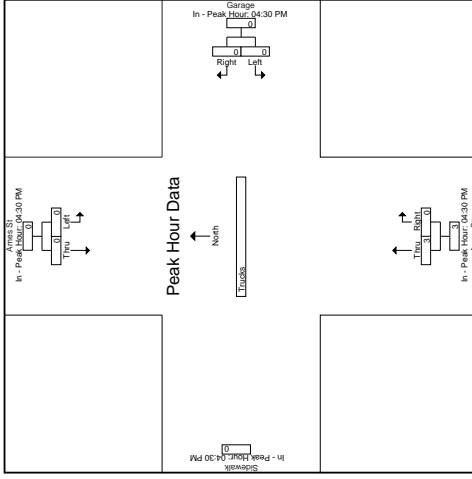
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Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		From West	
	Left	Thru	Right	Left	Right	Thru	App. Total	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1								
Peak Hour for Each Approach Begins at								
+0 mins.	0	0	0	0	0	1	0	0
+15 mins.	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	3	0	3
Total Volume	0	0	0	0	0	100	0	100
% App. Total	.000	.000	.000	.000	.000	.375	.000	.375
PHF								.000



File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

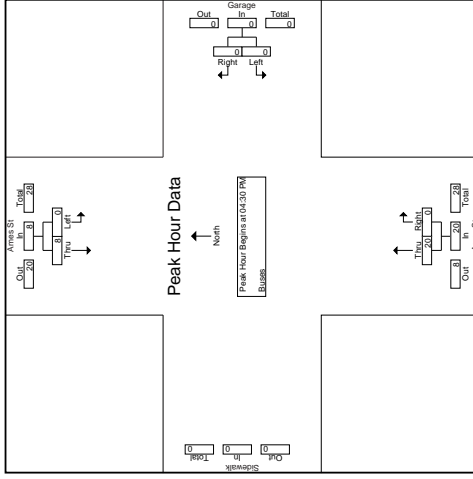
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 2

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear



Start Time	Ames St From North		Garage From East		Ames St From South		Garage From West		In. Total
	Left	Thru	Left	Thru	Right	Thru	Right	Thru	
04:30 PM	0	2	0	0	0	7	0	0	9
04:45 PM	0	2	0	0	0	4	0	0	6
05:00 PM	0	2	0	0	0	5	0	0	7
05:15 PM	0	2	0	0	0	4	0	0	6
05:30 PM	0	2	0	0	0	3	0	0	5
05:45 PM	0	3	0	0	0	6	0	0	9
Total	0	9	0	0	0	18	0	0	27
06:00 PM	0	3	0	0	0	3	0	0	6
06:15 PM	0	3	0	0	0	5	0	0	8
06:30 PM	0	19	0	0	0	19	0	0	38
Grand Total	0	40	0	0	0	66.1	0	0	106.1
Total %	0	33.9	0	0	0	66.1	0	0	100

Start Time	Ames St From North		Garage From East		Ames St From South		Garage From West		In. Total
	Left	Thru	Left	Thru	Right	Thru	Right	Thru	
04:30 PM	2	0	0	0	0	4	0	4	6
04:45 PM	2	0	0	0	0	7	0	7	9
05:00 PM	2	0	0	0	0	5	0	7	9
05:15 PM	2	0	0	0	0	4	0	6	8
05:30 PM	2	0	0	0	0	3	0	5	7
05:45 PM	2	0	0	0	0	4	0	6	8
Total Volume	8	0	0	0	0	20	0	20	28
% App. Total	100	0	0	0	0	100	0	100	100
PHI	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Peak Hour Analysis: 04:30 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

Accurate Counts
978-664-2565

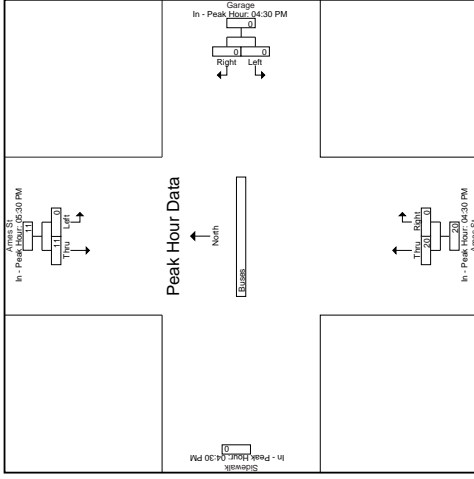
File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		Int. Total	
	Left	From North	From East	From South	From Right	From South	From West	From West
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1								
Peak Hour for Each Approach Begins at								
+0 mins.	0	2	0	0	0	0	0	0
+15 mins.	0	3	0	0	0	0	0	0
+30 mins.	0	3	0	0	0	0	0	0
Total Volume	0	11	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0
PHF	.000	.917	.000	.000	.000	.000	.714	.714



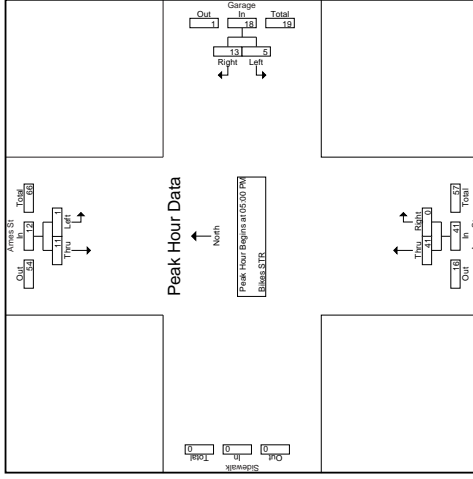
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Grouped Printed- Bikes STR

Start Time	Ames St From North		Garage From East		Ames St From South		In. Total
	Left	Thru	Left	Right	Thru	Right	
04:45 PM	0	1	2	2	0	0	18
Total	0	1	2	2	13	0	18
05:00 PM	1	3	1	6	15	0	27
05:15 PM	0	3	1	2	15	0	21
05:30 PM	0	1	1	3	3	0	8
05:45 PM	0	4	2	2	7	0	15
Total	1	11	5	13	41	0	71
06:00 PM	0	4	0	0	8	0	15
06:15 PM	0	4	0	0	9	0	13
Grand Total	1	20	7	18	100	0	117
App. Total	0.9	17.1	6	15.4	60.7	0	
Total %							

Start Time	Ames St From North		Garage From East		Ames St From South		App. Total	From West	In. Total
	Left	Thru	Left	Right	Thru	Right			
05:00 PM	4	1	6	7	16	0	16	0	27
05:15 PM	3	1	2	3	15	0	15	0	21
05:30 PM	0	3	1	2	7	0	7	0	8
05:45 PM	0	4	2	2	7	0	7	0	15
Total Volume	7	12	11	18	41	0	41	0	71
% App. Total	9.9	16.9	15.4	24.2	60.7	0	60.7	0	100
PHI	0.88	0.750	0.542	0.643	0.611	0.000	0.611	0.000	0.657

Peak Hour Analysis: 05:00 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

Start Time	Ames St From North	Garage From East	Ames St From South	From West	In. Total
05:00 PM	4	6	16	0	27
05:15 PM	3	2	15	0	21
05:30 PM	0	1	7	0	8
05:45 PM	0	2	7	0	15
Total Volume	7	11	41	0	71
% App. Total	9.9	15.5	57.7	0	100
PHI	0.88	0.750	0.611	0.000	0.657

Accurate Counts
978-664-2565

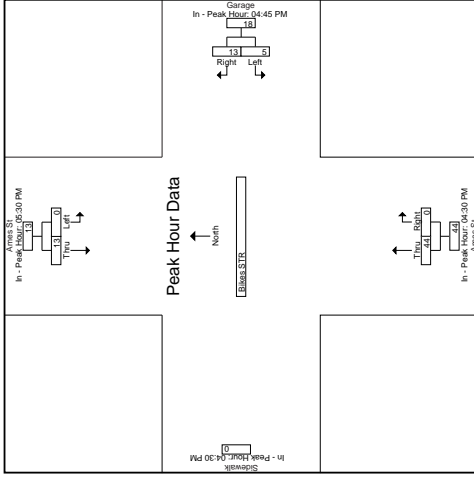
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Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		From West	
	Left	From North	From East	From South	Thru	From South	From West	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1								
Peak Hour for Each Approach Begins at								
+0 mins.	0	1	2	0	6	0	0	0
+15 mins.	0	4	6	7	7	0	7	0
+30 mins.	0	4	2	3	16	0	16	0
+45 mins.	0	4	1	2	44	0	44	0
Total Volume	0	13	13	18	100	0	44	0
% App. Total	0.000	.813	.813	.643	.688	.000	.688	.000



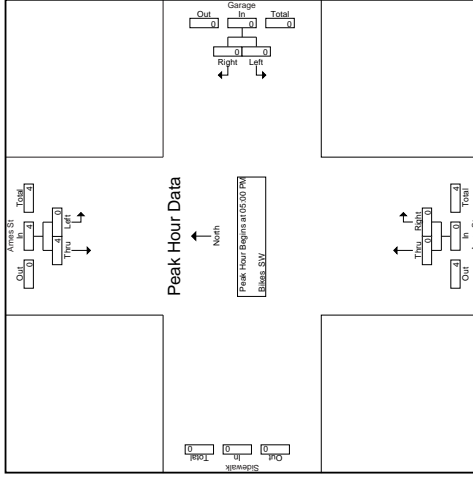
Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 2

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No : 1

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear



Ground Printed-Bikes SW

Start Time	Ames St From North		Garage From East		Ames St From South		Inn. Total	
	Left	Thru	Left	Right	Thru	Right	Left	Right
04:45 PM	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	0	1	1
05:30 PM	0	1	0	0	0	0	1	1
05:45 PM	0	1	0	0	0	0	1	1
Total	0	4	0	0	0	0	4	4
06:00 PM	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0
Grand Total	0	4	0	0	0	0	4	4
App. Total	0	100	0	0	0	0	0	0
Total %	0	100	0	0	0	0	0	0

Start Time	Ames St From North		Garage From East		Ames St From South		From West	
	Left	Thru	Left	Right	Thru	Right	App. Total	Inn. Total
05:00 PM	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	0	0	0	0	1
05:30 PM	1	0	0	0	0	0	0	1
05:45 PM	1	0	0	0	0	0	0	1
Total Volume	4	0	0	0	0	0	0	4
% App. Total	100	0	0	0	0	0	0	100
PHI	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00

Peak Hour Analysis: 05:00 PM to 06:15 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:00 PM

Accurate Counts
978-664-2565

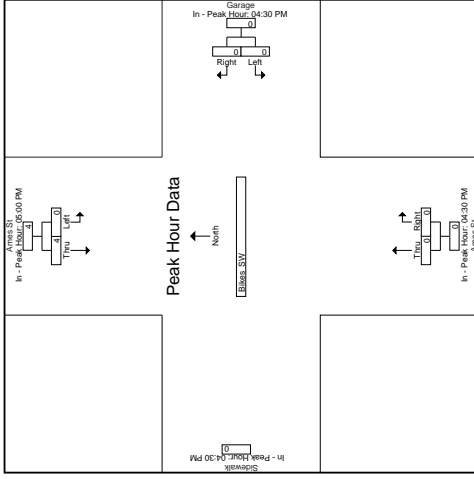
File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St		Garage		Ames St		Int. Total	
	Left	Thru	Left	Right	From South	From North	From West	From East
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1								
Peak Hour for Each Approach Begins at								
0:00 mins.	0	1	0	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	0	0
+30 mins.	0	1	0	0	0	0	0	0
Total Volume	0	4	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0
PHF	.000	1.000	.000	.000	.000	.000	.000	.000



Accurate Counts
978-664-2565

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
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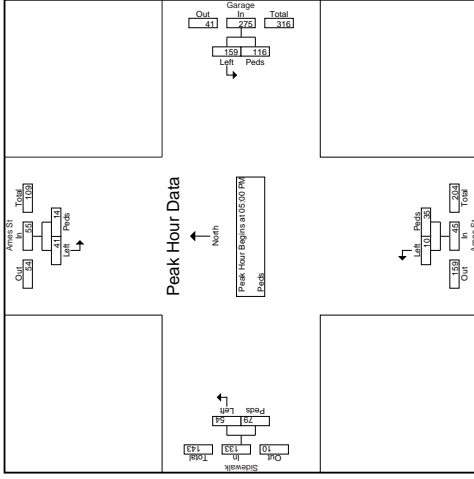
N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 16460006
Site Code : 16460006
Date : 4/9/2014
Page No. : 1

N/S Street : Ames Street
E/W Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North				Garage From East				Ames St From South				Sidewalk From West				In. Total
	SE	WB	WB	SE	SE	WB	WB	SE	SE	WB	WB	SE	WB	WB	SE		
04:45 PM	17	4	4	17	27	6	2	6	6	10	24	16	15	109			
Total	38	6	6	38	68	9	9	10	26	36	217	25	36	217			
05:00 PM	13	2	2	13	47	5	1	5	14	14	15	14	15	125			
05:15 PM	7	4	4	7	40	3	2	3	15	12	24	12	24	121			
05:30 PM	10	1	1	10	32	3	3	3	15	12	24	12	24	121			
05:45 PM	11	7	7	11	40	4	4	4	9	9	25	12	25	139			
Total	41	14	14	41	159	116	10	35	54	79	208	2	9	208			
06:00 PM	11	4	4	11	37	28	1	5	2	2	10	98	14	114			
06:15 PM	8	7	7	8	37	32	2	5	9	9	14	14	14	97			
Grand Total	98	31	31	98	301	300	22	55	91	91	139	39	61	308			
% App. Total	70	23	23	70	32.1	21.3	2.3	5.9	9.7	9.7	14.8	2.8	4.5	14.8			
Total %	10.5	5.3	5.3	10.5	32.1	21.3	2.3	5.9	9.7	9.7	14.8	2.8	4.5	14.8			

Start Time	Ames St From North				Garage From East				Ames St From South				Sidewalk From West				In. Total
	SE	WB	WB	SE	SE	WB	WB	SE	SE	WB	WB	SE	WB	WB	SE		
05:00 PM	13	2	2	13	47	5	1	5	6	6	15	14	15	125			
05:15 PM	7	4	4	7	40	3	2	3	8	8	16	12	15	123			
05:30 PM	10	1	1	10	32	3	3	3	15	12	24	12	24	121			
05:45 PM	11	7	7	11	40	4	4	4	9	9	25	12	25	139			
Total Volume	41	14	14	41	159	116	10	35	48	54	79	133	133	308			
% App. Total	74.5	25.5	25.5	74.5	42.2	23.2	2.3	7.8	23.2	23.2	40.6	59.4	39.9	39.9			
PHI	.788	.500	.500	.788	.846	.879	.052	.052	.052	.244	.790			.914			



Groups Printed: Peds

Accurate Counts
978-664-2565

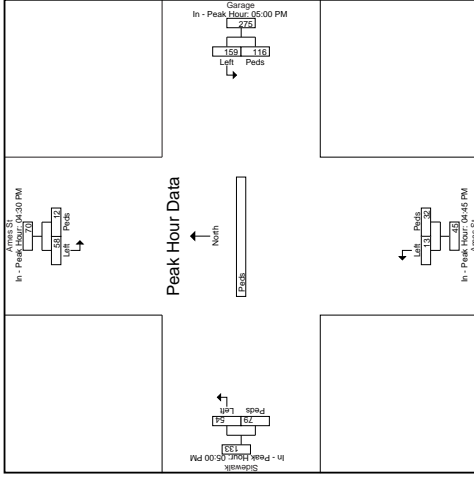
File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 4

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Start Time	Ames St From North			Garage From East			Ames St From South			Sidewalk From West			Int. Total
	EB	WB	App. Total	S/B	N/B	App. Total	EB	WB	App. Total	S/B	N/B	App. Total	
04:30 PM	21	2	23	47	28	75	7	6	13	15	14	29	
+0 mins.	17	4	21	40	33	73	1	5	6	16	15	31	
+15 mins.	13	2	15	32	31	63	2	6	8	12	24	36	
+30 mins.	13	2	15	32	31	63	1	6	7	12	24	36	
Total Volume	58	12	70	159	116	275	13	32	45	54	79	133	
% App. Total	82.9	17.1	100	57.8	42.2	100	28.9	71.1	100	40.6	59.4	100	
PER	690	750	1440	846	879	1725	464	533	1000	844	790	1634	



Accurate Counts
978-664-2565

File Name : 1646006
Site Code : 1646006
Date : 4/9/2014
Page No : 3

N/S Street : Ames Street
EW Street : Garage
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

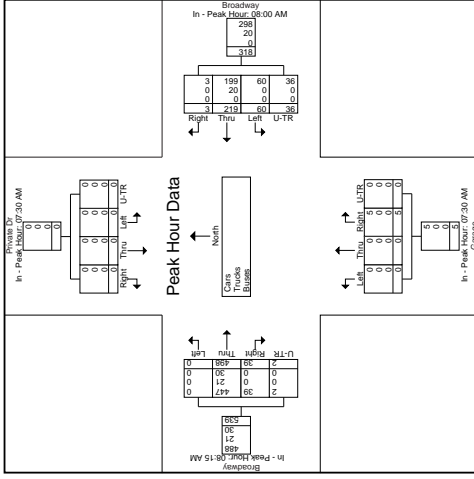
File Name : 1646007
Site Code : 1646007
Date/Time : 4/9/2014
Page No. : 4

N/S Street : Private Dr / Garage
EW Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date/Time : 4/9/2014
Page No. : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Garage			Broadway			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cars	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cars	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	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
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0



Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

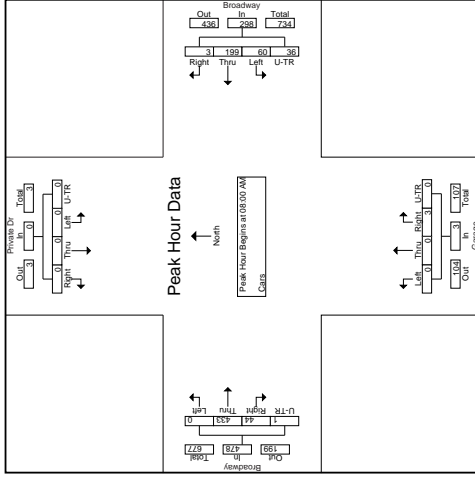
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Site Code : 16460007
Survey Date : 4/9/2014
Page No. : 1

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:45 AM	0	0	0	0	1	41	0	2	0	0	0	0	0	100	11	1	167
Total	0	0	0	0	20	84	0	12	0	0	3	0	2	165	19	2	307
08:00 AM	0	0	0	0	20	49	0	11	0	0	0	0	0	85	12	1	178
08:15 AM	0	0	0	0	15	49	0	5	0	0	2	0	0	119	9	0	199
08:30 AM	0	0	0	0	11	46	1	8	0	0	0	0	0	116	14	0	186
08:45 AM	0	0	0	0	14	55	2	12	0	0	1	0	0	133	9	0	208
Total	0	0	0	0	60	199	3	36	0	0	3	0	0	433	44	1	779
09:00 AM	0	0	0	0	10	51	0	4	0	0	1	0	0	99	7	2	174
09:15 AM	0	0	0	0	10	59	0	6	0	0	8	0	2	95	5	7	160
09:30 AM	0	0	0	0	10	59	0	6	0	0	8	0	2	70	7	7	140
09:45 AM	0	0	0	0	18.1	70.9	0.5	10.5	0	0	100	0	0.5	90.2	8.5	0.8	144.9
Approach %	0	0	0	0	6.9	27.3	0.2	4	0	0	0.6	0	0.3	55	5.2	0.5	

Start Time	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	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	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	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	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 4

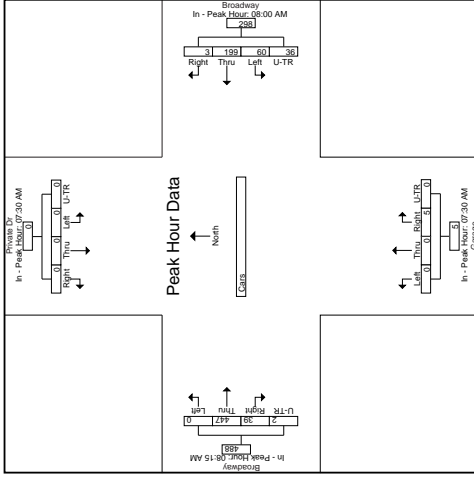
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
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Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Eastbound Broadway:												
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
Page No : 2

N/S Street : Private Dr / Garage
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

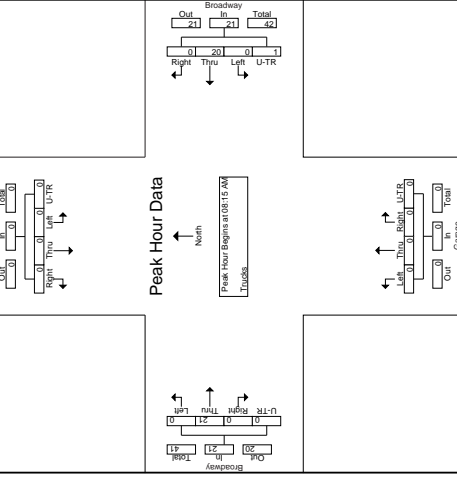
File Name : 16460007
Site Code : 16460007
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
E/W Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

Start Time	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	3	0	0	9
Total	0	0	0	0	0	10	0	0	0	0	0	0	0	6	0	0	16
08:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	6	0	0	9
08:15 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11
08:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	8
08:45 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	5	0	0	12
Total	0	0	0	0	0	20	0	0	0	0	0	0	0	20	0	0	40
09:00 AM	0	0	0	0	0	3	0	1	0	0	0	0	0	7	0	0	11
09:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	8	0	0	11
09:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7
09:45 AM	0	0	0	0	0	97.3	0	2.7	0	0	0	0	0	100	0	0	70
Total %	0	0	0	0	0	46.2	0	1.3	0	0	0	0	0	52.6	0	0	0

Start Time	Private Dr From South				Broadway From West				Garage From North				Broadway From East				In. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
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	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	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	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Appr. %	0.00	0.00	0.00	0.00	0.00	7.14	0.00	25.0	0.00	0.00	0.00	0.00	0.00	75.0	0.00	0.00	75.0
Total	0.00	0.00	0.00	0.00	0.00	7.14	0.00	25.0	0.00	0.00	0.00	0.00	0.00	75.0	0.00	0.00	75.0



Accurate Counts
978-664-2565

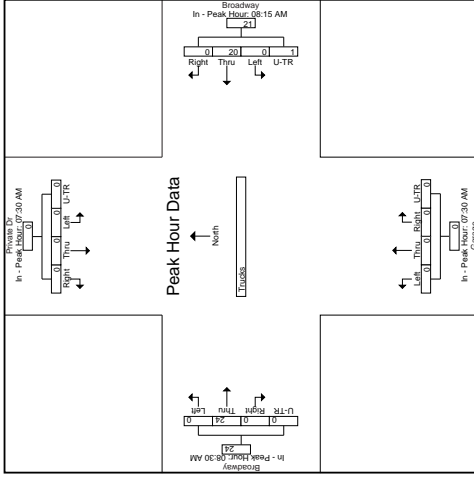
File Name : 1646007
Site Code : 1646007
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Eastbound Broadway:												
0:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

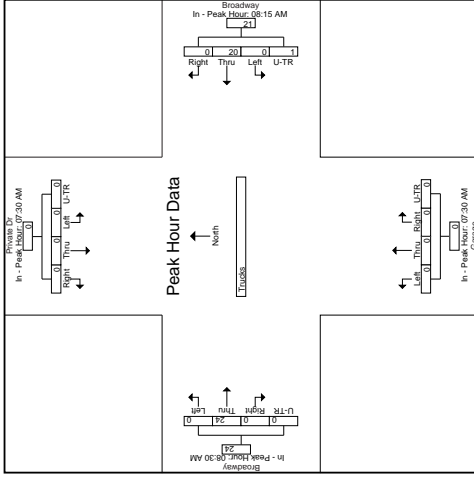


Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Eastbound Broadway:												
0:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



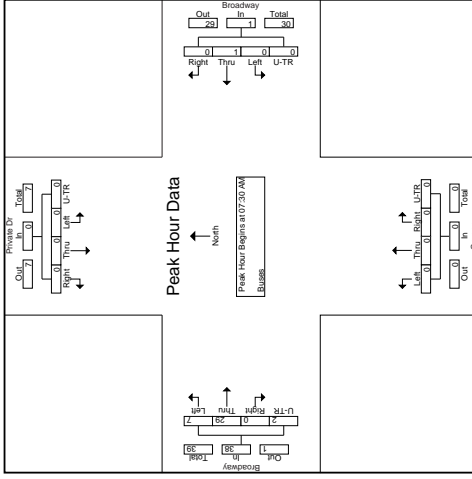
Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Print Date : 4/9/2014
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Broadway From East			Broadway From West			Private Dr From North			Garage From South			Broadway From East			Broadway From West			Private Dr From North			Garage From South							
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Appr. Total	Int. Total			
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Appr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHE	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Start Time	Broadway From East			Broadway From West			Private Dr From North			Garage From South			Broadway From East			Broadway From West			Private Dr From North			Garage From South							
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Appr. Total	Int. Total			
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Appr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHE	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

Accurate Counts
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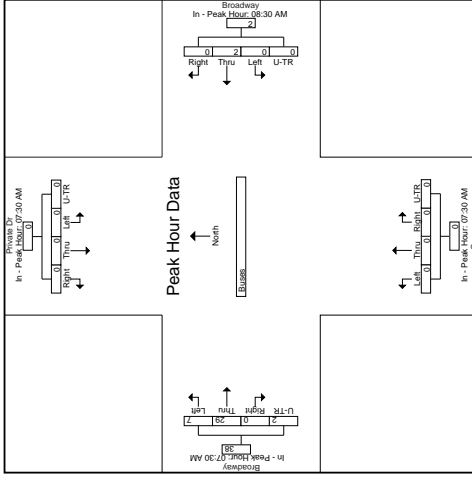
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1												
Peak Hour for Eastbound Direction:												
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
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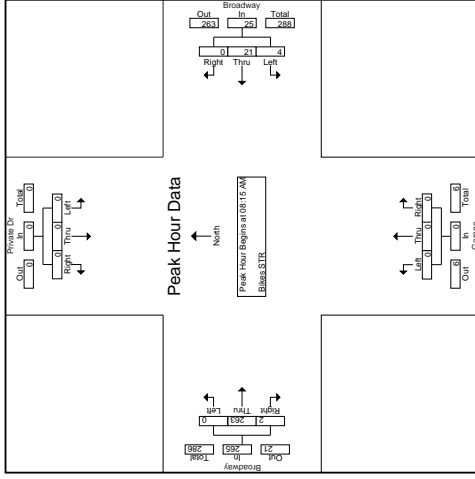
Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	0	0	1	4	0	0	0	0	0	29	0	34
07:45 AM	0	0	0	2	5	0	0	0	0	0	55	0	62
Total	0	0	0	3	9	0	0	0	0	0	84	0	96
08:00 AM	0	0	0	0	2	0	0	0	0	0	47	0	50
08:15 AM	0	0	0	0	5	0	0	0	0	0	72	0	78
08:30 AM	0	0	0	0	5	0	0	0	0	0	73	0	78
08:45 AM	0	0	0	3	17	0	0	0	0	0	99	0	119
Total	0	0	0	3	29	0	0	0	0	0	211	0	243
09:00 AM	0	0	0	1	6	0	0	0	0	0	59	0	67
09:15 AM	0	0	0	0	3	0	0	0	0	0	40	0	46
09:30 AM	0	0	0	0	6	0	0	0	0	0	49	0	55
09:45 AM	0	0	0	15.4	84.6	0	0	0	0	0	99	0	119
Total %	0	0	0	1.3	7.4	0	0	0	0	0	98.4	0	109.7

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	Private Dr From North	Broadway From East	Garage From South	Broadway From West	In. Total
07:30 AM	0	1	0	29	34
07:45 AM	0	2	0	55	62
Total	0	3	0	84	96
08:00 AM	0	0	0	47	50
08:15 AM	0	0	0	72	78
08:30 AM	0	0	0	73	78
08:45 AM	0	0	0	99	119
Total	0	0	0	211	243
09:00 AM	0	1	0	59	67
09:15 AM	0	0	0	40	46
09:30 AM	0	0	0	49	55
09:45 AM	0	0	0	99	119
Total %	0	1.3	0	98.4	109.7

Accurate Counts
978-664-2565

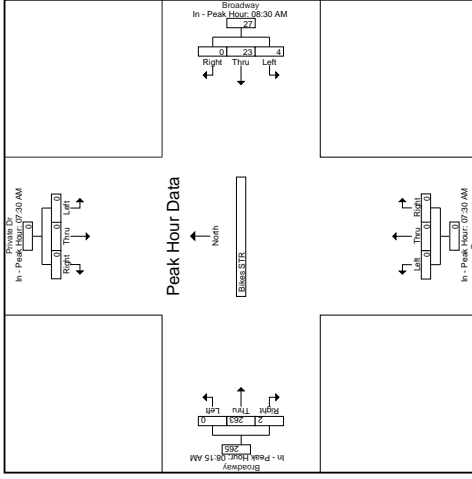
File Name : 1646007
Site Code : 1646007
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Counts			Broadway			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins At:															
07:30 AM	0	0	0	0	5	0	0	0	0	0	0	0	0	72	1
+0 mins.	0	0	0	3	7	0	0	0	0	0	0	0	0	73	0
+15 mins.	0	0	0	1	5	0	0	0	0	0	0	0	0	59	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Total Volume	0	0	0	4	23	0	0	0	0	0	0	0	0	263	2
% App. Total	0.00	0.00	0.00	14.8	86.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.2	0.8
PHF	0.00	0.00	0.00	.333	.821	.000	.675	.000	.000	.000	.000	.000	.000	.901	.008



Accurate Counts
978-664-2565

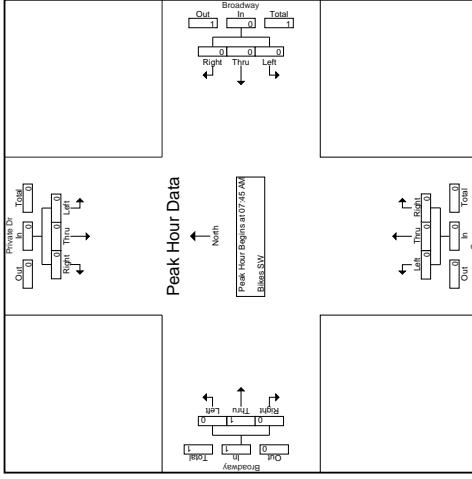
File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
Page No. : 2

N/S Street : Private Dr / Garage
EW Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
Page No. : 1

Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City/Town/State : Cambridge, MA
Weather : Clear



Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	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	1
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	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	100

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	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	250

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

Start Time	Left	Thru	Right	App. Total	% App. Total
07:30 AM	0	0	0	0	0
07:45 AM	0	0	0	0	0
08:00 AM	0	0	0	0	0
08:15 AM	0	0	0	0	0
08:30 AM	0	0	0	0	0
08:45 AM	0	0	0	0	0
Total %	0	0	0	0	0

Accurate Counts
978-664-2565

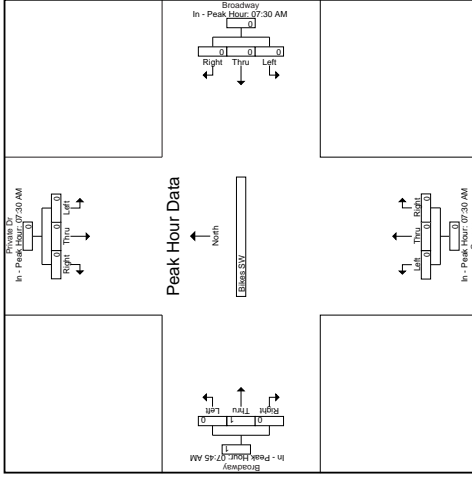
File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 4

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			County			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins At:													
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250



Accurate Counts
978-664-2565

Accurate Counts
978-664-2565

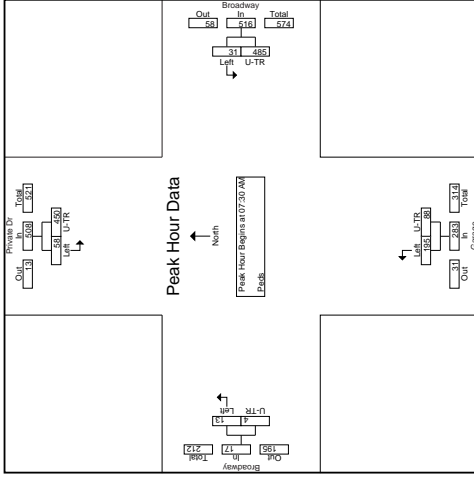
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Site Code : 16460007
Print Date : 4/9/2014
Page No. : 2

N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
Print Date : 4/9/2014
Page No. : 1

Accurate Counts
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Private Dr / Garage			Broadway			Grange Pt/Incl. Pk.			Broadway			In. Total
	WB	From NB	App. Total	SB	From NB	App. Total	WB	From South	App. Total	SB	From West	App. Total	
08:00 AM	10	109	119	8	113	121	44	30	74	9	1	10	324
08:15 AM	21	105	126	4	138	142	52	13	65	2	1	7	332
08:30 AM	24	102	126	17	104	121	56	25	81	4	0	4	332
08:45 AM	10	82	92	9	112	121	57	28	85	1	0	1	235
Total	65	389	454	37	407	481	209	86	295	16	2	2	1230
09:00 AM	14	64	78	11	72	83	39	30	69	1	0	1	231
09:15 AM	17	59	76	12	84	96	39	23	62	1	0	1	235
09:30 AM	12	78	90	7	84	91	58	15	73	20	0	20	2420
09:45 AM	14	86	100	8.4	91.6	100	66.6	33.4	100	83.3	16.7	0.2	332
Total %	5.1	31.3	36.4	3.3	35.4	41.7	16	8	28.3	0.8	0.2	0.2	332

Start Time	Private Dr / Garage			Broadway			Grange Pt/Incl. Pk.			Broadway			In. Total
	WB	From NB	App. Total	SB	From NB	App. Total	WB	From South	App. Total	SB	From West	App. Total	
07:30 AM	148	115	263	9	146	155	46	16	62	2	0	2	387
07:45 AM	16	88	104	10	88	98	53	29	82	0	2	2	287
08:00 AM	10	109	119	8	113	121	44	30	74	9	1	10	324
08:15 AM	21	105	126	4	138	142	52	13	65	2	1	7	332
08:30 AM	24	102	126	17	104	121	56	25	81	4	0	4	332
08:45 AM	10	82	92	9	112	121	57	28	85	1	0	1	235
% of Day Total	11.4	88.6	99.9	6	94	100	68.9	31.1	28.5	76.5	23.5	17	324
PHF	.690	.821	.695	.775	.850	.832	.920	.753	.853	.385	.500	.425	.802

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

Accurate Counts
978-664-2565

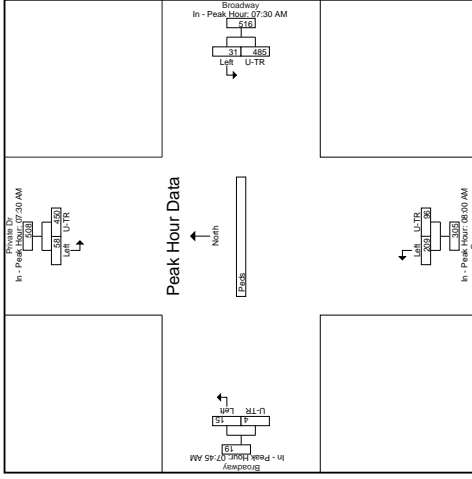
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Site Code : 1646007
Date : 4/9/2014
Page No : 4

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr		Broadway		Garage		Broadway		Int. Total
	WB	EB	SB	NB	WB	EB	SB	NB	
07:30 AM	11	137	9	146	155	44	30	74	
+0 mins.	16	99	10	88	89	52	13	65	2
+15 mins.	10	69	13	133	142	57	28	85	10
+45	2	156	4	133	142	57	28	85	3
Total Volume	58	450	31	485	516	209	96	305	19
% App. Total	11.4	88.6	6	94	69.5	31.5	15	78.9	21.1
PHF	.690	.821	.775	.830	.832	.317	.860	.817	.475



Accurate Counts
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File Name : 1646007
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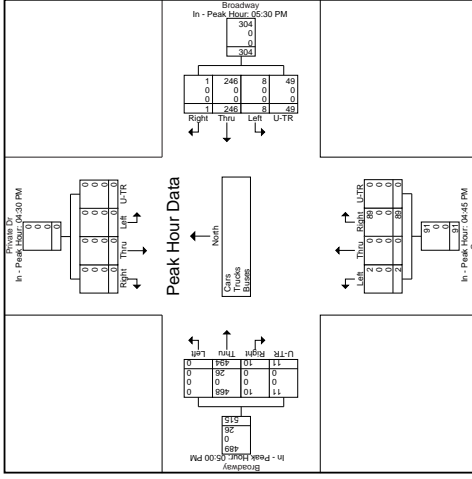
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage				Broadway				Garage				Broadway							
	Left		Right		Left		Right		Left		Right		Left		Right					
	Thru	U-TR	Thru	U-TR	Thru	U-TR	Thru	U-TR	Thru	U-TR	Thru	U-TR	Thru	U-TR	Thru	U-TR				
Peak Hour Analysis from 04:30 PM to 06:15 PM - Peak 1 of 1																				
Peak Hour for Eager/Bright/Bright BH:																				
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Cars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Accurate Counts
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File Name : 16460007
Site Code : 16460007
Date : 4/9/2014
Page No. : 2

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

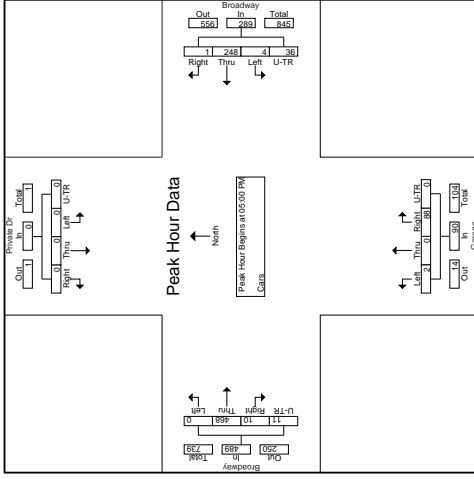
File Name : 16460007
Site Code : 16460007
Date : 4/9/2014
Page No. : 1

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Times	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR			
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
Total	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
05:00 PM	0	0	0	0	61	0	11	0	0	0	24	0	0	135	4	0	0	0	238
05:15 PM	0	0	0	0	52	0	6	2	0	14	0	0	0	99	1	0	0	0	174
05:30 PM	0	0	0	0	78	1	8	0	0	25	0	0	0	119	1	3	0	0	238
05:45 PM	0	0	0	0	57	0	1	0	0	25	0	0	0	135	4	5	0	0	220
Total	0	0	0	0	246	1	36	2	0	68	0	0	0	485	10	11	0	0	869
06:00 PM	0	0	0	0	3	47	0	14	1	0	19	0	0	105	0	0	0	0	189
06:15 PM	0	0	0	0	1	44	0	16	2	0	0	0	0	36	13	17	0	0	216
06:30 PM	0	0	0	0	1	45	0	9	0	0	15	0	0	32	0	0	0	0	107
06:45 PM	0	0	0	0	1.6	81.6	0.4	16.4	3.1	0	96.9	0	0	86.4	1.8	1.8	0	0	167
Total %	0	0	0	0	0.5	27.1	0.1	5.5	0.3	9.2	0	0	0	55.2	1	1	0	0	307

Start Times	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR			
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
Total	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
05:00 PM	0	0	0	0	61	0	11	0	0	0	24	0	0	135	4	0	0	0	238
05:15 PM	0	0	0	0	52	0	6	2	0	14	0	0	0	99	1	0	0	0	174
05:30 PM	0	0	0	0	78	1	8	0	0	25	0	0	0	119	1	3	0	0	238
05:45 PM	0	0	0	0	57	0	1	0	0	25	0	0	0	135	4	5	0	0	220
Total	0	0	0	0	246	1	36	2	0	68	0	0	0	485	10	11	0	0	869
06:00 PM	0	0	0	0	3	47	0	14	1	0	19	0	0	105	0	0	0	0	189
06:15 PM	0	0	0	0	1	44	0	16	2	0	0	0	0	36	13	17	0	0	216
06:30 PM	0	0	0	0	1	45	0	9	0	0	15	0	0	32	0	0	0	0	107
06:45 PM	0	0	0	0	1.6	81.6	0.4	16.4	3.1	0	96.9	0	0	86.4	1.8	1.8	0	0	167
Total %	0	0	0	0	0.5	27.1	0.1	5.5	0.3	9.2	0	0	0	55.2	1	1	0	0	307

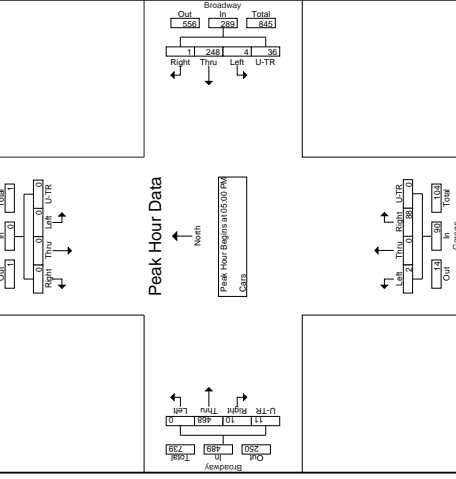
Start Times	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR			
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
Total	0	0	0	0	0	50	0	12	0	0	0	26	0	114	2	1	0	0	205
05:00 PM	0	0	0	0	61	0	11	0	0	0	24	0	0	135	4	0	0	0	238
05:15 PM	0	0	0	0	52	0	6	2	0	14	0	0	0	99	1	0	0	0	174
05:30 PM	0	0	0	0	78	1	8	0	0	25	0	0	0	119	1	3	0	0	238
05:45 PM	0	0	0	0	57	0	1	0	0	25	0	0	0	135	4	5	0	0	220
Total	0	0	0	0	246	1	36	2	0	68	0	0	0	485	10	11	0	0	869
06:00 PM	0	0	0	0	3	47	0	14	1	0	19	0	0	105	0	0	0	0	189
06:15 PM	0	0	0	0	1	44	0	16	2	0	0	0	0	36	13	17	0	0	216
06:30 PM	0	0	0	0	1	45	0	9	0	0	15	0	0	32	0	0	0	0	107
06:45 PM	0	0	0	0	1.6	81.6	0.4	16.4	3.1	0	96.9	0	0	86.4	1.8	1.8	0	0	167
Total %	0	0	0	0	0.5	27.1	0.1	5.5	0.3	9.2	0	0	0	55.2	1	1	0	0	307



Accurate Counts
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File Name : 16460007
Site Code : 16460007
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear



Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 4

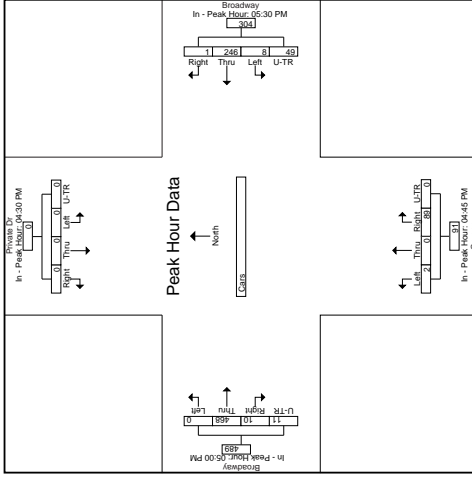
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			County			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Eastbound Direction:												
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Start Time	Private Dr / Garage			Broadway			County			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Eastbound Direction:												
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Topt	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
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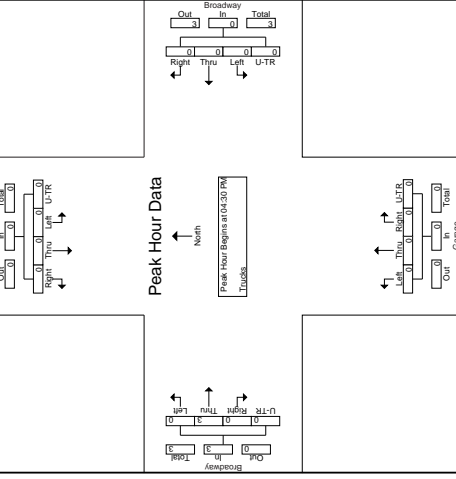
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
Page No. : 1

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Times	Private Dr From North				Broadway From East				Garage From South				Broadway From West				In. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	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 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM	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
% Appr. Total	0.000																

Start Times	Private Dr				Broadway				Garage				Broadway				In. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
% Appr. Total	0.000																



Accurate Counts
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File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
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Accurate Counts
978-664-2565

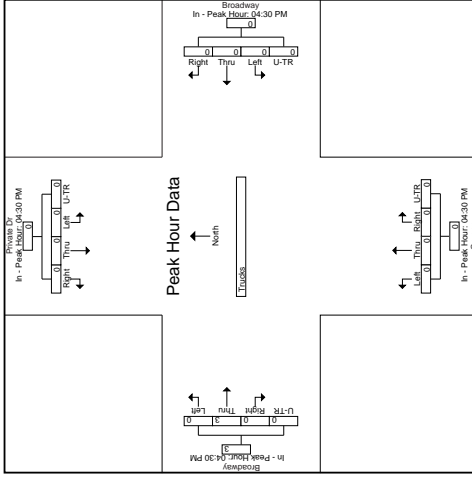
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Site Code : 1646007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
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File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			County			Broadway			App. Total	Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1															
Peak Hour for Eastbound Bldg/Bkgrd:															
40 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250



Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
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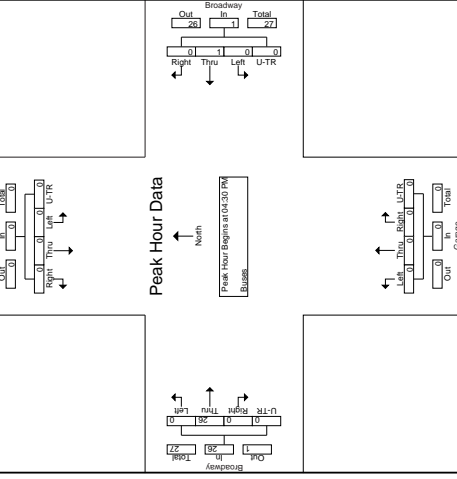
N/S Street : Private Dr / Garage
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
Print Date : 4/9/2014
Page No. : 1

N/S Street : Private Dr / Garage
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Start Times	Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	7	0	7
Total	0	0	0	0	0	0	0	14	0	15
05:00 PM	0	0	0	0	0	0	0	8	0	8
05:15 PM	0	0	0	0	0	0	0	4	0	4
05:30 PM	0	0	0	0	0	0	0	6	0	6
05:45 PM	0	0	0	0	0	0	0	8	0	8
Total	0	0	0	0	0	0	0	26	0	26
06:00 PM	0	0	0	0	0	0	0	6	0	6
06:15 PM	0	0	0	0	0	0	0	5	0	5
06:30 PM	0	0	0	0	0	0	0	100	0	100
Approach %	0	0	0	0	0	0	0	98.1	0	98.1
Total %	0	0	0	0	0	0	0	98.1	0	98.1

Start Times	Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	U-TR	Left	Thru	U-TR	Left	Thru	U-TR	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	7	0	7
05:00 PM	0	0	0	0	0	0	0	8	0	8
05:15 PM	0	0	0	0	0	0	0	4	0	4
05:30 PM	0	0	0	0	0	0	0	6	0	6
05:45 PM	0	0	0	0	0	0	0	8	0	8
Total	0	0	0	0	0	0	0	26	0	26
06:00 PM	0	0	0	0	0	0	0	6	0	6
06:15 PM	0	0	0	0	0	0	0	5	0	5
06:30 PM	0	0	0	0	0	0	0	100	0	100
Approach %	0	0	0	0	0	0	0	98.1	0	98.1
Total %	0	0	0	0	0	0	0	98.1	0	98.1



File Name : 16460007
Site Code : 16460007
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

File Name : 16460007
Site Code : 16460007
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City/State : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
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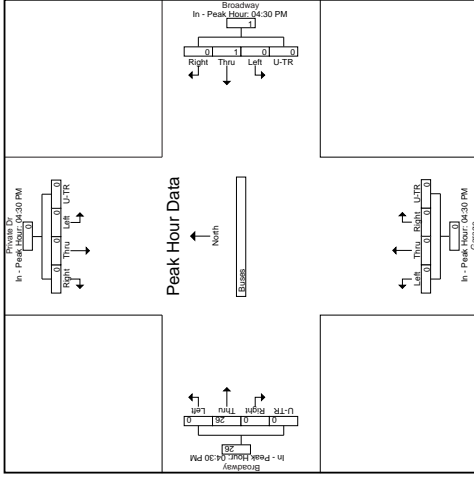
N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Eastbound Bicycles:												
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	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
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1												
Peak Hour for Eastbound Bicycles:												
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	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
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

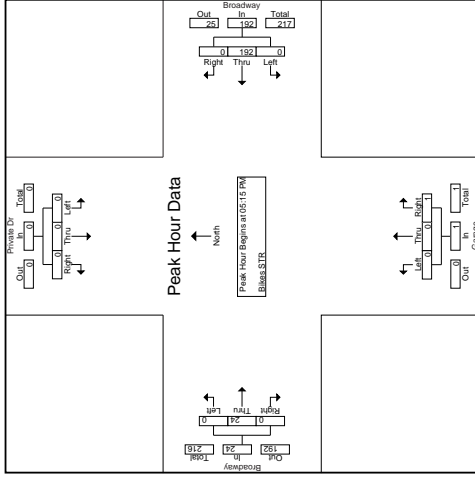
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Site Code : 16460007
Survey Date : 4/9/2014
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	28	0	0	0	0	0	3	31
04:45 PM	0	0	0	0	0	44	0	0	1	0	0	9	54
Total	0	0	0	0	0	44	0	0	1	0	0	9	54
05:00 PM	0	0	0	0	42	0	0	0	0	0	5	0	48
05:15 PM	0	0	0	0	55	0	0	0	1	0	6	0	62
05:30 PM	0	0	0	0	53	0	0	0	0	0	6	0	59
05:45 PM	0	0	0	0	40	0	0	0	2	0	5	0	45
Total	0	0	0	0	190	0	0	0	2	0	22	0	214
06:00 PM	0	0	0	0	44	0	0	0	0	0	7	0	51
06:15 PM	0	0	0	0	38	0	0	0	0	0	7	0	45
06:30 PM	0	0	0	0	100	0	0	0	0	0	100	0	204
06:45 PM	0	0	0	0	86.8	0	0	0	0.8	0	12.4	0	99.9
Total %	0	0	0	0	86.8	0	0	0	0.8	0	12.4	0	99.9

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	28	0	0	0	0	0	3	31
04:45 PM	0	0	0	0	0	44	0	0	1	0	0	9	54
Total	0	0	0	0	0	44	0	0	1	0	0	9	54
05:00 PM	0	0	0	0	42	0	0	0	0	0	5	0	48
05:15 PM	0	0	0	0	55	0	0	0	1	0	6	0	62
05:30 PM	0	0	0	0	53	0	0	0	0	0	6	0	59
05:45 PM	0	0	0	0	40	0	0	0	2	0	5	0	45
Total	0	0	0	0	190	0	0	0	2	0	22	0	214
06:00 PM	0	0	0	0	44	0	0	0	0	0	7	0	51
06:15 PM	0	0	0	0	38	0	0	0	0	0	7	0	45
06:30 PM	0	0	0	0	100	0	0	0	0	0	100	0	204
06:45 PM	0	0	0	0	86.8	0	0	0	0.8	0	12.4	0	99.9
Total %	0	0	0	0	86.8	0	0	0	0.8	0	12.4	0	99.9



Peak Hour Data

Peak hour Begins at 05:15 PM
Ends at 06:15 PM

Accurate Counts
978-664-2565

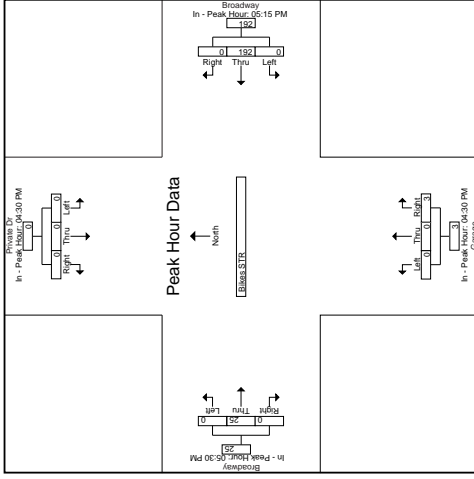
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Site Code : 1646007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Date : 4/9/2014
Page No : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Counts			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for East Approach Begins at:													
-0 mins.	0	0	0	0	55	0	0	0	1	0	0	0	6
+15 mins.	0	0	0	53	53	0	0	0	0	0	0	0	5
+30 mins.	0	0	0	44	44	0	0	1	1	0	0	0	7
+45 mins.	0	0	0	182	182	0	0	3	3	0	25	0	25
Total Volume	0	0	0	100	100	0	0	100	750	0	400	0	
% App. Total	0.00	0.00	0.00	0.00	0.873	0.00	0.00	0.00	0.750	0.00	0.893	0.00	0.893



Accurate Counts
978-664-2565

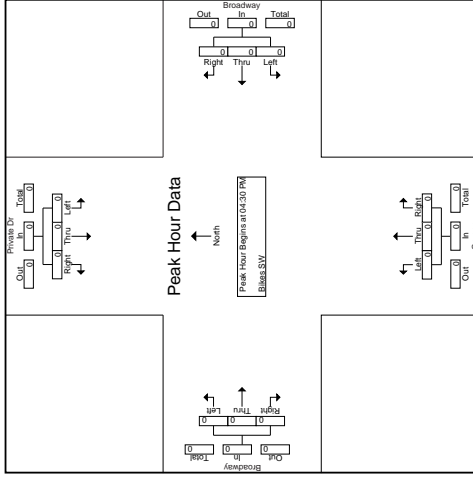
File Name : 1646007
Site Code : 1646007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
Location : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
EW Street : Broadway
Location : Cambridge, MA
Weather : Clear



Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
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	0	0	0	0	0
05:45 PM	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
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	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
06:45 PM	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
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	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
%Approach	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Start Time	Private Dr From North			Broadway From East			Garage From South			Broadway From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
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	0	0	0	0	0
05:45 PM	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
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	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
%Approach	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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
Peak Hour for Entire Intersection Ends at 06:15 PM
Peak Hour for Entire Intersection PHF: .000

Accurate Counts
978-664-2565

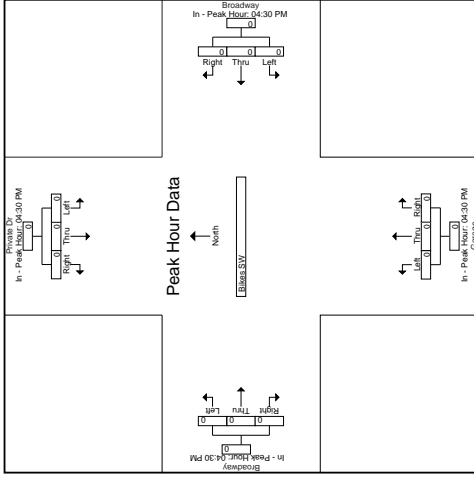
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Site Code : 1646007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646007
Site Code : 1646007
Survey Date : 4/9/2014
Page No. : 3

N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage			Broadway			Cambridge			Broadway			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



Accurate Counts
978-664-2565

File Name : 1646007
Site Code : 1646007
Survey Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
978-664-2565

File Name : 16460007
Site Code : 16460007
Print Date : 4/9/2014
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N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

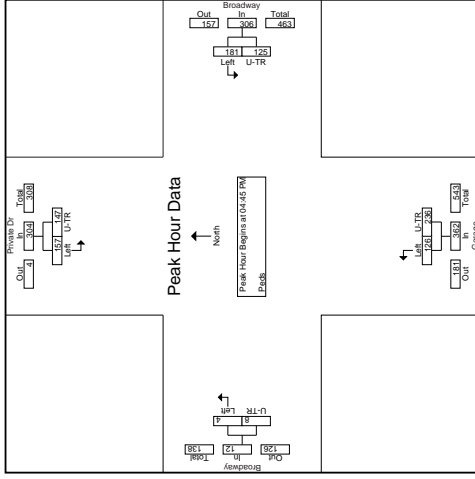
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Accurate Counts
978-664-2565

N/S Street : Private Dr / Garage
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr			Broadway			Garage			Broadway			Int. Total
	WB	From NB	App. Total	SB	From NB	App. Total	WB	From South	App. Total	SB	From West	App. Total	
04:45 PM	39	37	76	61	32	93	51	59	110	4	416	272	
05:00 PM	26	38	64	38	32	70	22	26	48	1	227	251	
05:15 PM	41	34	75	34	38	72	38	51	89	2	201	1750	
05:30 PM	30	34	64	144	30	174	40	41	81	2	381		
Total	146	144	290	277	170	447	151	207	358	4	861		
06:00 PM	26	38	64	38	32	70	22	26	48	1	227	251	
06:15 PM	30	34	64	144	30	174	40	41	81	2	381		
06:30 PM	26	38	64	38	32	70	22	26	48	1	227	251	
06:45 PM	26	38	64	38	32	70	22	26	48	1	227	251	
Total %	49.6	50.4	100	16.2	17.3	33.5	40.2	59.8	22.2	0.2	78.9	0.9	

Start Time	Private Dr			Broadway			Garage			Broadway			Int. Total
	WB	From NB	App. Total	SB	From NB	App. Total	WB	From South	App. Total	SB	From West	App. Total	
04:45 PM	39	37	76	61	32	93	51	59	110	4	416	272	
05:00 PM	26	38	64	38	32	70	22	26	48	1	227	251	
05:15 PM	41	34	75	34	38	72	38	51	89	2	201	1750	
05:30 PM	30	34	64	144	30	174	40	41	81	2	381		
Total	146	144	290	277	170	447	151	207	358	4	861		
06:00 PM	26	38	64	38	32	70	22	26	48	1	227	251	
06:15 PM	30	34	64	144	30	174	40	41	81	2	381		
06:30 PM	26	38	64	38	32	70	22	26	48	1	227	251	
06:45 PM	26	38	64	38	32	70	22	26	48	1	227	251	
Total %	49.6	50.4	100	16.2	17.3	33.5	40.2	59.8	22.2	0.2	78.9	0.9	



Accurate Counts
978-664-2565

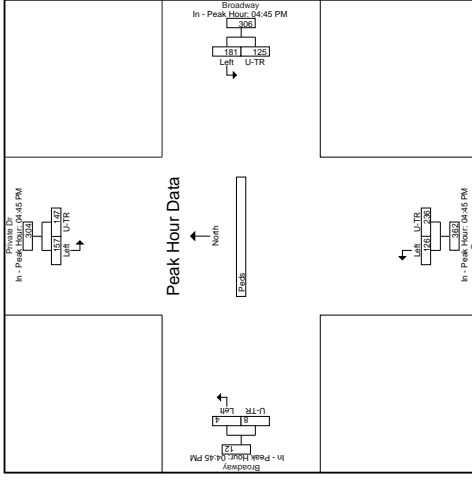
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Site Code : 16460007
Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
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Weather : Clear

File Name : 16460007
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Date : 4/9/2014
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N/S Street : Private Dr / Garage
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Private Dr / Garage		Broadway		Garage		Broadway		Int. Total
	WB	EB	SB	NB	WB	EB	SB	NB	
04:45 PM	37	39	76	71	15	70	85	85	
+15 mins.	26	38	64	95	51	59	110	0	2
+45 mins.	41	38	36	27	26	40	66	2	3
Total Volume	157	147	304	306	128	236	382	4	4
% App. Total	51.6	48.4	59.2	40.8	34.8	65.2	33.3	66.7	12
PHF	.770	.867	.894	.895	.618	.853	.823	.800	.687



Start Time	Private Dr / Garage		Broadway		Garage		Broadway		Int. Total
	WB	EB	SB	NB	WB	EB	SB	NB	
04:45 PM	37	39	76	71	15	70	85	85	
+15 mins.	26	38	64	95	51	59	110	0	2
+45 mins.	41	38	36	27	26	40	66	2	3
Total Volume	157	147	304	306	128	236	382	4	4
% App. Total	51.6	48.4	59.2	40.8	34.8	65.2	33.3	66.7	12
PHF	.770	.867	.894	.895	.618	.853	.823	.800	.687

Accurate Counts
978-664-2565

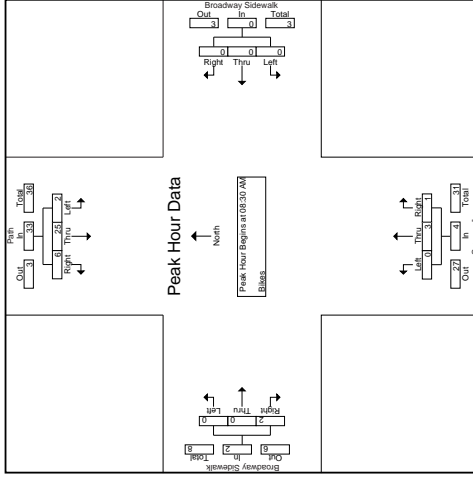
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Site Code : 16460008
Date : 4/9/2014
Page No. : 2

N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460008
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Accurate Counts
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N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear



Start Time	Path From North			Broadway Sidewalk From East			Crosswalk From South			Broadway Sidewalk From West			In, Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	1	0	0	0	0	0	1	0	0	0	4
08:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
08:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	6
08:45 AM	1	6	2	0	0	0	0	0	0	0	0	0	9
Total	1	16	2	0	0	0	0	0	0	0	0	0	22
09:00 AM	1	9	1	0	0	0	2	1	0	0	0	0	2
09:15 AM	0	7	0	0	0	0	4	0	0	0	0	0	8
09:30 AM	0	34	0	0	0	0	80	20	0	0	0	0	100
Total	1	79.1	16.3	0	0	0	88	21	0	0	0	0	110
Approach %	4.7	68	14	0	0	0	8	2	0	0	0	0	4

Start Time	Path From South			Broadway Sidewalk From West			Crosswalk From North			Broadway Sidewalk From East			In, Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
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
Total	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	0	0	0	0	0	0	0	0	0
09:30 AM	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
% Appr.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Appr. PHE	500	694	500	750	250	333	375	250	333	000	000	250	609

Accurate Counts
978-664-2565

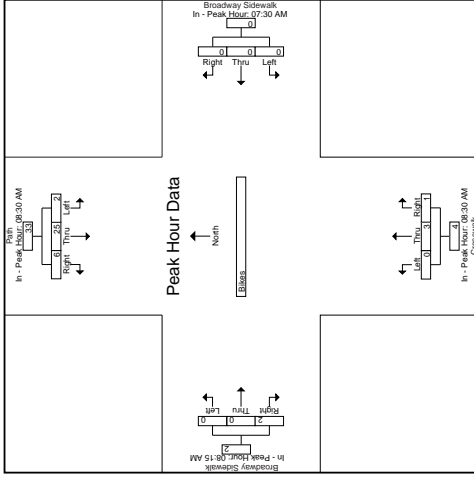
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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Peak North			Broadway Sidewalk			Crosswalk From South			Broadway Sidewalk			Broadway Sidewalk		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:30 AM to 09:15 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins At:															
07:30 AM	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
+0 mins.	1	6	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	9	1	0	0	0	2	0	3	0	0	0	0	0	0
+30 mins.	0	7	0	0	0	0	0	0	0	0	0	0	0	0	2
+45 mins.	2	25	6	0	0	0	0	3	1	4	0	0	0	0	2
Total Volume	6.1	75.8	18.2	0	0	0	0	3.75	25	4	0	0	0	0	100
% App. Total	500	594	500	0	0	0	0	375	250	333	0	0	0	0	250
PHF															



Accurate Counts
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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

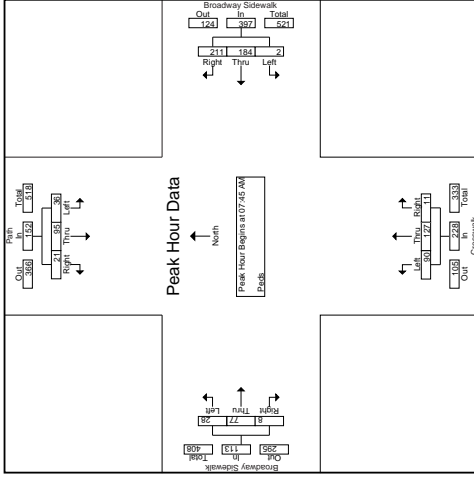
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Site Code : 16460008
Date : 4/9/2014
Page No. : 1

N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Path From North			Broadway Sidewalk From East			Crosswalk From South			Broadway Sidewalk From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	5	18	4	0	42	56	27	27	3	3	19	2	206
07:45 AM	8	18	4	0	42	56	27	27	3	3	19	2	206
Total	13	36	8	0	102	97	34	46	8	5	34	3	374
08:00 AM	7	18	1	1	63	67	17	48	0	13	14	1	251
08:15 AM	14	31	9	0	40	48	20	34	2	6	26	3	233
08:30 AM	10	28	7	1	39	40	26	17	6	6	18	2	200
08:45 AM	5	17	3	1	43	27	16	10	4	4	10	3	149
Total	36	94	31	3	163	162	78	110	9	29	68	9	653
08:00 AM	6	28	10	1	35	28	9	11	0	1	15	4	148
08:15 AM	9	27	11	1	39	22	13	14	1	2	13	3	158
08:30 AM	6	24	6	1	35	22	13	14	1	2	13	3	158
08:45 AM	5	17	3	1	43	27	16	10	4	4	10	3	149
Total	26	96	36	4	152	135	59	69	6	10	51	13	523
Approach %	19.7	59	21.3	0.7	51.8	47.5	40.8	53.9	5.4	20.1	68.6	10.3	15.3
Total %	3.9	11.7	4.2	0.3	23.7	21.7	9.1	12	1.2	2.4	8.5	1.3	10.0

Start Time	Broadway Sidewalk From East			Crosswalk From South			Broadway Sidewalk From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	42	56	27	27	3	3	19	2	206
07:45 AM	0	42	56	27	27	3	3	19	2	206
Total	0	84	112	54	54	6	6	38	4	412
08:00 AM	1	63	67	17	48	0	13	14	1	251
08:15 AM	0	40	48	20	34	2	6	26	3	233
08:30 AM	0	39	40	26	17	6	6	18	2	200
08:45 AM	1	43	27	16	10	4	4	10	3	149
Total	2	185	182	76	119	12	33	78	13	833
Approach %	0.3	23.7	21.7	9.1	12	1.2	2.4	8.5	1.3	10.0

Start Time	Broadway Sidewalk From East			Crosswalk From South			Broadway Sidewalk From West			In. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:30 AM	0	42	56	27	27	3	3	19	2	206
07:45 AM	0	42	56	27	27	3	3	19	2	206
Total	0	84	112	54	54	6	6	38	4	412
08:00 AM	0	63	67	17	48	0	13	14	1	251
08:15 AM	0	40	48	20	34	2	6	26	3	233
08:30 AM	0	39	40	26	17	6	6	18	2	200
08:45 AM	1	43	27	16	10	4	4	10	3	149
Total	1	185	182	76	119	12	33	78	13	833
Approach %	0.1	23.7	21.7	9.1	12	1.2	2.4	8.5	1.3	10.0



N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Accurate Counts
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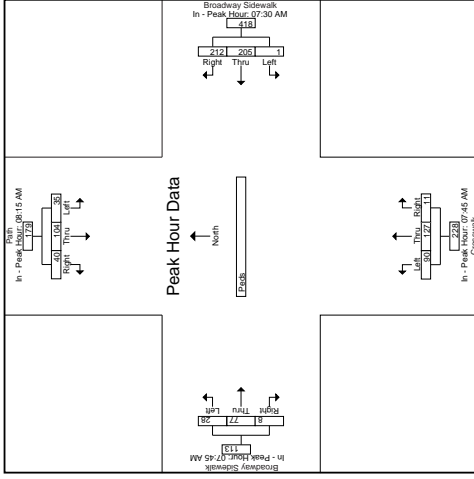
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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Peak North			Broadway Sidewalk			Crosswalk			Broadway Sidewalk			Broadway Sidewalk		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
07:30 AM	31	9	54	0	60	41	101	27	3	57	3	19	2	24	24
+0 mins.	14	7	45	0	42	56	88	17	49	66	13	14	1	28	28
+15 mins.	0	7	4	1	43	47	138	20	37	2	46	6	3	36	36
+30 mins.	6	21	10	0	40	48	100	37	2	46	6	16	3	26	26
Total Volume	35	104	40	1	205	212	418	90	127	11	228	28	77	8	113
% App. Total	19.6	85.1	22.3	0.2	49	50.7	798	38.5	55.7	4.3	24.8	69.1	7.1	7.1	7.1
PHF	0.65	0.39	0.74	0.00	0.33	0.31	0.38	0.33	0.38	0.01	0.38	0.38	0.38	0.38	0.38



Accurate Counts
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N/S Street : Path / Crosswalk
EW Street : Broadway
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Weather : Clear

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N/S Street : Path / Crosswalk
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Accurate Counts
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N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

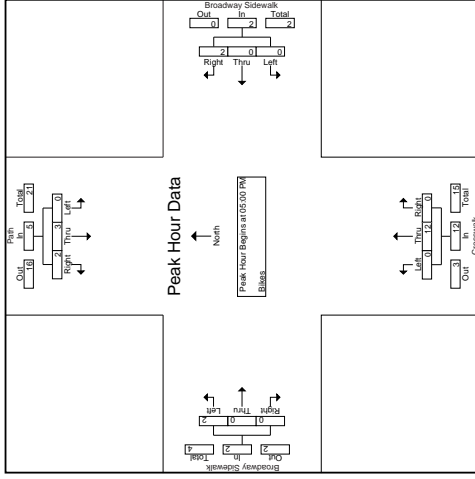
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Accurate Counts
978-664-2565

N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Groups Printed: Bikes													
	Path			Broadway Sidewalk			Crosswalk			Broadway Sidewalk				
	From North	Thru	Right	From East	Thru	Right	From South	Left	Thru	Right	From West	Left	Thru	Right
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	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	0
05:30 PM	0	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	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	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
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Groups Printed: Bikes													
	Path			Broadway Sidewalk			Crosswalk			Broadway Sidewalk				
	From North	Thru	Right	From East	Thru	Right	From South	Left	Thru	Right	From West	Left	Thru	Right
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	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	0
05:30 PM	0	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	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0



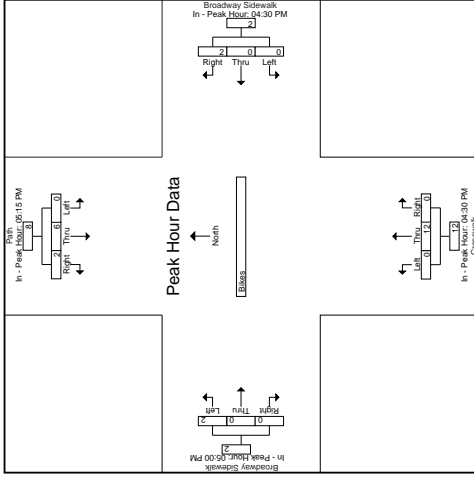
Accurate Counts
978-664-2565

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N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460008
Site Code : 16460008
Survey Date : 4/9/2014
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Start Time	Peak North			Broadway Sidewalk			Crosswalk From South			Broadway Sidewalk			Broadway Sidewalk From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1	Peak Hour for Each Approach Begins at:															
04:30 PM	1	0	0	0	0	0	0	0	3	0	0	3	0	0	1	
+0 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	
+15 mins.	1	0	1	0	0	0	0	0	2	0	0	2	0	0	0	
+30 mins.	0	1	2	0	0	1	0	2	5	0	2	0	0	0	0	
+45 mins.	3	0	0	0	0	0	0	0	2	0	0	2	0	0	0	
Total Volume	6	2	8	0	2	2	0	12	0	12	0	12	0	2	0	
% App. Total	0	75	25	0	0	100	0	100	0	100	0	100	0	0	0	
PHF	.000	.500	.250	.000	.000	.500	.000	.000	.600	.000	.600	.000	.500	.000	.500	



Accurate Counts
978-664-2565

N/S Street : Path / Crosswalk
E/W Street : Broadway
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Accurate Counts
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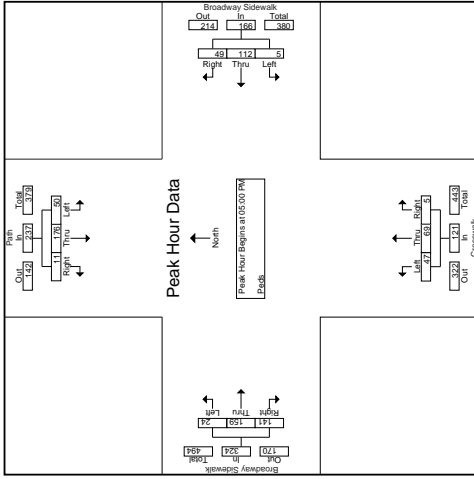
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E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 16460008
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Accurate Counts
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N/S Street : Path / Crosswalk
E/W Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Path			Broadway Sidewalk			Crosswalk			Broadway Sidewalk			Crosswalk			Broadway Sidewalk		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
04:30 PM	10	30	4	0	26	8	0	7	0	0	0	0	0	0	0	0	0	0
04:45 PM	21	74	4	0	41	16	0	16	0	0	0	0	0	0	0	0	0	0
Total	31	104	8	0	67	24	0	16	0	0	0	0	0	0	0	0	0	0
05:00 PM	13	45	1	4	33	12	11	22	0	9	32	38	220	138	214	183	1429	1429
05:15 PM	15	55	2	0	28	14	11	7	2	4	36	40	214	129	183	1429	1429	1429
05:30 PM	12	35	5	0	18	9	12	15	2	3	43	29	183	129	183	1429	1429	1429
05:45 PM	10	41	3	1	33	14	13	25	5	8	43	34	231	129	183	1429	1429	1429
Total	50	176	11	5	112	48	47	69	5	24	159	141	690	483	667	5111	5111	5111
06:00 PM	5	26	1	2	23	12	11	13	2	4	18	21	138	83	118	949	949	949
06:15 PM	6	26	2	1	21	13	12	10	8	6	25	16	129	83	118	949	949	949
06:30 PM	8	32	4	2	27	16	15	12	10	8	27	21	1429	83	118	949	949	949
Total	20.9	74.5	4.6	2.7	66.8	38.5	41.1	54.8	4.1	7.8	47.9	44.3	2629	166	231	1833	1833	1833
Approach %	5.8	20.5	1.3	0.6	13.8	6.3	5.7	7.6	0.6	1.8	18.1	16.8	100	100	100	100	100	100



Accurate Counts
978-664-2565

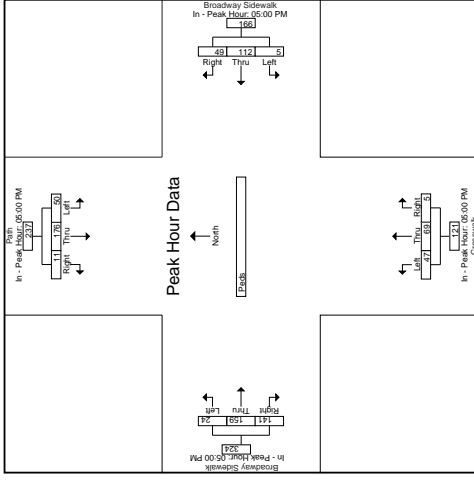
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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646008
Site Code : 1646008
Date : 4/9/2014
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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

Start Time	Path / North			Broadway Sidewalk			Crosswalk			Broadway Sidewalk			Broadway Sidewalk			Int. Total			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				
Peak Hour Analysis From 06:30 PM to 06:45 PM - Peak 1 of 1																			
Peak Hour for East Approach Begins at:																			
-10 mins.	13	45	1	59	12	49	05:00 PM	22	0	33	9	32	38	79					
+15 mins.	15	55	2	72	0	28	14	42	11	7	2	20	4	36	40	80			
+20 mins.	12	5	5	22	0	8	0	8	0	0	0	0	0	0	0	0			
+25 mins.	12	5	5	22	0	8	0	8	0	0	0	0	0	0	0	0			
Total Volume	50	176	11	237	5	112	49	166	47	69	5	121	24	159	141	324			
% App. Total	21.1	74.3	4.6	100.0	3	67.5	29.5	87.0	4.1	9.9	1.9	24.1	7.4	49.1	43.5	100.0			
PHF	.383	.800	.550	.823	.313	.388	.375	.827	.304	.625	.776	.667	.838	.881	.900				



Accurate Counts
978-664-2565

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N/S Street : Path / Crosswalk
EW Street : Broadway
City : Cambridge, MA
Weather : Clear

File Name : 1646008
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Ames Street Residences
Transportation Impact Study
Technical Appendix
Crash Data

Ames Street Residences

Vehicle Crash Data
(2009 - 2011)

Group Report

	Broadway and Galileo Galilei Way	Main Street and Galileo Galilei Way	Main Street and Ames Street	Broadway and Ames Street	Broadway and Third Street	Broadway and Garage Entrance/Exit
Currently Signalized?	Yes	Yes	Yes	Yes	Yes	No
MassHighway ACR	0.76	0.76	0.76	0.76	0.76	0.58
MassHighway CCR	0.74	0.92	0.56	0.53	0.56	0.22
Exceeds?	Yes	Yes	No	No	No	No
Year						
2009	5	4	5	0	7	1
2010	10	5	1	3	3	2
2011	<u>7</u>	<u>11</u>	<u>1</u>	<u>4</u>	<u>4</u>	<u>1</u>
Total	22	20	7	7	14	4
Average	7.33	6.67	2.33	3.50	4.67	1.33
Collision Type						
Angle	12	7	3	0	3	1
Head-on	1	1	0	0	0	0
Rear-end	1	4	0	4	5	1
Rear-to-Rear	0	0	0	0	0	0
Sideswipe, opposite direction	0	0	0	0	1	0
Sideswipe, same direction	2	5	2	1	2	0
Single vehicle crash	6	2	1	0	3	1
Unknown	0	0	1	1	0	1
Not reported	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	22	20	7	7	14	4
Crash Severity						
Fatal injury	0	0	0	0	0	0
Non-fatal injury	12	5	1	4	4	1
Property damage only	7	9	5	2	7	2
Not Reported	3	6	1	1	2	1
Unknown	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	22	20	7	7	14	4
Time of Day						
Weekday, 7:00 AM - 9:00 AM	3	2	0	3	0	0
Weekday, 4:00 PM - 6:00 PM	7	4	1	1	5	0
Saturday, 11:00 AM - 2:00 PM	2	0	0	0	0	0
Weekday, other time	8	11	6	3	7	4
Weekend, other time	<u>2</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	22	20	7	7	14	4
Pavement Conditions						
Dry	19	12	3	5	9	1
Wet	3	7	3	1	4	3
Snow	0	0	1	0	0	0
Ice	0	0	0	0	0	0
Sand, mud, dirt, oil, gravel	0	0	0	0	0	0
Water (standing, moving)	0	0	0	0	0	0
Slush	0	0	0	0	0	0
Other	0	0	0	0	0	0
Unknown	0	0	0	0	1	0
Not reported	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	22	20	7	7	14	4
Non Motroist (Bike, Pedestrian)						
Total	5	5	0	2	3	1

CRASH RATE WORKSHEET

CITY/TOWN : Cambridge

COUNT DATE :

DISTRICT : 6

UNSIGNALIZED :

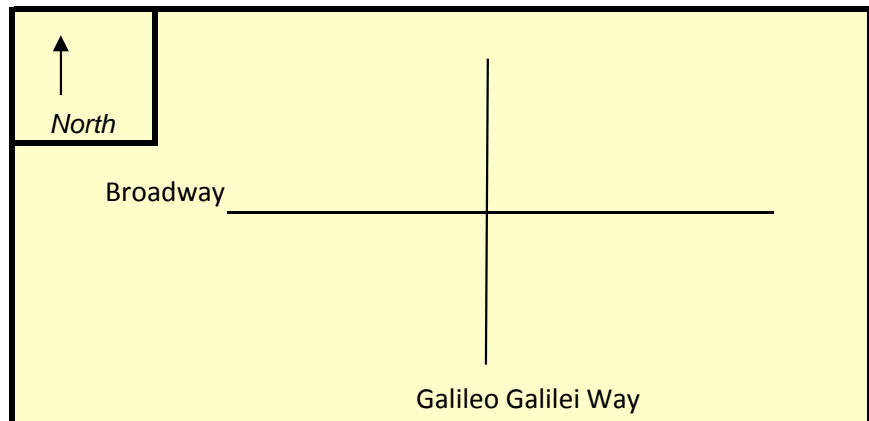
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Galileo Galilei Way

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	670	485	670	625		

" K " FACTOR :

0.09

APPROACH ADT :

27222.222

ADT = TOTAL VOL/"K" FACT.

TOTAL # OF
 ACCIDENTS :

22

OF
 YEARS :

3

AVERAGE # OF
 ACCIDENTS (A) :

7.33

CRASH RATE CALCULATION :

0.74

RATE =

$$\frac{(A * 1,000,000)}{(ADT * 365)}$$

Source (optional): Volumes from Existing Condition PM Peak

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Cambridge COUNT DATE :
 DISTRICT : 6 UNSIGNALIZED : SIGNALIZED : X

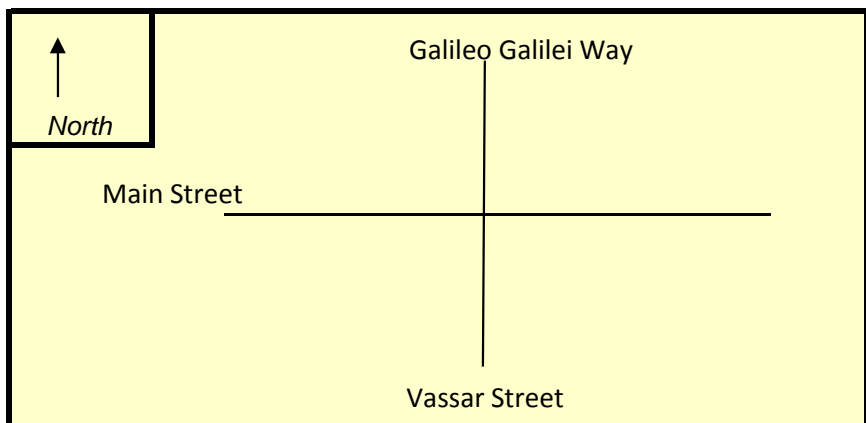
~ INTERSECTION DATA ~

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	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	580	485	524	200		

" K " FACTOR : 0.09 APPROACH ADT : 19877.778 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 20 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 6.67

CRASH RATE CALCULATION : 0.92 RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Source (optional): Volumes from Existing Condition PM Peak
 Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Cambridge

COUNT DATE :

DISTRICT : 6

UNSIGNALIZED :

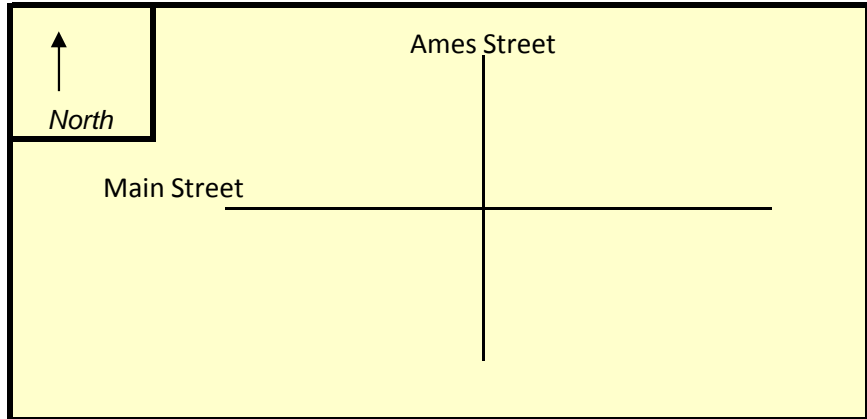
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Ames Street

**INTERSECTION
DIAGRAM
(Label Approaches)**



Peak Hour Volumes

APPROACH :

DIRECTION :

VOLUMES (PM) :

	1	2	3	4	5	6
NB						
SB						
EB						
WB						
Approach 1	250					
Approach 2		265				
Approach 3			415			
Approach 4				105		
Approach 5						
Approach 6						

" K " FACTOR :

0.09

APPROACH ADT :

11500

ADT = TOTAL VOL/"K" FACT.

TOTAL # OF
ACCIDENTS :

7

OF
YEARS :

3

AVERAGE # OF
ACCIDENTS (A) :

2.33

CRASH RATE CALCULATION :

0.56

RATE =

$$\frac{(A * 1,000,000)}{(ADT * 365)}$$

Source (optional): Volumes from Existing Condition PM Peak

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Cambridge

COUNT DATE :

DISTRICT : 6

UNSIGNALIZED :

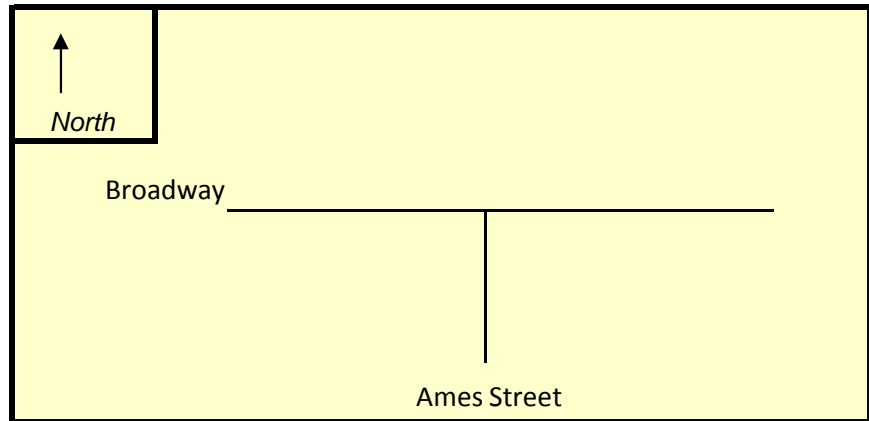
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Ames Street

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	350	0	625	640		

" K " FACTOR : 0.09 APPROACH ADT : 17944.444 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 7 # OF YEARS : 2 AVERAGE # OF ACCIDENTS (A) : 3.50

CRASH RATE CALCULATION :

0.53

$$\text{RATE} = \frac{(A * 1,000,000)}{(ADT * 365)}$$

Source (optional): Volumes from Existing Condition PM Peak

Comments:

CRASH RATE WORKSHEET

CITY/TOWN : Cambridge

COUNT DATE :

DISTRICT : 6

UNSIGNALIZED :

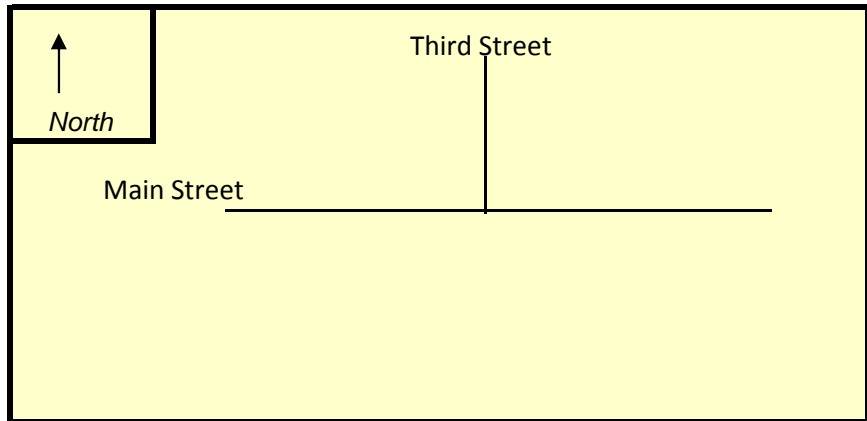
SIGNALIZED : X

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Third Street

INTERSECTION
 DIAGRAM
 (Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	0	550	865	645		

" K " FACTOR : 0.09 APPROACH ADT : 22888.889 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS :	14	# OF YEARS :	3	AVERAGE # OF ACCIDENTS (A) :	4.67
------------------------	----	--------------	---	--------------------------------	------

CRASH RATE CALCULATION : 0.56 RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Source (optional): Volumes from Existing Condition PM Peak
 Comments:



CRASH RATE WORKSHEET

CITY/TOWN : Cambridge

COUNT DATE :

DISTRICT : 6

UNSIGNALIZED : X

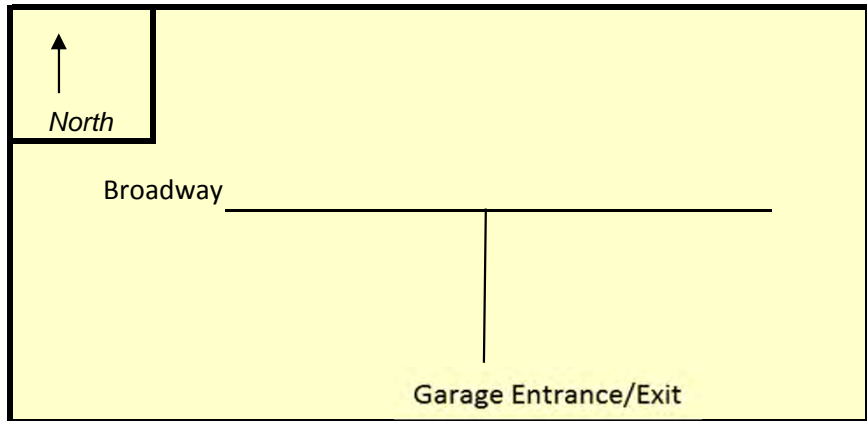
SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Broadway

MINOR STREET(S) : Garage Entrance/Exit

INTERSECTION
DIAGRAM
(Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	NB	SB	EB	WB		
VOLUMES (PM) :	125	0	740	625		

" K " FACTOR : 0.09 APPROACH ADT : 16555.556 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF
ACCIDENTS :

4

OF
YEARS :

3

AVERAGE # OF
ACCIDENTS (A) :

1.33

CRASH RATE CALCULATION :

0.22

$$\text{RATE} = \frac{(A * 1,000,000)}{(ADT * 365)}$$

Source (optional): Volumes from Existing Condition PM Peak

Comments:

Ames Street Residences
Transportation Impact Study
Technical Appendix
Synchro Analysis

**Intersection *Synchro* Analysis
Weekday Morning Peak**

2014 Existing Condition

Lanes and Geometrics
1: Broadway & Western Connector

5/12/2014

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	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	225	0	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.96	0.96	0.93	0.93	0.93	0.93
FRT	0.974	0.974	0.974	0.993	0.993	0.993	0.958	0.958	0.850	0.850	0.850	0.850
FRT Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1444	2679	0	1444	2922	0	1390	2553	0	1450	1476	1211
FRT Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1444	2679	0	1444	2922	0	1390	2553	0	1450	1476	1130
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)												
Link Speed (mph)	25	25	25	30	30	30	30	30	30	30	30	30
Link Distance (ft)	470	470	470	631	631	631	777	777	777	719	719	719
Travel Time (s)	12.8	12.8	12.8	14.3	14.3	14.3	17.7	17.7	17.7	16.3	16.3	16.3
Intersection Summary												
Area Type:	CBD											

Volume
1: Broadway & Western Connector

5/12/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	140	395	85	115	390	20	65	205	80	130	410	170
Cont'l. Peds. (#/hr)	372	372	372	242	242	18	18	99	99	99	99	36
Cont'l. Bikes (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	152	429	92	128	433	22	70	220	86	148	466	193
Shared Lane Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lane Group Flow (vph)	152	521	0	128	455	0	70	306	0	148	466	193
Intersection Summary												

Timings 5/12/2014
1: Broadway & Western Connector

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
140	395	115	390	65	205	130	410
Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
5	2	1	6	3	8	7	4
5	2	1	6	3	8	7	4
6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
21.0	27.0	14.0	22.0	12.0	27.0	17.0	27.0
21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
None	C-Max	None	C-Max	None	Max	None	Max
13.0	24.0	6.0	17.0	6.8	25.0	9.0	32.4
0.14	0.27	0.07	0.19	0.08	0.28	0.10	0.36
0.73	0.73	1.33	0.82	0.67	0.43	1.02	0.88
58.3	37.0	224.5	55.7	64.2	27.6	123.5	48.3
58.3	37.0	224.5	55.7	64.2	27.6	123.5	48.3
E	D	F	E	E	C	F	D
41.8		92.7		34.4		90.1	
D		F		C		F	
Intersection Summary							
Cycle Length: 90							
Actuated Cycle Length: 90							
Offset: 69 (77%), Referenced to phase 2,EBT and 6,WBT, Start of Green							
Natural Cycle: 90							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 1.33							
Intersection Signal Delay: 68.8							
Intersection Capacity Utilization 73.6%							
Analysis Period (min) 15							



Phasings 5/12/2014
1: Broadway & Western Connector

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
5	2	1	6	3	8	7	4
6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
21.0	27.0	14.0	22.0	12.0	27.0	17.0	27.0
21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
None	C-Max	None	C-Max	None	Max	None	Max
7.0		7.0		7.0		10.0	
15.0		10.0		15.0		12.0	
0		0		0		0	
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
Intersection Summary							
Cycle Length: 90							
Actuated Cycle Length: 90							
Offset: 69 (77%), Referenced to phase 2,EBT and 6,WBT, Start of Green							
Control Type: Actuated-Coordinated							

Queues 5/12/2014
1: Broadway & Western Connector

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	152	521	128	455	70	306	148	466	193
Lane Group Flow (vph)	0.73	0.73	1.33	0.82	0.67	0.43	1.02	0.88	1.18
v/c Ratio	58.3	37.0	224.5	55.7	64.2	27.6	123.5	48.3	165.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	58.3	37.0	224.5	55.7	64.2	27.6	123.5	48.3	165.5
Total Delay	84	142	-100	145	42	65	-88	255	-133
Queue Length 50th (ft)	#177	201	m#146	m172	m#102	110	#203	#433	#257
Queue Length 95th (ft)	390	390	551	551	697	697	639	639	639
Internal Link Dist (ft)	100	295	295	250	250	225	225	225	225
Turn Bay Length (ft)	209	714	96	552	108	709	145	531	163
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.73	1.33	0.82	0.65	0.43	1.02	0.88	1.18
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.								
m	Queue shown is maximum after two cycles.								
m	Volume for 95th percentile queue is metered by upstream signal.								

HCM Signalized Intersection Capacity Analysis 5/12/2014
1: Broadway & Western Connector

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Volume (vph)	140	395	85	115	390	20	65	205	80	130	410	170
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	10
Total Lost time (s)	8.0	5.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	8.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.93
Frpb, ped/bikes	1.00	0.92	1.00	1.00	0.98	1.00	0.96	1.00	0.96	1.00	1.00	0.93
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	1.00
Frt	1.00	0.97	1.00	1.00	0.99	1.00	0.96	1.00	0.96	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1444	2675	1444	2922	1390	2553	1450	1476	1130	1450	1476	1130
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1444	2675	1444	2922	1390	2553	1450	1476	1130	1450	1476	1130
Peak-Hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88
Adj. Flow (vph)	152	429	92	128	433	22	70	220	86	148	466	193
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	152	521	0	128	455	0	70	306	0	148	466	193
Confl. Peds. (#/hr)	372	321	18	242	18	24	99	24	99	24	99	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	5	7	4	5
Permitted Phases	5	2	1	6	3	8	7	4	5	7	4	5
Actuated Green, G (s)	13.0	23.0	6.0	16.0	5.6	26.0	9.0	32.4	13.0	9.0	32.4	13.0
Effective Green, g (s)	13.0	23.0	6.0	16.0	5.6	26.0	9.0	32.4	13.0	9.0	32.4	13.0
Actuated g/C Ratio	0.14	0.26	0.07	0.18	0.06	0.29	0.10	0.36	0.14	0.10	0.36	0.14
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	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	3.0	3.0
Lane Grp Cap (vph)	209	684	96	519	86	738	145	531	163	145	531	163
v/s Ratio Prot	0.11	c0.19	0.09	0.16	0.05	0.12	c0.10	c0.32	c0.17	c0.10	c0.32	c0.17
v/s Ratio Perm	0.73	0.76	1.33	0.88	0.81	0.41	1.02	0.88	1.18	1.02	0.88	1.18
Uniform Delay, d1	36.8	31.0	42.0	36.0	41.7	25.9	40.5	26.9	38.5	40.5	26.9	38.5
Progression Factor	1.00	1.00	1.00	1.32	0.88	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.9	7.8	188.4	12.9	39.3	1.6	80.3	18.3	128.6	80.3	18.3	128.6
Delay (s)	48.7	38.8	230.3	60.3	76.0	26.2	120.8	45.2	167.1	120.8	45.2	167.1
Level of Service	D	D	F	E	E	C	F	D	F	F	D	F
Approach Delay (s)	D	D	F	E	E	C	F	D	F	F	D	F
Approach LOS	D	D	F	F	F	D	D	D	F	F	D	F
Intersection Summary												
HCM Average Control Delay	69.3 HCM Level of Service E											
HCM Volume to Capacity ratio	1.06											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 26.0											
Intersection Capacity Utilization	73.6% ICU Level of Service D											
Analysis Period (min)	15											
c. Critical Lane Group												

Lanes and Geometrics

2: Main Street & Galileo Way

5/12/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	11	10	10	11	10	11	10
Grade (%)	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	250	120	1	1	0	250	0	0	0	0	75
Storage Lanes	1	1	1	1	1	0	1	0	0	1	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.77	0.96	0.93	0.93	0.92	0.93	0.93	0.91	0.87	0.91	0.87	0.85
FI Protected	0.950	0.950	0.950	0.950	0.950	0.956	0.956	0.950	0.950	0.950	0.950	0.850
Satd. Flow (prot)	1464	1426	0	1430	1372	0	0	2566	0	1354	1476	1211
FI Permitted	0.632	0.597	0.597	0.597	0.597	0.597	0.597	0.798	0.500	0.500	0.500	0.500
Satd. Flow (perm)	747	1426	0	839	1372	0	0	2056	0	646	1476	1058
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	21	21	25	25	25	25	25	81	81	30	30	32
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	1009	1009	483	483	483	483	483	810	810	777	777	777
Travel Time (s)	22.9	22.9	11.0	11.0	11.0	11.0	11.0	18.4	18.4	17.7	17.7	17.7

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Galileo Way

5/12/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	125	185	55	75	125	45	60	220	115	30	305	275
Contl. Peds. (#/hr)	490	83	83	83	490	36	132	132	132	36	36	36
Contl. Bikes (#/hr)	87	87	87	87	87	9	39	39	39	9	9	9
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	132	195	58	88	147	53	66	242	126	33	335	302
Shared Lane Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lane Group Flow (vph)	132	253	0	88	200	0	0	434	0	33	335	302

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	1	1	1	1	1	1	1	1
Volume (vph)	125	185	75	125	60	220	30	305
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39
v/c Ratio	0.41	0.40	0.24	0.33	0.51	0.13	0.58	0.70
Control Delay	22.4	18.3	27.5	26.4	19.3	21.8	23.7	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.4	18.3	27.5	26.4	19.3	21.8	23.7	24.2
LOS	C	B	C	C	B	C	C	C
Approach Delay	19.7		26.8		19.3		23.8	
Approach LOS	B		C		B		C	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 58 (64%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 0.70								
Intersection Signal Delay: 22.3								
Intersection Capacity Utilization: 125.0%								
Analysis Period (min): 15								



Splits and Phases: 2: Main Street & Galileo Way

Existing Condition 8:15 am 4/28/2014 AM Peak Hour
SLW

Synchro 8 Report
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%
Maximum Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 58 (64%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

Existing Condition 8:15 am 4/28/2014 AM Peak Hour
SLW

Synchro 8 Report
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	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	132	253	88	200	434	33	335	302
Lane Group Flow (vph)	0.41	0.40	0.24	0.33	0.51	0.13	0.58	0.70
v/c Ratio	22.4	18.3	27.5	26.4	19.3	21.8	23.7	24.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	22.4	18.3	27.5	26.4	19.3	21.8	23.7	24.2
Total Delay	50	87	49	105	77	11	112	90
Queue Length 50th (ft)	102	150	m71	m125	123	m13	m129	m105
Queue Length 95th (ft)	929			403	730		697	75
Internal Link Dist (ft)			120					
Turn Bay Length (ft)	324	630	364	609	849	251	574	431
Base Capacity (vph)	0	0	0	0	0	0	0	0
Station 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	0.41	0.40	0.24	0.33	0.51	0.13	0.58	0.70
Intersection Summary								
m	Volume for 95th percentile queue is metered by upstream signal.							

	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1
Volume (vph)	125	185	55	75	125	45	60	220	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	11	10	10	11	10
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Frb. ped/bikes	1.00	0.96	1.00	0.92	1.00	0.94	1.00	1.00	0.87
Frb. ped/bikes	0.77	1.00	0.93	1.00	1.00	1.00	0.91	1.00	1.00
Frt	1.00	0.97	1.00	0.96	1.00	0.96	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.99	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1122	1426	1334	1372	2558	1228	1476	1058	1058
Flt Permitted	0.63	1.00	0.60	1.00	0.80	1.00	0.60	1.00	1.00
Satd. Flow (perm)	747	1426	839	1372	2056	646	1476	1058	1058
Peak-Hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.91	0.91	0.91	0.91
Adj. Flow (vph)	132	195	58	88	147	53	66	242	126
RTOR Reduction (vph)	0	12	0	0	14	0	0	50	0
Lane Group Flow (vph)	132	241	0	88	186	0	385	0	33
Confl. Peds. (#/hr)	490	83	83	490	36	132	132	36	282
Confl. Bikes (#/hr)	87			9		39			67
Heavy Vehicles (%)	11%	11%	11%	6%	6%	5%	5%	12%	12%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3	3
Permitted Phases	1	1	1	1	3	3	3	3	3
Actuated Green, G (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
Effective Green, g (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	324	618	364	595	800	251	574	411	411
v/s Ratio Prot	0.17			0.14					0.23
v/s Ratio Perm	0.18			0.10					0.27
v/c Ratio	0.41	0.39	0.24	0.31	0.48	0.13	0.58	0.69	0.69
Uniform Delay, d1	17.5	17.4	16.1	16.7	20.7	17.7	21.7	22.9	22.9
Progression Factor	1.00	1.00	1.56	1.68	1.00	1.16	0.99	0.96	0.96
Incremental Delay, d2	3.8	1.9	1.2	1.1	2.1	0.4	1.5	3.2	3.2
Delay (s)	21.3	19.2	26.3	29.2	22.7	20.9	22.9	25.2	25.2
Level of Service	C	B	C	C	C	C	C	C	C
Approach Delay (s)	20.0		28.3		22.7		23.9		23.9
Approach LOS	B		C		C		C		C
Intersection Summary									
HCM Average Control Delay	23.5 HCM Level of Service C								
HCM Volume to Capacity ratio	0.54								
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 16.0								
Intersection Capacity Utilization	125.0% ICU Level of Service H								
Analysis Period (min)	15								
c. Critical Lane Group									

Lanes and Geometrics
3: Main Street & Ames Street

5/12/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	12	12	12
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.78	0.77	0.77	0.77	0.77	0.77	0.83	0.83	0.85	0.85	0.48	0.850
Frt	0.980	0.955	0.955	0.955	0.955	0.955	0.988	0.988	0.969	0.969	0.850	0.850
Flt Protected	0.987	0.995	0.995	0.995	0.995	0.995	0.983	0.983	0.969	0.969	0.850	0.850
Satd Flow (prot)	0	1257	0	0	1384	0	0	1399	0	0	1445	1223
Flt Permitted	0.877	0.949	0.949	0.949	0.949	0.949	0.845	0.845	0.652	0.652	0.652	0.652
Satd Flow (perm)	0	959	0	0	1279	0	0	1031	0	0	827	591
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	483	490	490	490	490	490	536	536	278	278	278	278
Travel Time (s)	11.0	11.1	11.1	11.1	11.1	11.1	12.2	12.2	6.3	6.3	6.3	6.3

Intersection Summary
Area Type: CBD

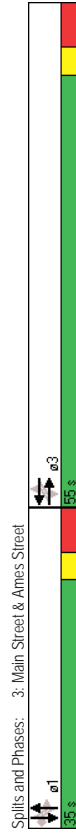
Volume
3: Main Street & Ames Street

5/12/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	90	190	50	10	50	30	80	135	20	60	35	115
Contl. Peds. (#/hr)	769	546	546	546	546	769	194	163	163	163	163	194
Contl. Bikes (#/hr)	0	107	107	15	15	15	1	1	1	1	1	34
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	108	229	60	11	57	34	88	148	22	67	39	129
Shared Lane Traffic (%)	0	0	0	0	102	0	0	258	0	0	106	129
Lane Group Flow (vph)	0	397	0	0	102	0	0	258	0	0	106	129

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations								
Volume (vph)	90	190	10	50	80	135	60	115
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	43.0	43.0	43.0	43.0	26.0	26.0	26.0	26.0
Total Split (s)	55.0	55.0	55.0	55.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.30	0.30	0.30	0.30
v/c Ratio	0.79	0.15	0.15	0.15	0.83	0.43	0.73	0.73
Control Delay	26.7	12.0	12.0	12.0	54.2	30.9	51.6	51.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	12.0	12.0	12.0	54.2	30.9	51.6	51.6
LOS	C	B	B	B	D	D	C	D
Approach Delay	26.7	12.0	12.0	12.0	54.2	42.3	42.3	42.3
Approach LOS	C	B	B	B	D	D	D	D
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 70								
Control Type: Prelimed								
Maximum v/c Ratio: 0.83								
Intersection Signal Delay: 36.0								
Intersection Capacity Utilization: 79.8%								
Analysis Period (min): 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	43.0	43.0	43.0	43.0	26.0	26.0	26.0	26.0
Total Split (s)	55.0	55.0	55.0	55.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	16.0	16.0	16.0	16.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

Queues
3: Main Street & Ames Street

5/12/2014

	EBT	WBT	NBT	SBT	SBR
Lane Group	397	102	258	106	129
Lane Group Flow (vph)	0.79	0.15	0.83	0.43	0.73
v/c Ratio	26.7	12.0	54.2	30.9	51.6
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	26.7	12.0	54.2	30.9	51.6
Total Delay	136	29	136	42	74
Queue Length 50th (ft)	179	55	#273	m#141	
Queue Length 95th (ft)	403	410	456	198	
Internal Link Dist (ft)					
Turn Bay Length (ft)					
Base Capacity (vph)	501	668	309	248	177
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	0.79	0.15	0.83	0.43	0.73

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.

HCM Signalized Intersection Capacity Analysis
3: Main Street & Ames Street

5/12/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+		+				+				+
Volume (vph)	90	190	50	10	50	30	80	135	20	60	35	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	16	12	12	12	12	12	12	12
Total Lost time (s)	8.0						8.0				8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fpb. ped/bikes	0.91						0.96				0.96	0.48
Fipb. ped/bikes	0.86						0.86				0.85	1.00
Frt	0.98						0.99				1.00	0.85
Flt Protected	0.99						0.98				0.97	1.00
Satd. Flow (prot)	1078						1340				1229	591
Flt Permitted	0.88						0.95				0.84	1.00
Satd. Flow (perm)	959						1279				827	591
Peak-Hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.91	0.89	0.89
Adj. Flow (vph)	108	229	60	11	57	34	88	148	22	67	39	129
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	397	0	0	102	0	258	0	0	106	129	0
Confl. Peds. (#/hr)	769		546	546		769	194		163	163		194
Confl. Bikes (#/hr)	107		15	15		15			1			34
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Parking (#/hr)	0						0					0

Turn Type	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1
Permitted Phases	3	3	3	3	1	1
Actuated Green, G (s)	47.0	47.0	47.0	47.0	27.0	27.0
Effective Green, g (s)	47.0	47.0	47.0	47.0	27.0	27.0
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.30	0.30
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	501		668		309	248
v/s Ratio Prot						
v/s Ratio Perm	c0.41		0.08		c0.25	0.13
v/c Ratio	0.79		0.15		0.83	0.43
Uniform Delay, d1	17.5		11.2		29.4	25.3
Progression Factor	0.75		1.00		1.00	1.00
Incremental Delay, d2	11.5		0.5		22.6	4.5
Delay (s)	24.7		11.6		52.0	29.7
Level of Service	C		B		D	C
Approach Delay (s)	24.7		11.6		52.0	40.0
Approach LOS	C		B		D	D

Intersection Summary		
HCM Average Control Delay	34.1	HCM Level of Service C
HCM Volume to Capacity ratio	0.81	
Actuated Cycle Length (s)	90.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization	79.8%	ICU Level of Service D
Analysis Period (min)	15	
c Critical Lane Group		

Lanes and Geometrics
4: Broadway & Ames Street

5/12/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	10	12	11	11	12	12
Lane Width (ft)	0%	0	160	0%	0	0
Grade (%)	0	1	1	1	1	1
Storage Length (ft)	25	25	25	25	25	25
Taper Length (ft)	0.95	0.95	1.00	1.00	1.00	1.00
Lane Util. Factor	0.89	0.82	0.79	0.45	0.45	0.850
Ped Bike Factor	0.974	0.950	0.950	0.950	1234	1234
FI Protected	2540	0	1510	1589	1533	0.950
Satd. Flow (prot)	2540	0	292	0.950	0.950	0.950
FI Permitted	2540	0	383	1589	1215	559
Satd. Flow (perm)	Yes	Yes	Yes	Yes	Yes	Yes
Right Turn on Red	30	30	30	30	122	122
Satd. Flow (RTOR)	30	30	30	30	30	30
Link Speed (mph)	631	396	273	273	273	273
Link Distance (ft)	14.3	9.0	6.2	6.2	6.2	6.2
Travel Time (s)						
Intersection Summary						
Area Type:	CBD					

Volume
4: Broadway & Ames Street

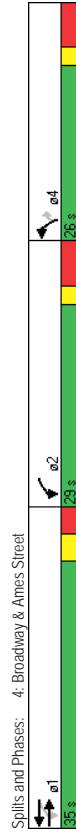
5/12/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	495	105	215	420	125	115
Cont'l. Peds. (#/hr)	323	323	323	138	271	271
Cont'l. Bikes (#/hr)	247	247	247	3	3	3
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	532	113	226	442	133	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	645	0	226	442	133	122
Intersection Summary						

Timings
4: Broadway & Ames Street

5/12/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	495	215	420	125	115
Volume (vph)					
Turn Type	pmt+pt				Perm
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Detector Phase	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	1.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%	32.2%	38.9%	28.9%	28.9%
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Max
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	19.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.21
v/c Ratio	0.77	0.46	0.86	0.41	0.57
Control Delay	20.2	13.7	54.1	31.3	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	13.7	54.1	31.3	15.1
LOS	C	B	D	C	B
Approach Delay	20.2		40.4	23.6	
Approach LOS	C		D	C	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 0.86					
Intersection Signal Delay: 29.4					
Intersection Capacity Utilization 69.1%					
Analysis Period (min) 15					



Phasings
4: Broadway & Ames Street

5/12/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	1.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%	32.2%	38.9%	28.9%	28.9%
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL	NBR
Lane Group					
Lane Group Flow (vph)	645	226	442	133	122
v/c Ratio	0.77	0.46	0.86	0.41	0.57
Control Delay	20.2	13.7	54.1	31.3	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	13.7	54.1	31.3	15.1
Queue Length 50th (ft)	174	56	276	63	15
Queue Length 95th (ft)	m175	m59	m279	m88	m27
Internal Link Dist (ft)	551	160	316	193	
Turn Bay Length (ft)					
Base Capacity (vph)	839	488	512	324	214
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	0.46	0.86	0.41	0.57
Intersection Summary					
m	Volume for 95th percentile queue is metered by upstream signal.				

	EBT	EBR	WBL	WBT	NBL	NBR	
Movement							
Lane Configurations	↑↑	↑	↑	↑	↑	↑	
Volume (vph)	495	105	215	420	125	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width	10	12	11	11	12	12	
Total Lost time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Frb. ped/bikes	0.89	1.00	1.00	1.00	0.45	0.45	
Frb. ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00	
Flt	0.97	1.00	1.00	1.00	0.85	0.85	
Flt Protected	1.00	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	2539	1442	1589	1533	559	559	
Flt Permitted	1.00	0.79	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	2539	443	1589	1533	559	559	
Peak-Hour factor, PHF	0.93	0.93	0.95	0.95	0.94	0.94	
Adj. Flow (vph)	532	113	226	442	133	122	
RTOR Reduction (vph)	20	0	0	0	0	96	
Lane Group Flow (vph)	625	0	226	442	133	26	
Confl. Peds. (#/hr)	323	323	323	138	271	3	
Confl. Bikes (#/hr)	247						
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%	
Parking (#/hr)						0	
Turn Type		pm+pl				Perm	
Protected Phases	1	2	1	1	4		
Permitted Phases			1		4		
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Effective Green, g (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.21	0.21	
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	818	495	512	324	118		
v/s Ratio Prot	0.25	c0.11	c0.28	c0.09			
v/s Ratio Perm		0.15			0.05		
v/c Ratio	0.76	0.46	0.86	0.41	0.22		
Uniform Delay, d1	27.4	18.1	28.6	30.7	29.4		
Progression Factor	0.59	0.79	1.68	0.91	1.04		
Incremental Delay, d2	4.3	0.8	5.2	2.8	3.1		
Delay (s)	20.5	15.0	53.4	30.7	33.6		
Level of Service	C	B	D	C	C		
Approach Delay (s)	20.5		40.4	32.1			
Approach LOS	C		D	C			
Intersection Summary							
HCM Average Control Delay	30.9					HCM Level of Service	C
HCM Volume to Capacity ratio	0.61						
Actuated Cycle Length (s)	90.0					Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.1%					ICU Level of Service	C
Analysis Period (min)	15						
c	Critical Lane Group						

Lanes and Geometrics
5: Broadway & Third Street

5/12/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	10	10
Grade (%)	340	0%	0%	0	0	160
Storage Length (ft)	1	0	0	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		0.93				
Flt	0.950		0.945		0.850	
Flt Protected			0.950			
Satd. Flow (pro)	1444	2842	2732	0	1458	1304
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1444	2842	2732	0	1458	1304
Right Turn on Red			No		No	No
Satd. Flow (RTOR)						
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	581	393	1212			
Travel Time (s)	13.2	8.9	27.5			
Intersection Summary						
Area Type:	CBD					

Volume
5: Broadway & Third Street

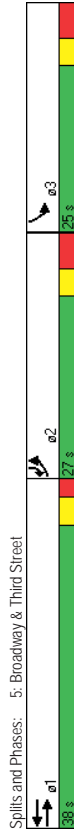
5/12/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	↔	↔	↔	↔	↔	↔
Volume (vph)	195	340	655	375	150	160
Confl. Peds. (#/hr)				103		
Confl. Bikes (#/hr)				19		1
Peak Hour Factor	0.83	0.83	0.95	0.95	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	1%	1%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)			0%		0%	
Adj. Flow (vph)	235	410	689	395	163	174
Shared Lane Traffic (%)						
Lane Group Flow (vph)	235	410	1084	0	163	174
Intersection Summary						

Timings
5: Broadway & Third Street

5/12/2014

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔
Volume (vph)	195	340	655	150	160
Turn Type	Prot	Over	Over	Over	Over
Protected Phases	2	1	1	3	2
Permitted Phases	2	1	1	3	2
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	37.0	37.0	25.0	27.0
Total Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (%)	30.0%	42.2%	42.2%	27.8%	30.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	20.0	33.0	33.0	18.0	20.0
Actuated g/C Ratio	0.22	0.37	0.37	0.20	0.22
v/c Ratio	0.73	0.39	1.08	0.56	0.60
Control Delay	36.0	12.8	82.5	40.8	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	12.8	82.5	40.8	41.3
LOS	D	B	F	D	D
Approach Delay		21.2	82.5	41.0	
Approach LOS		C	F	D	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.08					
Intersection Signal Delay: 56.6					
Intersection Capacity Utilization 71.1%					
Analysis Period (min) 15					



Phasings
5: Broadway & Third Street

5/12/2014

Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	2	1	1	3	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	27.0	37.0	37.0	25.0	27.0
Minimum Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (%)	30.0%	42.2%	42.2%	27.8%	30.0%
Maximum Green (s)	20.0	33.0	33.0	18.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	7.0	17.0	17.0	6.0	7.0
Flash Dont Walk (s)	12.0	12.0	12.0	11.0	12.0
Pedestrian Calls (/hr)	0	0	0	0	0
90th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBL	EBT	WBT	SBL	SBR
Lane Group	235	410	1084	163	174
Lane Group Flow (vph)	0.73	0.39	1.08	0.56	0.60
v/c Ratio	36.0	12.8	82.5	40.8	41.3
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.0	12.8	82.5	40.8	41.3
Total Delay	142	31	-366	84	89
Queue Length 50th (ft)	m191	64	#492	149	159
Queue Length 95th (ft)	501	313	1132		
Internal Link Dist (ft)	340				160
Turn Bay Length (ft)	321	1042	1002	292	290
Base Capacity (vph)	0	0	0	0	0
Stavation 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	0.73	0.39	1.08	0.56	0.60
Intersection Summary					
-	Volume exceeds capacity, queue is theoretically infinite.				
-	Queue shown is maximum after two cycles.				
#	95th percentile volume exceeds capacity, queue may be longer.				
-	Queue shown is maximum after two cycles.				
m	Volume for 95th percentile queue is metered by upstream signal.				

	EBL	EBT	WBT	SBL	SBR
Movement	EBL	EBT	WBT	SBL	SBR
Lane Configurations	195	340	655	150	160
Volume (vph)	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	70	11	11	10	10
Lane Width	7.0	5.0	5.0	7.0	7.0
Total Lost time (s)	1.00	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	1.00	0.93	1.00	1.00
Fpb. ped/bikes	1.00	1.00	1.00	1.00	1.00
Fllb. ped/bikes	1.00	1.00	0.95	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1444	2842	2733	1458	1304
Flt Permitted	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1444	2842	2733	1458	1304
Peak-Hour factor, PHF	0.83	0.83	0.95	0.95	0.92
Adj. Flow (vph)	235	410	689	163	174
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	235	410	1084	0	163
Confl. Peds. (#/hr)			103		
Confl. Bikes (#/hr)			19		1
Heavy Vehicles (%)	5%	5%	1%	1%	4%
Parking (#/hr)	0				
Turn Type	Prot	1	1	3	2
Protected Phases	2	1	1	3	2
Permitted Phases					
Actuated Green, G (s)	20.0	33.0	33.0	18.0	20.0
Effective Green, g (s)	20.0	33.0	33.0	18.0	20.0
Actuated g/C Ratio	0.22	0.37	0.37	0.20	0.22
Clearance Time (s)	7.0	5.0	5.0	7.0	7.0
Lane Grp Cap (vph)	321	1042	1002	292	290
v/s Ratio Prot	c0.16	0.14	c0.40	c0.11	0.13
v/s Ratio Perm					
v/c Ratio	0.73	0.39	1.08	0.56	0.60
Uniform Delay, d1	32.5	21.1	28.5	32.4	31.4
Progression Factor	0.76	0.56	1.00	1.00	1.00
Incremental Delay, d2	9.8	0.8	53.2	7.5	8.9
Delay (s)	34.5	12.6	81.7	39.9	40.3
Level of Service	C	B	F	D	D
Approach Delay (s)	20.6	81.7	40.1		
Approach LOS	C	F	D		
Intersection Summary					
HCM Average Control Delay	55.9 HCM Level of Service E				
HCM Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 19.0				
Intersection Capacity Utilization	71.1% ICU Level of Service C				
Analysis Period (min)	15				
c. Critical Lane Group					

Lanes and Geometrics
6: Ames Street &

5/12/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	5	5	5	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	1	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
FRT	0.950	0.850	0.984			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1624	1454	1587	0	0	1587
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1624	1454	1587	0	0	1587
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	239	278	278	273	273	273
Travel Time (s)	5.4	6.3	6.3			6.2
Intersection Summary						
Area Type:	CBD					

Volume
6: Ames Street &

5/12/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	5	5	220	30	35	210
Contl. Peds. (#/hr)	109	120	185	185	185	185
Contl. Bikes (#/hr)				12		
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	6%	6%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	7	7	234	32	39	236
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	7	266	0	0	275
Intersection Summary						

5/12/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	5	5	220	30	35	210
Volume (veh/h)	5	5	220	30	35	210
Sign Control	Stop	Free	Free	Free	Free	Free
Grade (%)	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Hourly flow rate (vph)	7	7	234	32	39	236
Pedestrians	185	109				120
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	15	9				10
Right turn flare (veh)			None	None	None	None
Median type			None	None	None	None
Median storage (veh)						
Upstream signal (ft)			278			273
pX platoon unblocked						
vC conflicting volume	859	555				451
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	859	555				451
vCu unblocked vol	6.4	6.2				4.2
IC single (s)						
IC 2 stage (s)						
IF (s)	3.5	3.3				2.3
p0 queue free %	97	98				96
cM capacity (veh/h)	243	407				917
Direction_Lane #	WB1	WB2	NB1	NB2	SB1	SB2
Volume Total	7	7	266	275		
Volume Left	7	0	0	39		
Volume Right	0	7	32	0		
cSH	243	407	1700	917		
Volume to Capacity	0.03	0.02	0.16	0.04		
Queue Length 95th (ft)	2	1	0	3		
Control Delay (s)	20.3	14.0	0.0	1.7		
Lane LOS	C	B	A	A		
Approach Delay (s)	17.1	0.0	0.0	1.7		
Approach LOS	C					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			53.4%	ICU Level of Service		A
Analysis Period (min)			15			

5/12/2014
 Lanes and Geometrics
 7: Broadway &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.994		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1650	0	1608	1693	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1650	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	386		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	580	25	105	660	0	5
Volume (vph)	580	25	105	660	0	5
Confl. Peds. (#/hr)	300	300	300	300	0	255
Confl. Bikes (#/hr)	264					
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	624	27	111	695	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	651	0	111	695	0	5
Intersection Summary						

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	580	25	105	660	0	5
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Hourly flow rate (vph)	624	27	111	695	0	5
Pedestrians				255	300	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				21	25	
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked				0.75	0.80	0.75
vC, conflicting volume				961	1853	1192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol				765	1230	1088
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)						
IC, 2 stage (s)				2.2	3.5	3.3
IF (s)				77	100	96
p0 queue free %				478	91	117
GM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	651	111	695	5		
Volume Left	0	111	0	0		
Volume Right	27	0	0	5		
cSH	1700	478	1700	117		
Volume to Capacity	0.38	0.23	0.41	0.04		
Queue Length 95th (ft)	0	22	0	3		
Control Delay (s)	0.0	14.8	0.0	37.2		
Lane LOS	B	B	B	E		
Approach Delay (s)	0.0	2.0	37.2			
Approach LOS			E			
Intersection Summary						
Average Delay	1.2					
Intersection Capacity Utilization	65.8%			ICU Level of Service C		
Analysis Period (min)	15					

2014 Build Condition

Lanes and Geometrics
1: Broadway east & Western Connector

5/20/2014

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	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	225	0	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.83	0.92	0.84	0.98	0.84	0.98	0.84	0.96	0.92	0.92	0.62	0.62
Frt	0.974			0.993			0.958		0.850			0.850
FRT Protected	0.950			0.950			0.950		0.950			0.950
Satd. Flow (prot)	1444	2680	0	1444	2923	0	1390	2553	0	1450	1476	1211
FRT Permitted	0.950			0.950			0.950		0.950			0.950
Satd. Flow (perm)	1203	2680	0	1213	2923	0	1169	2553	0	1335	1476	757
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)												
Link Speed (mph)	25			30			30		30			30
Link Distance (ft)	470			631			777		719			719
Travel Time (s)	12.8			14.3			17.7		16.3			16.3

Intersection Summary

CBD

Area Type:

Volume
1: Broadway east & Western Connector

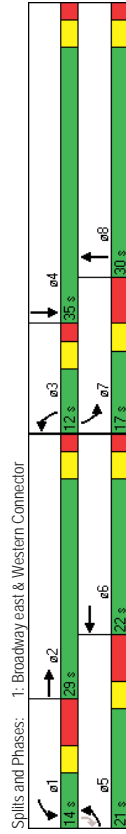
5/20/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	140	397	85	115	396	20	65	205	80	130	410	170
Confl. Peds. (#/hr)	242	372	372	372	242	257	99	99	99	99	257	257
Confl. Bikes (#/hr)			321			18			24			36
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	152	432	92	128	440	22	70	220	86	148	466	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	524	0	128	462	0	70	306	0	148	466	193

Intersection Summary

5/20/2014
Timings
1: Broadway east & Western Connector

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	140	397	115	396	65	205	130	410
Volume (vph)	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Turn Type	5	2	1	6	3	8	7	4
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	Max	None	Max	None	Max
Act Effct Green (s)	13.0	24.0	6.0	17.0	6.8	25.0	9.0	32.4
Actuated g/C Ratio	0.14	0.27	0.07	0.19	0.08	0.28	0.10	0.36
v/c Ratio	0.73	0.73	1.33	0.84	0.67	0.43	1.02	0.88
Control Delay	58.3	37.2	228.0	62.4	67.9	24.3	123.5	48.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	37.2	228.0	62.4	67.9	24.3	123.5	48.3
LOS	E	D	F	E	E	C	F	D
Approach Delay	41.9		98.3		32.5		148.3	
Approach LOS	D		F		C		F	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 2:EBT, Start of Green								
Natural Cycle: 95								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 1.77								
Intersection Signal Delay: 89.1								
Intersection Capacity Utilization: 73.6%								
Analysis Period (min): 15								



5/20/2014
Phasings
1: Broadway east & Western Connector

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	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	Max	None	Max	None	Max
Walk Time (s)	7.0		7.0		7.0		10.0	
Flash Dont Walk (s)	15.0		10.0		15.0		12.0	
Pedestrian Calls (/hr)	0		0		0		0	
90th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
70th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
50th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
30th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
10th %ile Green (s)	13.0	24.0	6.0	17.0	0.0	25.0	9.0	42.0
10th %ile Term Code	Max	Coord	Max	Coord	Skip	MaxR	Max	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 2:EBT, Start of Green								
Control Type: Actuated-Coordinated								

Queues 5/20/2014

1: Broadway east & Western Connector

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
152	524	128	462	70	306	148	466	193
0.73	0.73	1.33	0.84	0.67	0.43	1.02	0.88	1.77
58.3	37.2	226.0	62.4	67.9	24.3	123.5	48.3	408.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58.3	37.2	226.0	62.4	67.9	24.3	123.5	48.3	408.6
84	142	-100	150	42	60	-88	255	-165
#177	202	m#148	m#183	m#103	90	#203	#433	#290
100	390	295	551	250	697	225	639	
209	715	96	552	108	709	145	531	109
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0.73	0.73	1.33	0.84	0.65	0.43	1.02	0.88	1.77

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.

Simulation Settings 5/20/2014

1: Broadway east & Western Connector

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1.25	1.19	1.25	1.25	1.19	1.19	1.19	1.19	1.19	1.14	1.19	1.25
15	9	9	15	15	9	15	15	9	15	15	9
1	1	1	1	1	1	1	1	1	1	1	1
50	50	50	50	50	50	50	50	50	50	50	50
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
50	50	50	50	50	50	50	50	50	50	50	50
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Broadway east & Western Connector

5/20/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	4	4	1	4	4	1	4	4	1	4	4	
Volume (vph)	140	397	85	115	396	20	65	205	80	130	410	170	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	11	10	10	11	11	11	11	11	12	11	10	
Total Lost time (s)	8.0	5.0	5.0	8.0	5.0	5.0	5.0	5.0	8.0	5.0	5.0	8.0	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	0.62	
Frbp_psd/bikes	1.00	0.92	1.00	0.98	1.00	0.98	1.00	0.96	1.00	1.00	1.00	0.62	
Fllb_psd/bikes	1.00	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	0.97	1.00	0.99	1.00	0.99	1.00	0.96	1.00	1.00	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.85	
Satd. Flow (prot)	1444	2676	1444	2923	1444	2923	1390	2553	1450	1476	757	757	
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.85	
Satd. Flow (perm)	1444	2676	1444	2923	1444	2923	1390	2553	1450	1476	757	757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88	
Adj. Flow (vph)	152	432	92	128	440	22	70	220	86	148	466	193	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	152	524	0	128	462	0	70	306	0	148	466	193	
Confl. Peds. (#/hr)	242	372	372	242	257	18	99	99	99	99	257	257	
Confl. Bikes (#/hr)	321	321	321	321	321	24	24	24	24	24	36	36	
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%	
Turn Types	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom	
Protected Phases	5	2		1	6		3	8		7		4	
Permitted Phases												5	
Actuated Green, G (s)	13.0	23.0		6.0	16.0		5.6	26.0		9.0	32.4	13.0	
Effective Green, g (s)	13.0	23.0		6.0	16.0		5.6	26.0		9.0	32.4	13.0	
Actuated G/C Ratio	0.14	0.26		0.07	0.18		0.06	0.29		0.10	0.36	0.14	
Clearance Time (s)	8.0	8.0		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	
Lane Grp Cap. (vph)	209	684		96	520		86	738		145	531	109	
v/s Ratio Prot	0.11	c0.20		0.09	c0.16		0.05	0.12		c0.10	c0.32	c0.26	
v/s Ratio Perm	0.73	0.77		1.33	0.89		0.81	0.41		1.02	0.88	1.77	
Uniform Delay, d1	36.8	31.0		42.0	36.1		41.7	25.9		40.5	26.9	38.5	
Progression Factor	1.00	1.00		1.17	1.49		0.98	0.84		1.00	1.00	1.00	
Incremental Delay, d2	11.9	8.0		188.4	13.9		39.2	1.6		80.3	18.3	381.3	
Delay (s)	48.7	39.0		237.5	67.8		80.1	23.2		120.8	45.2	419.8	
Level of Service	D	D		F	E		F	C		F	D	F	
Approach Delay (s)	41.2			104.6			33.8			148.7		F	
Approach LOS	D			F			C			F		F	
Intersection Summary													
HCM Average Control Delay	90.7											HCM Level of Service	F
HCM Volume to Capacity ratio	1.27												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	31.0
Intersection Capacity Utilization	73.6%											ICU Level of Service	D
Analysis Period (min)	15												
c Critical Lane Group													

Lanes and Geometrics
2: Main Street & Western Connector

5/20/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	4	4	1	4	4	1	4	4	1	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	11	10	10	11	10	11	10
Grade (%)	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	250	120	0	250	0	0	250	0	0	0	75
Storage Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Pod Bike Factor	0.77	0.96	0.93	0.92	0.92	0.92	0.93	0.93	0.91	0.91	0.87	0.87
Frt	0.950	0.966	0.962	0.962	0.962	0.962	0.956	0.956	0.950	0.950	0.950	0.850
Flt Protected	1464	1427	0	1430	1379	0	0	2565	0	1354	1476	1211
Flt Permitted	0.628	0.594	0.594	0.594	0.594	0.594	0.798	0.798	0.499	0.499	0.499	0.499
Satd. Flow (perm)	744	1427	0	835	1379	0	0	2055	0	645	1476	1058
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	21	21	24	24	24	24	81	81	30	30	30	32
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	1009	1009	483	483	483	483	810	810	777	777	777	777
Travel Time (s)	22.9	22.9	11.0	11.0	11.0	11.0	18.4	18.4	17.7	17.7	17.7	17.7
Intersection Summary												
Area Type:	CBD											

Volume
2. Main Street & Western Connector

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	125	188	55	80	132	45	60	220	116	30	305	275
Confl. Peds. (#/hr)	490		83	83	490	36	132	132				36
Confl. Bikes (#/hr)			87			9			39			67
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%						0%					0%
Adj. Flow (vph)	132	198	58	94	155	53	66	242	127	33	335	302
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	256	0	94	208	0	0	435	0	33	335	302
Intersection Summary												

Timings
2. Main Street & Western Connector

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	125	188	80	132	45	60	220	116	30	305	275	
Volume (vph)	125	188	80	132	45	60	220	116	30	305	275	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3
Detector Phase	1	1	1	1	1	1	3	3	3	3	3	3
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	47.0	47.0	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0	43.0
Total Spill (%)	52.2%	52.2%	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%	47.8%	47.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39	0.39
v/c Ratio	0.41	0.41	0.26	0.34	0.34	0.34	0.51	0.13	0.58	0.70	0.70	0.70
Control Delay	22.5	18.4	25.8	24.6	24.6	24.6	19.3	27.2	30.2	30.9	30.9	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	18.4	25.8	24.6	24.6	24.6	19.3	27.2	30.2	30.9	30.9	30.9
LOS	C	B	C	C	C	C	B	C	C	C	C	C
Approach Delay	19.8			25.0			19.3			30.4		
Approach LOS	B			C			B			C		
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 58 (64%), Referenced to phase 1:EBWB, Start of Green												
Natural Cycle: 90												
Control Type: Prelimed												
Maximum v/c Ratio: 0.70												
Intersection Signal Delay: 24.5												
Intersection Capacity Utilization: 125.1%												
Analysis Period (min): 15												

Splits and Phases: 2. Main Street & Western Connector



Phasings
2: Main Street & Western Connector

5/20/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	1	1	1	1	3	3	3	3	3
Protected Phases									
Permitted Phases	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%	47.8%
Total Split (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)									
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)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	Max	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 68 (64%). Referenced to phase 1:EBWB. Start of Green
Control Type: Prelimed

Queues
2: Main Street & Western Connector

5/20/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	132	256	94	208	435	33	335	302	302
Lane Group Flow (vph)	0.41	0.41	0.26	0.34	0.51	0.13	0.58	0.70	0.70
w/c Ratio	22.5	18.4	25.8	24.6	19.3	27.2	30.2	30.9	30.9
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	22.5	18.4	25.8	24.6	19.3	27.2	30.2	30.9	30.9
Total Delay	50	89	51	87	78	14	148	121	121
Queue Length 50th (ft)	102	152	m176	m120	124	m16	m165	m137	m137
Queue Length 95th (ft)	929			403	730		697		75
Internal Link Dist (ft)			120						
Turn Bay Length (ft)	322	630	362	611	849	251	574	431	431
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.41	0.26	0.34	0.51	0.13	0.58	0.70	0.70

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Simulation Settings
2: Main Street & Western Connector

5/20/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	21	21	21	21	21	21
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	10	10	10	10	10	10	10	10	10	10	10	10
Two way Left Turn Lane	1.14	1.14	1.14	1.25	1.19	1.19	1.25	1.25	1.19	1.25	1.19	1.25
Headway Factor	15	15	9	15	15	9	15	15	9	15	15	9
Turning Speed (mph)												
Intersection Summary												

HCM Signalized Intersection Capacity Analysis
2: Main Street & Western Connector

5/20/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1	
Volume (vph)	125	188	55	80	132	45	60	220	116	30	305	275	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	12	12	10	11	11	10	10	11	10	11	10	
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.87	
Fpb. ped/bikes	1.00	0.96	1.00	1.00	0.92	1.00	0.94	1.00	0.94	1.00	1.00	1.00	
Fibb. ped/bikes	0.77	1.00	1.00	0.93	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	
Frt	1.00	0.97	1.00	0.96	1.00	0.96	1.00	0.99	1.00	1.00	1.00	0.85	
Flt Protected	1126	1427	1335	1379	2556	1058	1228	1476	1058	1228	1476	1058	
Satd. Flow (prot)	0.63	1.00	0.59	1.00	0.80	1.00	0.80	1.00	0.60	1.00	1.00	1.00	
Flt Permitted	744	1427	834	1379	2055	645	1476	1058	645	1476	1058	1058	
Satd. Flow (perm)	0.95	0.95	0.85	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91	
Peak-hour factor, PHF	132	198	58	94	155	53	66	242	127	33	335	302	
Adj. Flow (vph)	0	12	0	0	14	0	0	50	0	0	0	20	
RTOR Reduction (vph)	132	244	0	94	194	0	0	386	0	33	335	282	
Lane Group Flow (vph)	490	83	83	490	36	132	132	36	39	39	36	67	
Conf. Peds. (#/hr)	87			9									
Conf. Bikes (#/hr)													
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	39.0	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	
Actuated G/C Ratio	0.43	0.43	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Grp Cap (vph)	322	618	361	598	799	251	574	411	251	574	411	411	
v/s Ratio Prot	0.17			0.14									
v/s Ratio Perm	0.18			0.11			0.19		0.05			0.23	
v/c Ratio	0.41	0.39	0.26	0.33	0.48	0.13	0.58	0.69	0.13	0.58	0.69	0.69	
Uniform Delay, d1	17.6	17.4	16.3	16.8	20.7	17.7	21.7	22.9	17.7	21.7	22.9	22.9	
Progression Factor	1.00	1.00	1.43	1.53	1.00	1.00	1.45	1.28	1.00	1.45	1.28	1.28	
Incremental Delay, d2	3.8	1.9	1.4	1.2	2.1	0.4	1.5	3.2	0.4	1.5	3.2	3.2	
Delay (s)	21.4	19.3	24.8	26.9	22.8	26.1	29.2	32.4	26.1	29.2	32.4	32.4	
Level of Service	C	B	C	C	C	C	C	C	C	C	C	C	
Approach Delay (s)	20.0	26.2	22.8	22.8	22.8	30.5	30.5	30.5	22.8	30.5	30.5	30.5	
Approach LOS	C	C	C	C	C	C	C	C	C	C	C	C	
Intersection Summary													
HCM Average Control Delay	25.6											HCM Level of Service	C
HCM Volume to Capacity ratio	0.54												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	16.0
Intersection Capacity Utilization	125.1%											ICU Level of Service	H
Analysis Period (min)	15												
c. Critical Lane Group													

Lanes and Geometrics

3: Main Street & Ames Street

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	11	11	11
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.78	0.980	0.966	0.993	0.983	0.989	0.81	0.84	0.45	0.850	0.850	0.850
Frt	0.986	0.986	0.986	0.986	0.986	0.986	0.986	0.986	0.986	0.986	0.986	0.986
Flt Protected	0	1254	0	0	1476	0	0	1391	0	0	1499	1182
Satd Flow (prot)	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861
Flt Permitted	0	938	0	0	1315	0	0	1022	0	0	908	536
Satd Flow (perm)	No	No	No	No	No	No	No	No	No	No	No	No
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	483	483	483	483	483	483	483	483	483	483	483	483
Link Distance (ft)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Travel Time (s)												

Intersection Summary

Area Type: CBD

Volume

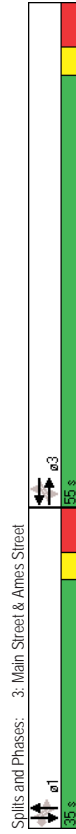
3: Main Street & Ames Street

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	94	190	50	17	72	30	80	136	20	49	31	105
Volume (vph)	769	546	546	546	769	194	163	163	163	163	163	194
Contl. Peds. (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Contl. Bikes (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	113	229	60	19	82	34	88	149	22	55	35	118
Shared Lane Traffic (%)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	402	0	0	135	0	0	259	0	0	90	118

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4
Volume (vph)	94	190	17	72	80	136	49	105
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	40.0	40.0	40.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	55.0	55.0	55.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	-1.0	-1.0	-1.0	-1.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	7.0	7.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.0	47.0	47.0	28.0	28.0	28.0	28.0	27.0
Actuated g/C Ratio	0.52	0.52	0.52	0.31	0.31	0.31	0.32	0.73
v/c Ratio	0.82	0.20	0.20	0.81	0.81	0.81	0.32	0.73
Control Delay	29.4	12.4	12.4	50.7	50.7	50.7	29.7	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	12.4	12.4	50.7	50.7	50.7	29.7	57.8
LOS	C	B	B	D	D	D	C	E
Approach Delay	29.4	12.4	12.4	50.7	50.7	50.7	45.6	D
Approach LOS	C	B	B	D	D	D	D	D
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 70								
Control Type: Prelimed								
Maximum v/c Ratio: 0.82								
Intersection Signal Delay: 36.0								
Intersection Capacity Utilization 75.6%								
Analysis Period (min) 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	40.0	40.0	40.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	55.0	55.0	55.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	13.0	13.0	13.0	1.0	1.0	1.0	1.0	1.0
Flash Dont Walk (s)	19.0	19.0	19.0	14.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
90th %ile Term Code	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
70th %ile Term Code	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
50th %ile Term Code	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
30th %ile Term Code	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
10th %ile Term Code	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

Queues
3: Main Street & Ames Street

5/20/2014

	EBT	WBT	NBT	SBT	SBR
Lane Group	402	135	259	90	118
Lane Group Flow (vph)	0.82	0.20	0.81	0.32	0.73
v/c Ratio	29.4	12.4	50.7	29.7	57.8
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	29.4	12.4	50.7	29.7	57.8
Total Delay	138	39	135	37	71
Queue Length 50th (ft)	#320	70	#268	m#7	m#141
Queue Length 95th (ft)	403	410	456	198	
Internal Link Dist (ft)					
Turn Bay Length (ft)	490	687	318	282	161
Base Capacity (vph)	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.20	0.81	0.32	0.73

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.

Simulation Settings
3: Main Street & Ames Street

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	No	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	10	10	10	10	10	10	10	10	10	10	10	10
Median Width(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Link Offset(ft)	12	12	12	12	12	12	12	12	12	12	12	12
Crosswalk Width(ft)	1.14	1.30	1.14	1.14	0.97	1.14	1.14	1.30	1.14	1.19	1.19	1.36
Two way Left Turn Lane	15	9	15	9	15	9	15	15	9	15	15	9
Headway Factor												
Turning Speed (mph)												

Intersection Summary

3. Main Street & Ames Street

5/20/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations		4	4		4	4		4	4		4	4
Volume (vph)	94	190	50	17	72	30	80	136	20	49	31	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	11	11	11
Total Lost time (s)	8.0			8.0			7.0			7.0	8.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.84	0.96	0.96	0.85	0.84	1.00	0.85	1.00
Frb. ped/bikes	0.91			0.84			0.96		0.85	0.84	1.00	
Flbb. ped/bikes	0.86			0.96			0.85		0.84	1.00		
Frt	0.98			0.97			0.99		1.00	0.85		
Flt Protected	0.99			0.99			0.98		0.97	1.00		
Satd. Flow (prot)	1074			1416			1175		1257	536		
Flt Permitted	0.86			0.92			0.85		0.70	1.00		
Satd. Flow (perm)	938			1315			1018		909	536		
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	113	229	60	19	82	34	88	149	22	55	35	118
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	402	0	0	135	0	0	259	0	0	90	118
Confl. Peds. (#/hr)	7.69		5.46	5.46		7.69	1.94		1.63	1.63		1.94
Confl. Bikes (#/hr)	107		107	15		15	1		1			34
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Parking (#/hr)	0						0		0			0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	3	3	1	1	1	1	1	1
Permitted Phases	3	3	3	3	3	3	1	1	1	1	1	1
Actuated Green, G (s)	47.0			47.0			27.0		27.0		27.0	27.0
Effective Green, g (s)	47.0			47.0			28.0		28.0		28.0	27.0
Actuated g/C Ratio	0.52			0.52			0.31		0.31		0.31	0.30
Clearance Time (s)	8.0			8.0			8.0		8.0		8.0	8.0
Lane Grp Cap. (vph)	490			687			317		283		161	
v/s Ratio Prot												
v/s Ratio Perm	c0.43			0.10			c0.25		0.10		0.22	
v/g Ratio	0.82			0.20			0.82		0.32		0.73	
Uniform Delay, d1	18.0			11.4			28.6		23.7		28.3	
Progression Factor	0.76			1.00			1.00		1.09		1.09	
Incremental Delay, d2	13.6			0.6			20.3		2.7		23.7	
Delay (s)	27.2			12.1			49.0		28.6		54.5	
Level of Service	C			B			D		C		D	
Approach Delay (s)	27.2			12.1			49.0		43.3		D	
Approach LOS	C			B			D		D		D	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c. Critical Lane Group			

4. Broadway east & Ames Street

5/20/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4	4	4	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	12	12
Grade (%)	0%			0%		
Storage Length (ft)	0		160		0	0
Storage Lanes	0		1		1	1
Taper Length (ft)	25		25		25	25
Lane Util. Factor	0.95		0.95		1.00	1.00
Ped Bike Factor	0.92		0.83		0.79	0.45
Frt	0.983				0.850	
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2675		1510		1589	1220
Flt Permitted			0.291		0.950	
Satd. Flow (perm)	2675		382		1215	553
Right Turn on Red	Yes		Yes		Yes	Yes
Satd. Flow (RTOR)	17					160
Link Speed (mph)	30				30	30
Link Distance (ft)	631				396	273
Travel Time (s)	14.3				9.0	6.2

Intersection Summary

Area Type: CBD

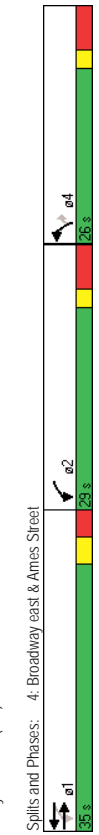
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	532	70	175	420	131	150
Confl. Peds. (#/hr)	323	323	323	323	138	271
Confl. Bikes (#/hr)	247					3
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						2
Mid-Block Traffic (%)	0%			0%	0%	0%
Adj. Flow (vph)	572	75	184	442	139	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	647	0	184	442	139	160

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle: 90
Control Type: Prelimed
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 30.6
Intersection LOS: C
Intersection Capacity Utilization 66.6%
Analysis Period (min) 15



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	EB	WB	WB	NB	NB
Volume (vph)	532	175	420	131	150
Turn Type	pm+pt				Perm
Protected Phases	1	2	1	4	4
Permitted Phases	1				
Detector Phase	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%	32.2%	38.9%	28.9%	28.9%
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	20.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.22
v/c Ratio	0.74	0.38	0.86	0.43	0.65
Control Delay	22.2	11.9	55.4	31.8	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	11.9	55.4	31.8	16.4
LOS	C	B	E	C	B
Approach Delay	22.2		42.6	23.6	
Approach LOS	C		D	C	



Spills and Phases: 4: Broadway east & Ames Street

Spill 1	55 s
Spill 2	29 s
Spill 3	26 s
Spill 4	26 s

Phasings
4: Broadway east & Ames Street

5/20/2014

	EBT	WBL	WBT	NBL	NBR
Lane Group	1	2	1	4	4
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%	32.2%	38.9%	28.9%	28.9%
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green
Control Type: Prelimed

Queues
4: Broadway east & Ames Street

5/20/2014

	EBT	WBL	WBT	NBL	NBR
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	647	184	442	139	160
v/c Ratio	0.74	0.38	0.86	0.43	0.65
Control Delay	22.2	11.9	55.4	31.8	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	11.9	55.4	31.8	16.4
Queue Length 50th (ft)	72	42	276	66	20
Queue Length 95th (ft)	m87	m43	m274	m91	m33
Internal Link Dist (ft)	551	160	316	193	
Turn Bay Length (ft)					
Base Capacity (vph)	873	488	512	324	247
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	0.74	0.38	0.86	0.43	0.65

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Simulation Settings
4: Broadway east & Ames Street

5/20/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11		11	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	10		10	10		0
Two way Left Turn Lane	1.25	1.14	1.19	1.19	1.14	1.32
Headway Factor						
Turning Speed (mph)	9	15	15	15	15	9

HCM Signalized Intersection Capacity Analysis
4: Broadway east & Ames Street

5/20/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (vph)	532	70	175	420	131	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	12	11	11	12	12
Total Lost time (s)	6.0	7.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Emp. ped/bikes	0.92	1.00	1.00	1.00	0.45	0.45
Fibb. ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Frt	0.98	1.00	1.00	1.00	0.85	0.85
Flt Protected	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2674	1443	1589	1533	553	553
Flt Permitted	1.00	0.29	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2674	442	1589	1533	553	553
Peak-hour factor, PHF	0.93	0.93	0.95	0.95	0.94	0.94
Adj. Flow (vph)	572	75	184	442	139	160
RTOR Reduction (vph)	12	0	0	0	0	124
Lane Group Flow (vph)	635	0	184	442	139	36
Confl. Peds. (#/hr)	323	323	323	138	271	3
Confl. Bikes (#/hr)	247					
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Parking (#/hr)						2
Turn Type		pm+pt				Perm
Protected Phases	1	2	1	1	4	
Permitted Phases		1			4	
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0	19.0
Effective Green, g (s)	29.0	51.0	29.0	19.0	20.0	20.0
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.22	0.22
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0	7.0
Lane Grp Cap (vph)	862	495	512	324	123	
v/s Ratio Prot	0.24	c0.09	c0.28	c0.09		
v/s Ratio Perm		0.12			0.06	
v/g Ratio	0.74	0.37	0.86	0.43	0.29	
Uniform Delay, d1	27.1	17.7	28.6	30.8	29.1	
Progression Factor	0.69	0.80	1.73	0.91	1.10	
Incremental Delay, d2	3.6	0.6	5.2	3.0	4.3	
Delay (s)	22.3	14.6	54.8	31.2	36.3	
Level of Service	C	B	D	C	D	
Approach Delay (s)	22.3		43.0	33.9		
Approach LOS	C		D	C		
Intersection Summary						
HCM Average Control Delay		32.7			HCM Level of Service	C
HCM Volume to Capacity ratio		0.59				
Actuated Cycle Length (s)		90.0			Sum of lost time (s)	20.0
Intersection Capacity Utilization		66.6%			ICU Level of Service	C
Analysis Period (min)		15				
c. Critical Lane Group						

Lanes and Geometrics
5: Broadway east & Third Street

5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.983	0.93	0.945	0.962	0.962	0.962	0.962	0.962	0.962	0.962	0.962
FI Protected	1444	2695	0	0	2733	0	0	0	0	0	0	1476
Satd. Flow (prot)	1444	2695	0	0	2733	0	0	0	0	0	0	1476
FI Permitted	1444	2695	0	0	2733	0	0	0	0	0	0	1476
Satd. Flow (perm)	1444	2695	0	0	2733	0	0	0	0	0	0	1476
Right Turn on Red	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	No
Satd. Flow (RTOR)	18	18	18	30	30	30	30	30	30	30	30	30
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	581	581	581	393	393	393	156	156	156	1212	1212	1212
Travel Time (s)	13.2	13.2	13.2	8.9	8.9	8.9	3.5	3.5	3.5	27.5	27.5	27.5
Intersection Summary												
Area Type:	CBD											

Volume
5: Broadway east & Third Street

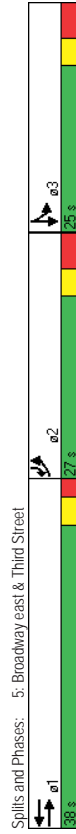
5/20/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	205	345	45	0	657	375	0	0	0	150	40	123
Cont'l. Peds. (#/hr)	70	70	103	19	19	19	0	0	0	0	0	0
Cont'l. Bikes (#/hr)	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Growth Factor	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Heavy Vehicles (%)	0	0	0	0	0	0	0	0	0	0	0	0
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	247	416	54	0	692	395	0	0	0	163	43	134
Shared Lane Traffic (%)	247	470	0	0	1087	0	0	0	0	0	0	206
Lane Group Flow (vph)	247	470	0	0	1087	0	0	0	0	0	0	206
Intersection Summary												

Timings
5: Broadway east & Third Street

5/20/2014

EBL	EBT	WBT	SBT	SBR
5	4	4	4	4
205	345	657	40	123
Prot				
2	1	1	3	2
Protected Phases				
Detector Phase				
2	1	1	3	2
Switch Phase				
4.0	4.0	4.0	4.0	4.0
27.0	37.0	37.0	25.0	27.0
27.0	38.0	38.0	25.0	27.0
Total Split (%)				
30.0%				
42.2%				
27.8%				
30.0%				
Yellow Time (s)				
3.0	3.0	3.0	3.0	3.0
All-Red Time (s)				
4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)				
0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)				
7.0	5.0	5.0	7.0	7.0
Lead/Lag				
Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?				
Max	Max	Max	Max	Max
20.0	33.0	33.0	18.0	20.0
Act Effct Green (s)				
0.22	0.37	0.37	0.20	0.22
v/c Ratio				
0.77	0.47	1.08	0.70	0.46
Control Delay				
41.3	11.5	83.5	47.7	36.4
Total Delay				
41.3	11.5	83.5	47.7	36.4
LOS				
D	B	F	D	D
Approach Delay				
C	F	D	D	D
Approach LOS				
Intersection Summary				
Cycle Length: 90				
Actuated Cycle Length: 90				
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green				
Natural Cycle: 90				
Control Type: Prelimed				
Maximum v/c Ratio: 1.08				
Intersection Signal Delay: 56.5				
Intersection Capacity Utilization: 75.7%				
Analysis Period (min): 15				



Phasings
5: Broadway east & Third Street

5/20/2014

EBL	EBT	WBT	SBT	SBR
2	1	1	3	2
Protected Phases				
Permitted Phases				
4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)				
27.0	37.0	37.0	25.0	27.0
Minimum Split (s)				
27.0	38.0	38.0	25.0	27.0
Total Split (%)				
30.0%				
42.2%				
27.8%				
30.0%				
Maximum Green (s)				
20.0	33.0	33.0	18.0	20.0
Yellow Time (s)				
3.0	3.0	3.0	3.0	3.0
All-Red Time (s)				
4.0	2.0	2.0	4.0	4.0
Lead/Lag				
Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?				
3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)				
3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)				
0.0	0.0	0.0	0.0	0.0
Time Before Reduce (s)				
0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)				
Max	Max	Max	Max	Max
7.0	17.0	17.0	6.0	7.0
Walk Time (s)				
12.0	12.0	12.0	11.0	12.0
Flash Dont Walk (s)				
0	0	0	0	0
Pedestrian Calls (#/hr)				
20.0	33.0	33.0	18.0	20.0
90th %ile Green (s)				
20.0	33.0	33.0	18.0	20.0
90th %ile Term Code				
MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)				
20.0	33.0	33.0	18.0	20.0
70th %ile Term Code				
MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)				
20.0	33.0	33.0	18.0	20.0
50th %ile Term Code				
MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)				
20.0	33.0	33.0	18.0	20.0
30th %ile Term Code				
MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)				
20.0	33.0	33.0	18.0	20.0
10th %ile Term Code				
MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary				
Cycle Length: 90				
Actuated Cycle Length: 90				
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green				
Control Type: Prelimed				

Queues
5: Broadway east & Third Street

5/20/2014



Lane Group	EBL	EBT	WBT	WBT	SBT	SBR
Lane Group Flow (vph)	247	470	1087	206	134	0.46
v/c Ratio	0.77	0.47	1.08	0.70	0.46	36.4
Control Delay	41.3	11.5	83.5	47.7	36.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	11.5	83.5	47.7	36.4	0.0
Queue Length 50th (ft)	148	34	-368	110	66	123
Queue Length 95th (ft)	m#217	72	#494	#206	123	
Internal Link Dist (ft)	501	313	1132			
Turn Bay Length (ft)	340				160	
Base Capacity (vph)	321	1000	1002	295	290	
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	0.47	1.08	0.70	0.46	
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.						

Simulation Settings
5: Broadway east & Third Street

5/20/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12								0
Link Offset(ft)	0			0								0
Crosswalk Width(ft)	10			10			16					18
Two way Left Turn Lane												
Headway Factor	1.25	1.27	1.25	1.19	1.19	1.19	1.14	1.14	1.14	1.25	1.25	1.25
Turning Speed (mph)	15		9	15	15	9	15	15	9	15	15	9
Intersection Summary												

5/20/2014
HCM Signalized Intersection Capacity Analysis
5: Broadway east & Third Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	5	4	4	4	4	4	4	4	4	4	4	4
Volume (vph)	205	345	45	0	657	375	0	0	0	150	40	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	11	12	12	12	10	10	10
Total Lost time (s)	7.0	5.0	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	0.96	1.00	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fllb. ped/bikes	1.00	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	0.98	1.00	0.95	1.00	1.00	0.96	1.00	0.96	1.00	0.85	1.00
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00	0.96	1.00	0.96	1.00	0.96	1.00
Satd. Flow (prot)	1444	2695	1444	2695	2734	1444	1476	1304	1476	1304	1476	1304
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00	0.96	1.00	0.96	1.00	0.96	1.00
Satd. Flow (perm)	1444	2695	1444	2695	2734	1444	1476	1304	1476	1304	1476	1304
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	247	416	54	0	692	395	0	0	0	163	43	134
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	247	459	0	0	1087	0	0	0	0	0	0	206
Conf. Ped. (#/hr)	70	70	103	103	103	103	103	103	103	103	103	103
Conf. Bikes (#/hr)	199	199	19	19	19	19	19	19	19	19	19	19
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Prot	Prot	Prot	Split	Split	Split	Split	Split	Split	Split	Split	Split
Protected Phases	2	1	1	3	3	3	3	3	3	3	3	3
Permitted Phases	2	1	1	3	3	3	3	3	3	3	3	3
Actuated Green, G (s)	20.0	33.0	33.0	33.0	33.0	33.0	18.0	20.0	18.0	20.0	20.0	20.0
Effective Green, g (s)	20.0	33.0	33.0	33.0	33.0	33.0	18.0	20.0	18.0	20.0	20.0	20.0
Actuated g/C Ratio	0.22	0.37	0.37	0.37	0.37	0.37	0.20	0.22	0.20	0.22	0.22	0.22
Clearance Time (s)	7.0	5.0	5.0	5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Grp Cap. (vph)	321	988	1002	1002	1002	1002	295	290	295	290	290	290
v/s Ratio Prot	c0.17	0.17	c0.40	c0.40	c0.40	c0.14	c0.14	0.10	c0.14	0.10	0.10	0.10
v/s Ratio Perm	0.77	0.46	1.08	1.08	1.08	0.70	0.46	0.46	0.70	0.46	0.46	0.46
Uniform Delay, d1	32.8	21.8	28.5	28.5	28.5	33.5	30.3	30.3	33.5	30.3	30.3	30.3
Progression Factor	0.81	0.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.9	1.2	54.3	54.3	54.3	12.9	5.2	5.2	12.9	5.2	5.2	5.2
Delay (s)	39.5	11.8	82.8	82.8	82.8	46.4	35.6	35.6	46.4	35.6	35.6	35.6
Level of Service	D	B	F	F	F	D	D	D	D	D	D	D
Approach Delay (s)	21.3	82.8	0.0	0.0	0.0	42.1	42.1	42.1	42.1	42.1	42.1	42.1
Approach LOS	C	F	A	A	A	D	D	D	D	D	D	D

Intersection Summary

HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

5/20/2014
Lanes and Geometrics
6: Ames Street &

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor	0.952	0.952	0.952	0.952	0.952	0.952
Flt Protected	0.969	0.969	0.969	0.969	0.969	0.969
Flt Permitted	0.969	0.969	0.969	0.969	0.969	0.969
Satd. Flow (prot)	1577	0	1559	0	0	1375
Satd. Flow (perm)	1577	0	1559	0	0	1375
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	239	278	278	278	273	273
Travel Time (s)	5.4	6.3	6.3	6.3	6.2	6.2

Intersection Summary

Area Type: CBD

Volume
6: Ames Street &

5/20/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Volume (vph)	20	11	255	0	0	170
Confl. Peds. (#/hr)	109	120	185	185	185	
Confl. Bikes (#/hr)			12			
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	6%	6%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						2
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	27	15	271	0	0	191
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	271	0	0	191
Intersection Summary						

Simulation Settings
6: Ames Street &

5/20/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0		0	0
Link Offset(ft)	0		0		0	0
Crosswalk Width(ft)	16		16		16	16
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.19	1.19	1.19	1.38
Turning Speed (mph)	15	9	9	9	15	15
Intersection Summary						

5/20/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	20	11	255	0	0	170
Sign Control	Stop		Free			Free
Grade (%)	0%		0%			0%
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Hourly flow rate (vph)	27	15	271	0	0	191
Pedestrians	185		109			120
Lane Width (ft)	12.0		11.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	15		8			9
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			278			273
pX platoon unblocked						
vC conflicting volume	756	576				456
vC1 stage 1 conf vol						
vC2 stage 2 conf vol						
vCu unblocked vol	756	576				456
IC single (s)	6.4	6.2				4.2
IC 2 stage (s)						
IF (s)	3.5	3.3				2.3
p0 queue free %	91	96				100
GM capacity (veh/h)	294	400				912
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	42	271	191			
Volume Left	27	0	0			
Volume Right	15	0	0			
cSH	324	1700	912			
Volume to Capacity	0.13	0.16	0.00			
Queue Length 95th (ft)	11	0	0			
Control Delay (s)	17.7	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	17.7	0.0	0.0			
Approach LOS	C					

Intersection Summary		
Average Delay	15	
Intersection Capacity Utilization	34.7%	ICU Level of Service A
Analysis Period (min)	15	

5/20/2014
 Lanes and Geometrics
 7: Broadway east &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	R	T	T	T	R
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0	40	0		0	0
Storage Lanes	0	1	0		0	1
Taper Length (ft)	25	25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.981					0.865
Flt Protected		0.950				
Satd. Flow (prot)	1629	0	1608	1693	0	1479
Flt Permitted		0.950				
Satd. Flow (perm)	1629	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	386		581		146	
Travel Time (s)	9.0		13.2		3.3	

Intersection Summary	
Area Type:	CBD

Volume
7: Broadway east &

5/20/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	580	97	110	620	0	20
Confl. Peds. (#/hr)	300	300	300			255
Confl. Bikes (#/hr)	264					
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	624	104	116	653	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	728	0	116	653	0	20
Intersection Summary						

Simulation Settings
7: Broadway east &

5/20/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12	0	0
Link Offset(ft)	0		0	0	0	0
Crosswalk Width(ft)	16		16	16	16	16
Two way Left Turn Lane	1.14	1.14	1.14	1.14	1.14	1.14
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	9	9	15	15	15	9
Intersection Summary						

HCM Unsignalized Intersection Capacity Analysis

7: Broadway east &

5/20/2014



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Volume (veh/h)	580	97	110	620	0	20
Sign Control	Free	Free	Free	Free	S/opp	S/opp
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Hourly flow rate (vph)	624	104	116	653	0	20
Pedestrians					255	300
Lane Width (ft)					12.0	12.0
Walking Speed (ft/s)					4.0	4.0
Percent Blockage					21	25
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%				581	
pX platoon unblocked			0.75		0.80	0.75
vC conflicting volume			1028		1860	1231
vC1 stage 1 conf vol						
vC2 stage 2 conf vol			870		1243	1140
vCu unblocked vol			4.1		6.4	6.2
IC single (s)						
IC 2 stage (s)			2.2		3.5	3.3
p0 queue free %			74		100	82
cM capacity (veh/h)			438		86	109
Direction_Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	728	116	663	20		
Volume Left	0	116	0	0		
Volume Right	104	0	0	20		
cSH	1700	438	1700	109		
Volume to Capacity	0.43	0.26	0.38	0.18		
Queue Length 95th (ft)	0	26	0	16		
Control Delay (s)	0.0	16.2	0.0	45.3		
Lane LOS	C	C	E	E		
Approach Delay (s)	0.0	2.4		45.3		
Approach LOS		E		E		

Intersection Summary		
Average Delay	1.8	
Intersection Capacity Utilization	71.8%	ICU Level of Service C
Analysis Period (min)	15	

2019 Future Condition
With Cycle Track

Lanes and Geometrics

1: Broadway & Western Connector

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	0	225	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.85	0.92	0.85	0.98	0.88	0.97	0.93	0.62	0.93	0.93	0.62	0.85
Frt	0.975	0.993	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.850
Flt Protected	1444	2695	0	1444	2925	0	1350	2601	0	1450	1476	1211
Satd Flow (prot)	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Flt Permitted	1222	2695	0	1228	2925	0	1216	2601	0	1350	1476	757
Satd Flow (perm)	No	No	No	No	No	No	No	No	No	No	No	No
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)	25	25	25	30	30	30	30	30	30	30	30	30
Link Speed (mph)	470	470	470	631	631	631	777	777	777	777	777	719
Link Distance (ft)	12.8	12.8	12.8	14.3	14.3	14.3	17.7	17.7	17.7	17.7	17.7	16.3
Travel Time (s)												
Intersection Summary												
Area Type:	CBD											

Volume

1: Broadway & Western Connector

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	187	439	87	130	448	22	69	294	83	143	561	204
Contl. Peds. (#/hr)	242	372	372	372	242	257	99	99	99	99	99	257
Contl. Bikes (#/hr)			321			18			24			36
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)												
Adj. Flow (vph)	203	477	95	144	498	24	74	316	89	162	638	232
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	572	0	144	522	0	74	405	0	162	638	232
Intersection Summary												

Timings
1: Broadway & Western Connector

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	187	439	130	448	69	294	143	561
Volume (vph)	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Turn Type	5	2	1	6	3	8	7	4
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Switch Phase	5	2	1	6	3	8	7	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	None	C-Max	None	C-Max	None	Max	None	Max
Recall Mode	13.0	24.0	6.0	17.0	6.9	25.0	9.0	32.4
Act Effct Green (s)	0.14	0.27	0.07	0.19	0.08	0.28	0.10	0.36
Actuated g/C Ratio	0.97	0.80	1.50	0.94	0.70	0.56	1.12	1.20
v/c Ratio	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Total Delay	F	D	F	C	E	C	F	F
LOS	E	E	E	E	C	C	F	F
Approach Delay	55.0	74.6	34.3	234.4				
Approach LOS	E	E	E	C	C	C	F	F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 2,EBT and 6,WBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.13	
Intersection Signal Delay: 118.8	Intersection LOS: F
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	



Phasings
1: Broadway & Western Connector

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	None	C-Max	None	C-Max	None	Max	None	Max
Recall Mode	13.0	24.0	6.0	17.0	6.9	25.0	9.0	32.4
Act Effct Green (s)	0.14	0.27	0.07	0.19	0.08	0.28	0.10	0.36
Actuated g/C Ratio	0.97	0.80	1.50	0.94	0.70	0.56	1.12	1.20
v/c Ratio	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Total Delay	F	D	F	C	E	C	F	F
LOS	E	E	E	E	C	C	F	F
Approach Delay	55.0	74.6	34.3	234.4				
Approach LOS	E	E	E	C	C	C	F	F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 85 (94%), Referenced to phase 2,EBT and 6,WBT, Start of Green	
Control Type: Actuated-Coordinated	

Queues
1: Broadway & Western Connector

5/23/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	203	572	144	522	74	405	162	638
v/c Ratio	0.97	0.80	1.50	0.94	0.70	0.56	1.12	1.20
Control Delay	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.4	40.4	263.2	22.6	66.5	28.4	149.9	137.1
Queue Length 50th (ft)	116	159	-104	62	36	92	-107	-469
Queue Length 95th (ft)	#253	#238	m34	m21	m#79	142	#223	#654
Internal Link Dist (ft)	390	390	295	551	697	697	225	639
Turn Bay Length (ft)	100	209	719	96	553	108	723	145
Base Capacity (vph)	0	0	0	0	0	0	0	0
Stavation 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	0.97	0.80	1.50	0.94	0.69	0.56	1.12	1.20
Intersection Summary								
-	Volume exceeds capacity, queue is theoretically infinite.							
-	Queue shown is maximum after two cycles.							
#	95th percentile volume exceeds capacity, queue may be longer.							
-	Queue shown is maximum after two cycles.							
m	Volume for 95th percentile queue is metered by upstream signal.							

HCM Signalized Intersection Capacity Analysis
1: Broadway & Western Connector

5/23/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1
Volume (vph)	187	439	87	130	448	22	69	294	83	143	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11	12	11
Total Lost time (s)	8.0	5.0	8.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.92	1.00	0.98	1.00	0.98	1.00	0.97	1.00	1.00	0.62
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
Fr	1.00	0.98	1.00	0.99	1.00	0.99	1.00	0.97	1.00	1.00	0.85
Fl	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1444	2693	1444	2925	1390	2602	1450	1476	757	1450	1476
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1444	2693	1444	2925	1390	2602	1450	1476	757	1450	1476
Peak-Hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88
Adj. Flow (vph)	203	477	95	144	498	24	74	316	89	162	232
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	203	572	0	144	522	0	74	405	0	162	638
Confl. Peds. (#/hr)	242	372	372	242	257	242	257	99	99	257	257
Confl. Bikes (#/hr)	321	321	321	18	18	18	24	24	24	36	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	13%	12%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	4	7	4
Permitted Phases	5	2	1	6	3	8	7	4	4	7	4
Actuated Green, G (s)	13.0	23.0	6.0	16.0	5.6	26.0	9.0	32.4	9.0	32.4	13.0
Effective Green, g (s)	13.0	23.0	6.0	16.0	5.6	26.0	9.0	32.4	9.0	32.4	13.0
Actuated g/C Ratio	0.14	0.26	0.07	0.18	0.06	0.29	0.10	0.36	0.10	0.36	0.14
Clearance Time (s)	8.0	5.0	8.0	5.0	5.0	5.0	5.0	8.0	5.0	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	3.0
Lane Grp Cap (vph)	209	688	96	520	86	752	145	531	109	531	109
v/s Ratio Prot	0.14	0.21	0.10	c0.18	c0.05	0.16	0.11	c0.43	0.11	c0.43	0.31
v/s Ratio	0.97	0.83	1.50	1.00	0.86	0.54	1.12	1.20	1.12	1.20	1.13
Uniform Delay, d1	38.3	31.7	42.0	37.0	41.8	26.9	40.5	28.8	40.5	28.8	38.5
Progression Factor	1.00	1.00	1.03	0.42	0.94	0.92	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	53.8	11.2	230.0	12.8	46.0	2.2	109.7	107.7	109.7	107.7	537.2
Delay (s)	92.1	42.9	273.1	28.2	85.2	26.9	150.2	136.5	150.2	136.5	575.7
Level of Service	F	D	F	C	F	C	F	F	F	F	F
Approach Delay (s)	F	D	F	C	F	C	F	F	F	F	F
Approach LOS	E	E	E	F	D	D	F	F	F	F	F
Intersection Summary											
HCM Average Control Delay	121.8										
HCM Volume to Capacity ratio	1.30										
Actuated Cycle Length (s)	90.0										
Intersection Capacity Utilization	83.4%										
Analysis Period (min)	15										
c. Critical Lane Group	E										

Lanes and Geometrics

2: Main Street & Western Connector

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	10	11	11	10	10	11	10	11	10
Lane Width (ft)	0	0%	0	250	120	0	250	0	0	0	0	75
Storage Length (ft)	1	1	1	1	1	0	1	0	1	0	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.79	0.96	0.96	0.94	0.94	0.94	0.94	0.94	0.92	0.92	0.87	0.87
Frt	0.950			0.950	0.950	0.970	0.957	0.957	0.950	0.950	0.850	0.850
FIT Protected	1464	1438	0	1430	1418	0	0	2575	0	1354	1476	1211
Satd. Flow (prot)	0.576			0.556			0.779	0.779	0.447	0.447		
FIT Permitted	703	1438	0	785	1418	0	0	2013	0	584	1476	1058
Satd. Flow (perm)			Yes			Yes		Yes	Yes		Yes	Yes
Right Turn on Red												
Satd. Flow (RTOR)	18			17			77					26
Link Speed (mph)	30			30			30					30
Link Distance (ft)	1009			483			810					777
Travel Time (s)	22.9			11.0			18.4					17.7

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Western Connector

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	189	219	56	89	185	46	62	267	130	32	334	413
Contl. Peds. (#/hr)	490		83	83		490	36		132	132		36
Contl. Bikes (#/hr)			87			9			39			67
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	199	231	59	105	218	54	68	293	143	35	367	454
Shared Lane Traffic (%)												
Lane Group Flow (vph)	199	290	0	105	272	0	0	504	0	35	367	454

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	1	1	1	1	3	3	3	3
Volume (vph)	189	219	89	185	62	267	32	334
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39
v/c Ratio	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06
Control Delay	32.4	19.7	4.4	4.0	22.1	8.4	10.3	49.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	19.7	4.4	4.0	22.1	8.4	10.3	49.6
LOS	C	B	A	A	C	A	B	D
Approach Delay	24.9				22.1		31.1	
Approach LOS	C				C		C	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 79 (88%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 1.06								
Intersection Signal Delay: 23.1								
Intersection Capacity Utilization: 129.1%								
Analysis Period (min): 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%
Maximum Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 79 (88%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	199	290	105	272	504	35	367	454
Lane Group Flow (vph)	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06
v/c Ratio	32.4	19.7	4.4	4.0	22.1	8.4	10.3	49.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	32.4	19.7	4.4	4.0	22.1	8.4	10.3	49.6
Total Delay	87	105	3	2	100	6	66	-263
Queue Length 50th (ft)	#181	177	m3	m1	154	m5	m55	m60
Queue Length 95th (ft)	929		403	730		697		75
Internal Link Dist (ft)			120					
Turn Bay Length (ft)	305	633	340	624	830	227	574	427
Base Capacity (vph)	0	0	0	0	0	0	0	0
Station 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	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06
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	1	1	1	1	1	1	1	1	1	1	1	1	
Volume (vph)	189	219	56	89	185	46	62	267	130	32	334	413	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	12	12	10	11	11	10	10	11	10	11	10	
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.94	1.00	0.94	1.00	1.00	1.00	1.00	0.87	
Flpb, ped/bikes	0.79	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	
Frt	1.00	0.97	1.00	0.97	1.00	0.96	1.00	1.00	1.00	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.99	1.00	0.99	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1159	1439	1341	1418	2569	1242	1476	1058	1242	1476	1058	1058	
Flt Permitted	0.58	1.00	1.00	0.56	1.00	0.78	1.00	0.78	1.00	0.45	1.00	1.00	
Satd. Flow (perm)	702	1439	784	1418	2015	584	1476	1058	584	1476	1058	1058	
Peak-Hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	199	231	59	105	218	54	68	293	143	35	367	454	
RTOR Reduction (vph)	0	10	0	0	10	0	0	47	0	0	0	16	
Lane Group Flow (vph)	199	280	0	105	262	0	0	457	0	35	367	438	
Confl. Peds. (#/hr)	490	83	83	83	490	36	132	132	36	39	67	67	
Confl. Bikes (#/hr)	87			9									
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Actuated Green, G (s)	39.0	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	
Effective Green, g (s)	39.0	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Grp Cap (vph)	304	624	624	340	614	784	784	784	227	574	411	411	
v/s Ratio Prot	0.19			0.13	0.19		0.23	0.23	0.06	0.06	0.25	0.25	
v/s Ratio Perm	c0.28			0.31	0.43		0.58	0.58	0.15	0.15	0.64	0.64	
v/c Ratio	20.2	17.9	16.7	17.7	21.7	17.9	22.4	27.5	17.9	22.4	27.5	27.5	
Uniform Delay, d1	1.00	1.00	0.24	0.22	1.00	1.00	0.44	0.42	0.44	0.42	0.39	0.39	
Progression Factor	1.00	1.00	2.3	2.2	3.2	3.2	0.1	0.5	0.1	0.5	0.5	0.5	
Incremental Delay, d2	30.7	20.3	4.2	4.1	24.9	8.0	9.9	45.7	8.0	9.9	45.7	45.7	
Delay (s)	C	C	A	A	A	C	A	A	A	A	A	D	
Level of Service	C	C	A	A	A	C	A	A	A	A	A	D	
Approach Delay (s)	24.5			4.1	24.9		28.8	28.8					
Approach LOS	C	C	A	A	C	A	C	C	C	C	C	C	
Intersection Summary													
HCM Average Control Delay	22.8											HCM Level of Service	C
HCM Volume to Capacity ratio	0.85												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	16.0
Intersection Capacity Utilization	129.1%											ICU Level of Service	H
Analysis Period (min)	15												
c	Critical Lane Group												

Lanes and Geometrics
3: Main Street & Ames Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	11	11	11
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.76	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Frt	0.981	0.958	0.958	0.958	0.958	0.958	0.958	0.958	0.958	0.958	0.958	0.958
Flt Protected	0.984	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
Satd Flow (prot)	0	1254	0	0	1390	0	0	1400	0	0	0	925
Flt Permitted	0.847	0.918	0.918	0.918	0.918	0.918	0.918	0.918	0.918	0.918	0.918	0.918
Satd Flow (perm)	0	905	0	0	1245	0	0	849	0	0	0	694
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	483	490	490	490	490	490	490	490	490	490	490	490
Travel Time (s)	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1

Intersection Summary
Area Type: CBD

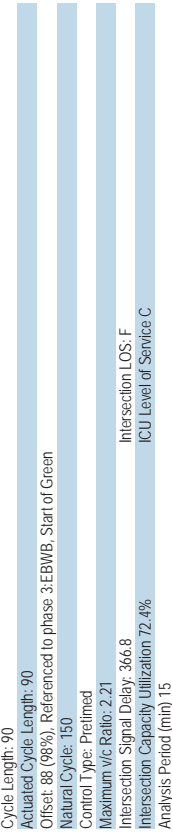
Volume
3: Main Street & Ames Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	121	205	54	17	74	41	98	155	21	53	40	149
Volume (vph)	769	546	546	546	546	546	194	163	163	163	163	194
Contl. Peds. (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Contl. Bikes (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	146	247	65	19	84	47	108	170	23	60	45	167
Shared Lane Traffic (%)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	458	0	0	150	0	0	301	0	0	272	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø2
Lane Configurations									
Volume (vph)	121	205	17	74	98	155	53	40	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	3	3	3	3	1	1	1	1	2
Detector Phase	3	3	3	3	1	1	1	1	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	38.0	38.0	38.0	38.0	24.0	24.0	24.0	24.0	28.0
Total Split (s)	38.0	38.0	38.0	38.0	24.0	24.0	24.0	24.0	28.0
Total Split (%)	42.2%	42.2%	42.2%	42.2%	26.7%	26.7%	26.7%	26.7%	31%
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	18.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	-1.0	0.0	
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	7.0	8.0	
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.18	0.18	0.18	0.18	
v/c Ratio	1.52	0.36	0.00	0.00	1.99	0.00	0.00	2.21	
Control Delay	272.4	25.9	25.9	25.9	494.1	494.1	494.1	572.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	272.4	25.9	25.9	25.9	494.1	494.1	494.1	572.8	
LOS	F	C	C	C	F	F	F	F	
Approach Delay	272.4	25.9	25.9	25.9	494.1	494.1	494.1	572.8	
Approach LOS	F	C	C	C	F	F	F	F	
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 88 (98%), Referenced to phase 3:EBWB, Start of Green									
Natural Cycle: 150									
Control Type: Prelimed									
Maximum v/c Ratio: 2.21									
Intersection Signal Delay: 366.8									
Intersection Capacity Utilization: 72.4%									
Analysis Period (min): 15									



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø2
Protected Phases	3	3	3	3	1	1	1	1	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	38.0	38.0	38.0	38.0	24.0	24.0	24.0	24.0	28.0
Total Split (s)	38.0	38.0	38.0	38.0	24.0	24.0	24.0	24.0	28.0
Total Split (%)	42.2%	42.2%	42.2%	42.2%	26.7%	26.7%	26.7%	26.7%	31%
Maximum Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	18.0
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	Max	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	11.0	11.0	11.0	11.0	2.0	2.0	2.0	2.0	
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	
90th %ile Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	30.0	30.0	30.0	30.0	16.0	16.0	16.0	16.0	7.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 88 (98%), Referenced to phase 3:EBWB, Start of Green									
Control Type: Prelimed									

3: Main Street & Ames Street



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	458	150	301	272
v/c Ratio	1.52	0.36	1.99	2.21
Control Delay	272.4	25.9	494.1	572.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	272.4	25.9	494.1	572.8
Queue Length 50th (ft)	-376	64	-270	-248
Queue Length 95th (ft)	#506	114	#429	m#259
Internal Link Dist (ft)	403	410	456	198
Turn Bay Length (ft)				
Base Capacity (vph)	302	415	151	123
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.52	0.36	1.99	2.21

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

3: Main Street & Ames Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+		+				+			+	
Volume (vph)	121	205	54	17	74	41	98	155	21	53	40	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	16	12	12	12	12	11	11	11
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	0.91			0.80			0.96			0.66		0.66
Frb. ped/bikes	0.84			0.97			0.91			0.96		0.96
Frt	0.98			0.96			0.99			0.92		0.92
Flt Protected	0.98			0.99			0.98			0.99		0.99
Satd. Flow (prot)	1052			1347			1276			884		884
Flt Permitted	0.85			0.92			0.65			0.78		0.78
Satd. Flow (perm)	905			1245			849			695		695
Peak-Hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	146	247	65	19	84	47	108	170	23	60	45	167
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	458	0	0	150	0	0	301	0	0	272	0
Confl. Peds. (#/hr)	769		546	546		769	194		163	163		194
Confl. Bikes (#/hr)		107				15			1			34
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Parking (#/hr)	0						0			0		0

Turn Type	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1
Permitted Phases	3	3	3	3	1
Actuated Green, G (s)	30.0		30.0		16.0
Effective Green, g (s)	30.0		30.0		16.0
Actuated q/C Ratio	0.33		0.33		0.18
Clearance Time (s)	8.0		8.0		8.0
Lane Grp Cap (vph)	302		415		151
v/s Ratio Prot					
v/s Ratio Perm	c0.51		0.12		0.35
v/c Ratio	1.52		0.36		1.99
Uniform Delay, d1	30.0		22.7		37.0
Progression Factor	0.86		1.00		1.00
Incremental Delay, d2	247.5		2.4		469.8
Delay (s)	273.4		25.2		506.8
Level of Service	F		C		F
Approach Delay (s)	273.4		25.2		506.8
Approach LOS	F		C		F

Intersection Summary

HCM Average Control Delay	368.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	44.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes and Geometrics

4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Grade (%)	0%	0%	16%	0%	0%	0%
Storage Length (ft)	0	160	0	0	0	0
Storage Lanes	0	1	1	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.89	0.87	0.88	0.88	0.88	0.88
Flt	0.979	0.979	0.920	0.920	0.920	0.920
Flt Protected			0.950	0.950	0.980	0.980
Satd. Flow (prot)	2576	0	1510	1589	917	0
Flt Permitted			0.222	0.980		
Satd. Flow (perm)	2576	0	305	1589	818	0
Right Turn on Red	No	No				Yes
Satd. Flow (RTOR)					69	
Link Speed (mph)	30		30	30	30	
Link Distance (ft)	631		396	273		
Travel Time (s)	14.3		9.0	6.2		
Intersection Summary						
Area Type:	CBD					

Volume

4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	569	91	256	493	139	203
Contl. Peds. (#/hr)	323	323	323	138	271	
Contl. Bikes (#/hr)	247				3	
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						2
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	612	98	269	519	148	216
Shared Lane Traffic (%)						
Lane Group Flow (vph)	710	0	269	519	364	0
Intersection Summary						

Lane Group	EBT	WBL	WBT	NBL	ø3
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	569	256	493	139	
Turn Type	pmm+pt				
Protected Phases	1	2	1	4	3
Permitted Phases	1				
Detector Phase	1	2	1	4	
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (%)	26.7%	23.3%	26.7%	23.3%	27%
Yellow Time (s)	3.0	2.0	3.0	2.0	3.0
All-Red Time (s)	3.0	5.0	3.0	5.0	14.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	18.0	31.0	18.0	14.0	
Acted g/C Ratio	0.20	0.34	0.20	0.16	
v/c Ratio	1.38	0.92	1.63	1.81	
Control Delay	207.0	19.9	310.1	388.5	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	207.0	19.9	310.1	388.5	
LOS	F	B	F	F	F
Approach Delay	207.0	211.0	388.5		
Approach LOS	F	F	F	F	F
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 53 (59%). Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 150					
Control Type: Prelimed					
Maximum v/c Ratio: 1.81					
Intersection Signal Delay: 244.2					
Intersection Capacity Utilization 81.8%					
Analysis Period (min) 15					



Lane Group	EBT	WBL	WBT	NBL	ø3
Protected Phases	1	1	1	4	3
Permitted Phases	1				
Minimum Initial (s)	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (%)	26.7%	23.3%	26.7%	23.3%	27%
Maximum Green (s)	18.0	14.0	18.0	14.0	7.0
Yellow Time (s)	3.0	2.0	3.0	2.0	3.0
All-Red Time (s)	3.0	5.0	3.0	5.0	14.0
Lead/Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	16.0	12.0	16.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 53 (59%). Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL
Lane Group	710	269	519	364
Lane Group Flow (vph)	1.38	0.92	1.63	1.81
v/c Ratio	207.0	19.9	310.1	388.5
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	207.0	19.9	310.1	388.5
Total Delay	-295	91	-448	-268
Queue Length 50th (ft)	m#371	m78	m#393	m#157
Queue Length 95th (ft)	551	160	316	193
Internal Link Dist (ft)				
Turn Bay Length (ft)	515	293	318	201
Base Capacity (vph)	0	0	0	0
Station Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.38	0.92	1.63	1.81
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.			

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	←	←	←
Volume (vph)	569	91	256	493	139	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	12	11	11	11	11
Total Lost time (s)	6.0	7.0	6.0	7.0		
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	
Frb. ped/bikes	0.89	1.00	1.00	0.65		
Frb. ped/bikes	1.00	0.98	1.00	1.00	1.00	
Frt	0.98	1.00	1.00	0.92		
Flt Protected	1.00	0.95	1.00	0.98		
Satd. Flow (prot)	2576	1473	1589	917		
Flt Permitted	1.00	0.22	1.00	0.98		
Satd. Flow (perm)	2576	345	1589	917		
Peak-Hour factor, PHF	0.93	0.93	0.95	0.95	0.94	0.94
Adj. Flow (vph)	612	98	269	519	148	216
RTOR Reduction (vph)	0	0	0	0	58	0
Lane Group Flow (vph)	710	0	269	519	306	0
Confl. Peds. (#/hr)	323	323	138	271		
Confl. Bikes (#/hr)	247					
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Parking (#/hr)						2
Turn Type	pm+pt					
Protected Phases	1	2	1	1	4	
Permitted Phases	1					
Actuated Green, G (s)	18.0	32.0	18.0	14.0	14.0	
Effective Green, g (s)	18.0	32.0	18.0	14.0	14.0	
Actuated q/C Ratio	0.20	0.36	0.20	0.16		
Clearance Time (s)	6.0	7.0	6.0	7.0		
Lane Grp Cap (vph)	515	298	318	143		
v/s Ratio Prot	0.28	c0.14	c0.33	c0.33		
v/s Ratio Perm	0.18					
v/c Ratio	1.38	0.90	1.63	2.14		
Uniform Delay, d1	36.0	24.0	36.0	38.0		
Progression Factor	0.96	0.41	0.75	0.92		
Incremental Delay, d2	176.7	4.6	285.7	514.2		
Delay (s)	211.4	14.5	312.6	549.1		
Level of Service	F	B	F	F		
Approach Delay (s)	211.4		210.8	549.1		
Approach LOS	F		F	F		
Intersection Summary						
HCM Average Control Delay	277.2					
HCM Volume to Capacity ratio	1.57					
Actuated Cycle Length (s)	90.0					
Sum of lost time (s)	44.0					
Intersection Capacity Utilization	81.8%					
ICU Level of Service	D					
Analysis Period (min)	15					
c. Critical Lane Group						

Lanes and Geometrics

5: Broadway east & Third Street

5/23/2014

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	10	12	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97	0.983	0.945									0.850
Flt Protected	0.950											0.960
Satd. Flow (prot)	1444	2697	0	0	2731	0	0	0	0	0	1473	1304
Flt Permitted	0.950											0.960
Satd. Flow (perm)	1444	2697	0	0	2731	0	0	0	0	0	1473	1304
Right Turn on Red			Yes			No				Yes		No
Satd. Flow (RTOR)	17											30
Link Speed (mph)	30				30							30
Link Distance (ft)	581				393							1212
Travel Time (s)	13.2				8.9							27.5
Intersection Summary												
Area Type:	CBD											

Volume

5: Broadway east & Third Street

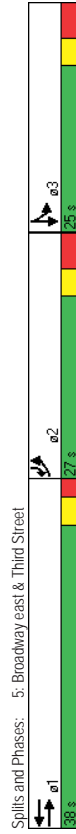
5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	277	360	46	0	730	422	0	0	0	200	41	209
Contd. Peds. (#/hr)	70	70	199		103							1
Contd. Bikes (#/hr)	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	334	434	55	0	768	444	0	0	0	217	45	227
Shared Lane Traffic (%)	334	489	0	0	1212	0	0	0	0	0	262	227
Lane Group Flow (vph)												
Intersection Summary												

Timings
5: Broadway east & Third Street

5/23/2014

EBL	EBT	WBT	SBT	SBR
5	4	4	4	4
277	360	730	41	209
Prot	Over			
2	1	1	3	2
2	1	1	3	2
4.0	4.0	4.0	4.0	4.0
27.0	37.0	37.0	25.0	27.0
27.0	38.0	38.0	25.0	27.0
30.0%	42.2%	42.2%	27.8%	30.0%
3.0	3.0	3.0	3.0	3.0
4.0	2.0	2.0	4.0	4.0
0.0	0.0	0.0	0.0	0.0
7.0	5.0	5.0	7.0	7.0
Lag	Lead	Lead	Lag	Lag
Max	Max	Max	Max	Max
20.0	33.0	33.0	18.0	20.0
0.22	0.37	0.37	0.20	0.22
1.04	0.49	1.21	0.89	0.78
66.6	6.0	132.5	67.4	53.5
66.6	6.0	132.5	67.4	53.5
E	A	F	E	D
30.6	132.5	60.9		
C	F	E		
Intersection Summary				
Cycle Length: 90				
Actuated Cycle Length: 90				
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green				
Natural Cycle: 140				
Control Type: Prelimed				
Maximum v/c Ratio: 1.21				
Intersection Signal Delay: 85.4				
Intersection Capacity Utilization: 87.3%				
Analysis Period (min): 15				



Spills and Phases: 5: Broadway east & Third Street

Phasings
5: Broadway east & Third Street

5/23/2014

EBL	EBT	WBT	SBT	SBR
2	1	1	3	2
4.0	4.0	4.0	4.0	4.0
27.0	37.0	37.0	25.0	27.0
27.0	38.0	38.0	25.0	27.0
30.0%	42.2%	42.2%	27.8%	30.0%
20.0	33.0	33.0	18.0	20.0
3.0	3.0	3.0	3.0	3.0
4.0	2.0	2.0	4.0	4.0
Lag	Lead	Lead	Lag	Lag
3.0	3.0	3.0	3.0	3.0
3.0	3.0	3.0	3.0	3.0
0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0
Max	Max	Max	Max	Max
2.0	17.0	17.0	6.0	2.0
12.0	12.0	12.0	11.0	12.0
0	0	0	0	0
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
20.0	33.0	33.0	18.0	20.0
MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary				
Cycle Length: 90				
Actuated Cycle Length: 90				
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green				
Control Type: Prelimed				

	EBL	EBT	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group	334	489	1212	262	227			
Lane Group Flow (vph)	1.04	0.49	1.21	0.89	0.78			
v/c Ratio	66.6	6.0	132.5	67.4	53.5			
Control Delay	0.0	0.0	0.0	0.0	0.0			
Queue Delay	66.6	6.0	132.5	67.4	53.5			
Total Delay	-215	24	-447	146	122			
Queue Length 50th (ft)	m155	m11	#576	#286	#240			
Queue Length 95th (ft)	501	313	1132					
Internal Link Dist (ft)	340							
Turn Bay Length (ft)	321	1000	1001	295	290			
Base Capacity (vph)	0	0	0	0	0			
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	1.04	0.49	1.21	0.89	0.78			
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)	277	360	46	730	422	0	0	0	200	41	209	1900	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	70	11	10	12	11	11	12	12	12	10	10	70	
Total Lost time (s)	7.0	5.0		5.0						7.0	7.0		
Lane Util. Factor	1.00	0.95		0.95						1.00	1.00		
Fpb. ped/bikes	1.00	0.97		0.93						1.00	1.00		
Ft	1.00	0.98		0.95						1.00	1.00		
Flt Protected	0.95	1.00		1.00						0.96	1.00		
Satd. Flow (prot)	1444	2698		2731						1474	1304		
Flt Permitted	0.95	1.00		1.00						0.96	1.00		
Satd. Flow (perm)	1444	2698		2731						1474	1304		
Peak-hour factor, PHF	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	334	434	55	768	444	0	0	0	217	45	227		
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0		
Lane Group Flow (vph)	334	478	0	0	1212	0	0	0	0	0	262	227	
Conf. Peds. (#/hr)			70	70	103								
Conf. Bikes (#/hr)			199		19								
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%		
Parking (#/hr)	0												
Turn Type	Prot	2	1	1	1				Split	3	2		
Protected Phases													
Permitted Phases													
Actuated Green, G (s)	20.0	33.0	33.0	33.0	33.0					18.0	20.0		
Effective Green, g (s)	20.0	33.0	33.0	33.0	33.0					18.0	20.0		
Actuated q/C Ratio	0.22	0.37	0.37	0.37	0.37					0.20	0.22		
Clearance Time (s)	7.0	5.0	5.0	5.0	5.0					7.0	7.0		
Lane Grp Cap (vph)	321	989		1001						295	290		
v/s Ratio Prot	c0.23	0.18		c0.44						c0.18	0.17		
v/s Ratio Perm													
v/c Ratio	1.04	0.48		1.21						0.89	0.78		
Uniform Delay, d1	35.0	21.9		28.5						35.0	33.0		
Progression Factor	1.11	0.27		1.00						1.00	1.00		
Incremental Delay, d2	27.0	0.2		104.3						30.3	18.8		
Delay (s)	65.7	6.1		132.8						65.3	51.7		
Level of Service	E	A		F						E	D		
Approach Delay (s)		30.3		132.8						59.0			
Approach LOS		C		F						A			
Intersection Summary													
HCM Average Control Delay	85.0											HCM Level of Service	F
HCM Volume to Capacity ratio	1.08												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	19.0
Intersection Capacity Utilization	87.3%											ICU Level of Service	E
Analysis Period (min)	15												
c. Critical Lane Group													

Lanes and Geometrics
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.952					
FIT Protected	0.969					
Satd. Flow (prot)	1577	0	1559	0	0	1375
FIT Permitted	0.969					
Satd. Flow (perm)	1577	0	1559	0	0	1375
Link Speed (mph)	30		30			30
Link Distance (ft)	239		278			273
Travel Time (s)	5.4		6.3			6.2
Intersection Summary						
Area Type:	CBD					

Volume
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Volume (vph)	20	11	312	0	0	226
Confl. Peds. (#/hr)	109	120	185	185	185	185
Confl. Bikes (#/hr)			12			
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	6%	6%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						2
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	27	15	332	0	0	254
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	332	0	0	254
Intersection Summary						

5/23/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	W		T			T
Volume (veh/h)	20	11	312	0	0	226
Sign Control	Stop		Free			Free
Grade (%)	0%		0%			0%
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Hourly flow rate (vph)	27	15	332	0	0	254
Pedestrians	185		109			120
Lane Width (ft)	12.0		11.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	15		8			9
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			278			273
pX platoon unblocked						
vC conflicting volume	880	637			517	
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	880	637			517	
vCu unblocked vol	6.4	6.2			4.2	
IC 2 stage (s)						
IF (s)	3.5	3.3			2.3	
p0 queue free %	89	96			100	
GM capacity (veh/h)	248	369			866	
Direction_Lane #	WBL	NB 1	SB 1			
Volume Total	42	332	254			
Volume Left	27	0	0			
Volume Right	15	1700	866			
cSH	281					
Volume to Capacity	0.15	0.20	0.00			
Queue Length 95th (ft)	13	0	0			
Control Delay (s)	20.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	20.0	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	1.3					
Intersection Capacity Utilization	38.1%					
Analysis Period (min)	15					
	ICU Level of Service A					

5/23/2014
 Lanes and Geometrics
 7: Broadway east &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	1	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.983		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1632	0	1555	1637	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1632	0	1555	1637	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	396		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	668	97	110	775	0	20
Volume (vph)	668	97	110	775	0	20
Confl. Peds. (#/hr)	300	300	300	300	0	255
Confl. Bikes (#/hr)	264					
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	718	104	116	816	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	822	0	116	816	0	20

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	668	97	110	775	0	20
Volume (veh/h)	668	97	110	775	0	20
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Hourly flow rate (vph)	718	104	116	816	0	20
Pedestrians	255	300				
Lane Width (ft)	11.0	12.0				
Walking Speed (ft/s)	4.0	4.0				
Percent Blockage				19	25	
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked			0.78		0.76	0.78
vC, conflicting volume			1123		2118	1325
vC1, stage 1 conf vol						
vC2, stage 2 conf vol			1017		1666	1277
vCu, unblocked vol			4.1		6.4	6.2
IC, single (s)			2.2		3.5	3.3
IC, 2 stage (s)			71		100	79
IF (s)			402		44	97
p0 queue free %						
gM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	823	116	816	20		
Volume Left	0	116	0	0		
Volume Right	104	0	0	20		
cSH	1700	402	1700	97		
Volume to Capacity	0.48	0.29	0.48	0.21		
Queue Length 95th (ft)	0	29	0	18		
Control Delay (s)	0.0	17.5	0.0	51.5		
Lane LOS	C	C	F	F		
Approach Delay (s)	0.0	2.2	51.5			
Approach LOS			F			
Intersection Summary						
Average Delay						1.7
Intersection Capacity Utilization						76.8%
ICU Level of Service						D
Analysis Period (min)						15

2019 Future Condition
With Buffered Bike Lanes

Lanes and Geometrics

1: Broadway & Western Connector

5/23/2014

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	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	0	225	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.85	0.92	0.85	0.98	0.88	0.97	0.93	0.62	0.93	0.62	0.85	0.85
FRT	0.975	0.993	0.967	0.967	0.967	0.967	0.967	0.850	0.950	0.950	0.950	0.950
FRT Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1444	2695	0	1444	2925	0	1390	2601	0	1450	1476	1211
FRT Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1222	2695	0	1228	2925	0	1216	2601	0	1350	1476	757
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)												
Link Speed (mph)	25	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	470	631	719	719	719	719	719	719	719	719	719	719
Travel Time (s)	12.8	14.3	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	16.3
Intersection Summary												
Area Type:	CBD											

Volume

1: Broadway & Western Connector

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	187	439	87	130	448	22	69	294	83	143	561	204
Confl. Peds. (#/hr)	242	372	372	372	242	257	99	99	99	99	99	257
Confl. Bikes (#/hr)			321			18			24			36
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	13%	13%	13%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)												
Adj. Flow (vph)	203	477	95	144	498	24	74	316	89	162	638	232
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	572	0	144	522	0	74	405	0	162	638	232
Intersection Summary												

Timings
1: Broadway & Western Connector

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	187	439	130	448	69	294	143	561
Volume (vph)	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Turn Type	5	2	1	6	3	8	7	4
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Switch Phase	5	2	1	6	3	8	7	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	C-Max	None	None
Act Effct Green (s)	13.0	24.0	6.0	17.0	6.9	25.0	9.0	32.4
Actuated g/C Ratio	0.14	0.27	0.07	0.19	0.08	0.28	0.10	0.36
v/c Ratio	0.97	0.80	1.50	0.94	0.70	0.56	1.12	1.20
Control Delay	96.4	40.4	279.0	62.5	65.7	30.1	149.9	137.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.4	40.4	279.0	62.5	65.7	30.1	149.9	137.1
LOS	F	D	F	E	E	C	F	F
Approach Delay	55.0	109.3	35.6	234.4	F	D	F	F
Approach LOS	E	F	F	D	D	D	F	F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 69 (77%), Referenced to phase 2,EBT and 6,WBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.13	
Intersection Signal Delay: 126.8	Intersection LOS: F
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	



Phasings
1: Broadway & Western Connector

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	14.0	27.0	14.0	22.0	11.0	27.0	14.0	27.0
Total Split (s)	21.0	29.0	14.0	22.0	12.0	30.0	17.0	35.0
Total Split (%)	23.3%	32.2%	15.6%	24.4%	13.3%	33.3%	18.9%	38.9%
Maximum Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	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	None	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0
Flash Dont Walk (s)	15.0	10.0	15.0	15.0	15.0	12.0	15.0	12.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
70th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
50th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
30th %ile Green (s)	13.0	24.0	6.0	17.0	7.0	25.0	9.0	30.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
10th %ile Green (s)	13.0	24.0	6.0	17.0	0.0	25.0	9.0	42.0
10th %ile Term Code	Max	Coord	Max	Coord	Skip	MaxR	Max	MaxR

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 69 (77%), Referenced to phase 2,EBT and 6,WBT, Start of Green	
Control Type: Actuated-Coordinated	

Queues
1: Broadway & Western Connector

5/23/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	203	572	144	522	74	405	162	638
v/s Ratio	0.97	0.80	1.50	0.94	0.70	0.56	1.12	1.20
Control Delay	96.4	40.4	279.0	62.5	65.7	30.1	149.9	137.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.4	40.4	279.0	62.5	65.7	30.1	149.9	137.1
Queue Length 50th (ft)	116	159	-120	168	40	97	-107	-469
Queue Length 95th (ft)	#253	#238	m#146	m#171	m#80	148	#223	#654
Internal Link Dist (ft)	390	295	551	551	697	697	225	639
Turn Bay Length (ft)	100	295	295	295	250	250	225	109
Base Capacity (vph)	209	719	96	553	108	723	145	531
Stavation 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	0.97	0.80	1.50	0.94	0.69	0.56	1.12	1.20
Intersection Summary								
-	Volume exceeds capacity, queue is theoretically infinite.							
-	Queue shown is maximum after two cycles.							
#	95th percentile volume exceeds capacity, queue may be longer.							
m	Queue shown is maximum after two cycles.							
m	Volume for 95th percentile queue is metered by upstream signal.							

HCM Signalized Intersection Capacity Analysis
1: Broadway & Western Connector

5/23/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Volume (vph)	187	439	87	130	448	22	69	294	83	143	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11	12	11
Total Lost time (s)	8.0	5.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.92	1.00	0.98	1.00	0.98	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	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98	1.00	0.99	1.00	0.99	1.00	0.97	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1444	2693	1444	2925	1444	2925	1390	2602	1450	1476	757
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1444	2693	1444	2925	1444	2925	1390	2602	1450	1476	757
Peak-Hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.93	0.93	0.93	0.88	0.88
Adj. Flow (vph)	203	477	95	144	498	24	74	316	89	162	638
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	203	572	0	144	522	0	74	405	0	162	638
Confl. Peds. (#/hr)	242	372	372	242	257	242	257	99	99	257	257
Confl. Bikes (#/hr)	321	321	321	18	18	18	24	24	24	36	36
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	13%	13%	12%	12%
Turn Types	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases	5										5
Actuated Green, G (s)	13.0	23.0		6.0	16.0		5.6	26.0		9.0	32.4
Effective Green, g (s)	13.0	23.0		6.0	16.0		5.6	26.0		9.0	32.4
Actuated g/C Ratio	0.14	0.26		0.07	0.18		0.06	0.29		0.10	0.36
Clearance Time (s)	8.0	5.0		8.0	5.0		5.0	5.0		8.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	209	688		96	520		86	752		145	531
v/s Ratio Prot	0.14	c0.21		0.10	c0.18		0.05	0.16		c0.11	c0.43
v/s Ratio Perm											
v/c Ratio	0.97	0.83		1.50	1.00		0.86	0.54		1.12	1.20
Uniform Delay, d1	38.3	31.7		42.0	37.0		41.8	26.9		40.5	28.8
Progression Factor	1.00	1.00		0.97	1.31		0.92	0.98		1.00	1.00
Incremental Delay, d2	53.8	11.2		246.8	26.7		46.0	2.2		109.7	107.7
Delay (s)	92.1	42.9		287.5	75.2		84.3	28.5		150.2	136.5
Level of Service	F	D		F	E		F	C		F	F
Approach Delay (s)											
Approach LOS											
Intersection Summary											
HCM Average Control Delay	131.0 HCM Level of Service F										
HCM Volume to Capacity ratio	1.56										
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 31.0										
Intersection Capacity Utilization	83.4% ICU Level of Service E										
Analysis Period (min)	15										
c. Critical Lane Group											

Lanes and Geometrics

2: Main Street & Western Connector

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	10	11	11	10	10	11	10	11	10
Lane Width (ft)	0	0%	250	120	0%	0	250	0%	0	0	0%	75
Storage Length (ft)	1	1	1	1	1	0	1	0	1	0	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.79	0.96	0.96	0.94	0.94	0.94	0.94	0.94	0.92	0.92	0.87	0.87
Flt Protected	0.950	0.950	0.950	0.970	0.970	0.957	0.957	0.957	0.950	0.950	0.850	0.850
Satd. Flow (prot)	1464	1438	0	1430	1418	0	2575	0	2575	0	1354	1476
Flt Permitted	0.576	0.556	0.556	0.556	0.556	0.779	0.779	0.779	0.447	0.447	0.447	0.447
Satd. Flow (perm)	703	1438	0	785	1418	0	2013	0	584	1476	1058	1058
Right Turn on Red			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	18	17	17	17	17	17	17	17	30	30	30	26
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	1009	1009	483	483	483	810	810	810	777	777	777	777
Travel Time (s)	22.9	22.9	11.0	11.0	11.0	18.4	18.4	18.4	17.7	17.7	17.7	17.7

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Western Connector

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	189	219	56	89	185	46	62	267	130	32	334	413
Contd. Peds. (#/hr)	490	83	83	83	36	490	36	132	132	132	36	36
Contd. Bikes (#/hr)			87			9		39				67
Peak Hour Factor	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)								0%				0%
Adj. Flow (vph)	199	231	59	105	218	54	68	293	143	35	367	454
Shared Lane Traffic (%)												
Lane Group Flow (vph)	199	290	0	105	272	0	0	504	0	35	367	454

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	1	1	1	1	3	3	3	3	3
Volume (vph)	189	219	89	185	62	267	32	334	413
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3	3
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)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%	47.8%
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39
v/c Ratio	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06	
Control Delay	32.4	19.7	27.3	27.7	22.1	21.8	23.3	60.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.4	19.7	27.3	27.7	22.1	21.8	23.3	60.0	
LOS	C	B	C	C	C	C	C	C	E
Approach Delay	24.9		27.6		22.1		42.7		
Approach LOS	C		C		C		D		
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 58 (64%), Referenced to phase 1:EBWB, Start of Green									
Natural Cycle: 90									
Control Type: Prelimed									
Maximum v/c Ratio: 1.06									
Intersection Signal Delay: 31.6									
Intersection Capacity Utilization: 129.1%									
Analysis Period (min): 15									



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	1	1	1	1	3	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Total Split (s)	47.0	47.0	47.0	47.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	52.2%	52.2%	52.2%	52.2%	47.8%	47.8%	47.8%	47.8%	47.8%
Maximum Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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	Max	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 58 (64%), Referenced to phase 1:EBWB, Start of Green									
Control Type: Prelimed									

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	199	290	105	272	504	35	367	454
Lane Group Flow (vph)	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06
v/c Ratio	32.4	19.7	27.3	27.7	22.1	21.8	23.3	60.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	32.4	19.7	27.3	27.7	22.1	21.8	23.3	60.0
Total Delay	87	105	59	126	100	12	122	-158
Queue Length 50th (ft)	#181	177	m69	m137	154	m10	m104	m119
Queue Length 95th (ft)	929		403	730		697		75
Internal Link Dist (ft)		120						
Turn Bay Length (ft)	305	633	340	624	830	227	574	427
Base Capacity (vph)	0	0	0	0	0	0	0	0
Station 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	0.65	0.46	0.31	0.44	0.61	0.15	0.64	1.06
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	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Volume (vph)	189	219	56	89	185	46	62	267	130	32	334	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	11	11	10	10	11	10	11	10
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.94	1.00	1.00	1.00	0.87
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.94	1.00	0.94	1.00	0.92	1.00	1.00	0.85
Flpb, ped/bikes	0.79	1.00	0.97	1.00	0.97	1.00	0.96	1.00	0.95	1.00	1.00	0.85
Frt	1.00	0.97	1.00	1.00	0.97	1.00	0.99	1.00	0.95	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.99	1.00	0.95	1.00	1.00	0.85
Satd. Flow (prot)	1159	1439	1341	1418	2569	1242	1476	1058	1242	1476	1058	1058
Flt Permitted	0.58	1.00	0.56	1.00	0.78	1.00	0.78	1.00	0.45	1.00	1.00	0.85
Satd. Flow (perm)	702	1439	784	1418	2015	584	1476	1058	584	1476	1058	1058
Peak-Hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	199	231	59	105	218	54	68	293	143	35	367	454
RTOR Reduction (vph)	0	10	0	0	10	0	0	47	0	0	0	16
Lane Group Flow (vph)	199	280	0	105	262	0	0	457	0	35	367	438
Confl. Peds. (#/hr)	490	83	83	83	490	36	132	132	39	39	67	67
Confl. Bikes (#/hr)	87			9								
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	12%	12%	12%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3
Actuated Green, G (s)	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Effective Green, g (s)	39.0	39.0	39.0	39.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	304	624	340	614	784	227	574	411	227	574	411	411
v/s Ratio Prot	0.19			0.19								
v/s Ratio Perm	c0.28			0.13			0.23					0.41
v/c Ratio	0.65	0.45	0.31	0.43	0.58	0.15	0.64	1.07	0.15	0.64	1.07	1.07
Uniform Delay, d1	20.2	17.9	16.7	17.7	21.7	17.9	22.4	27.5	17.9	22.4	27.5	27.5
Progression Factor	1.00	1.00	1.48	1.54	1.00	1.16	0.98	0.91	1.16	0.98	0.91	0.91
Incremental Delay, d2	10.5	2.3	1.4	1.3	3.2	0.1	0.5	35.1	0.1	0.5	35.1	35.1
Delay (s)	30.7	20.3	26.0	28.6	24.9	20.8	22.5	60.2	20.8	22.5	60.2	60.2
Level of Service	C	C	C	C	C	C	C	C	C	C	C	E
Approach Delay (s)	24.5			27.9			42.4				42.4	
Approach LOS	C			C			D				D	
Intersection Summary												
HCM Average Control Delay	32.1 HCM Level of Service C											
HCM Volume to Capacity ratio	0.85											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 16.0											
Intersection Capacity Utilization	129.1% ICU Level of Service H											
Analysis Period (min)	15											
c Critical Lane Group												

Lanes and Geometrics

3: Main Street & Ames Street

5/23/2014

	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)	12	12	12	12	16	12	12	12	12	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	100
Storage Lanes	0	0	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.77	0.981	0.78	0.958	0.990	0.990	0.990	0.990	0.850	0.850	0.850	0.850
Flt Protected	0.984	0.984	0.994	0.994	0.982	0.982	0.982	0.972	0.972	0.972	0.972	0.972
Sat'd Flow (prot)	0	1259	0	1398	0	1397	0	1502	1182	1502	1182	1182
Flt Permitted	0.837	0.922	0.838	0.922	0.838	0.838	0.838	0.659	0.659	0.659	0.659	0.659
Sat'd Flow (perm)	0	900	0	1254	0	1001	0	879	536	879	536	536
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Sat'd Flow (RTOR)												
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	483	483	490	490	536	536	536	263	263	263	263	263
Travel Time (s)	11.0	11.0	11.1	11.1	12.2	12.2	12.2	6.0	6.0	6.0	6.0	6.0
Intersection Summary												
Area Type:	CBD											

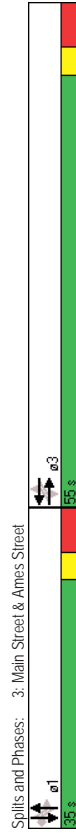
Volume

3: Main Street & Ames Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Volume (vph)	121	205	54	17	74	41	98	155	21	53	40	149
Cont'l. Peds. (#/hr)	769	546	546	769	194	163	163	163	163	163	163	194
Cont'l. Bikes (#/hr)			107			15			1			34
Peak Hour Factor	0.83	0.83	0.83	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	6%	6%	6%	3%	3%	3%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	146	247	65	19	84	47	108	170	23	60	45	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	458	0	0	150	0	0	301	0	0	105	167
Intersection Summary												

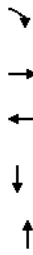
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	121	205	17	74	98	155	53	40
Volume (vph)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	3	3	3	3	1	1	1	1
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	40.0	40.0	40.0	40.0	23.0	23.0	23.0	23.0
Total Split (s)	55.0	55.0	55.0	55.0	35.0	35.0	35.0	35.0
Total Spilt (%)	61.1%	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.0	47.0	0.52	0.52	27.0	27.0	27.0	27.0
Actuated g/C Ratio	0.52	0.52	0.23	0.23	1.00	1.00	0.40	1.04
v/c Ratio	0.97	0.97	12.8	12.8	87.0	87.0	33.1	111.9
Control Delay	52.6	52.6	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	52.6	12.8	12.8	87.0	87.0	33.1	111.9
LOS	D	D	B	B	F	F	C	F
Approach Delay	52.6	52.6	12.8	12.8	87.0	87.0	81.5	F
Approach LOS	D	D	B	B	F	F	F	F
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 1.04								
Intersection Signal Delay: 63.0								
Intersection Capacity Utilization 81.7%								
Analysis Period (min) 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	40.0	40.0	40.0	40.0	23.0	23.0	23.0	23.0
Total Split (s)	55.0	55.0	55.0	55.0	35.0	35.0	35.0	35.0
Total Spilt (%)	61.1%	61.1%	61.1%	61.1%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	13.0	13.0	13.0	13.0	1.0	1.0	1.0	1.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 44 (49%), Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

Queues
3: Main Street & Ames Street

5/23/2014



EBT	WBT	NBT	SBT	SBR
458	150	301	105	167
0.97	0.23	1.00	0.40	1.04
52.6	12.8	87.0	33.1	111.9
0.0	0.0	0.0	0.0	0.0
52.6	12.8	87.0	33.1	111.9
160	44	-171	40	-108
#388	78	#339	m83	m#214
403	410	456	183	100
470	655	300	264	161
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0.97	0.23	1.00	0.40	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.

HCM Signalized Intersection Capacity Analysis
3: Main Street & Ames Street

5/23/2014



EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
121	205	54	17	74	41	98	155	21	53	40	149
1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
12	12	12	12	16	12	12	12	12	11	11	11
8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.92	0.80	0.80	0.80	0.96	0.96	0.96	0.96	0.96	0.86	0.86	0.86
0.84	0.84	0.97	0.84	0.97	0.84	0.84	0.84	0.84	0.86	0.86	0.86
0.98	0.98	0.96	0.96	0.99	0.99	0.99	0.99	0.99	1.00	1.00	1.00
0.98	0.98	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.97	0.97	0.97
1058	1058	1351	1351	1173	1173	1173	1173	1173	1297	1297	1297
0.84	0.84	0.92	0.92	0.84	0.84	0.84	0.84	0.84	0.66	0.66	0.66
900	900	1254	1254	1001	1001	1001	1001	1001	879	879	879
0.83	0.83	0.83	0.88	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89
146	247	65	19	84	47	108	170	23	60	45	167
0	0	0	0	0	0	0	0	0	0	0	0
0	458	0	0	150	0	301	0	0	105	167	194
769	546	546	546	769	194	163	163	163	163	163	194
107	107	15	15	15	15	15	15	15	34	34	34
8%	8%	8%	6%	6%	6%	6%	3%	3%	3%	7%	7%
0	0	0	0	0	0	0	0	0	0	0	0
Perm	3	3	3	3	3	3	1	1	1	1	1
3	3	3	3	3	3	3	1	1	1	1	1
47.0	47.0	47.0	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
47.0	47.0	47.0	47.0	47.0	47.0	47.0	27.0	27.0	27.0	27.0	27.0
0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.30	0.30	0.30	0.30	0.30
8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
470	470	655	655	655	655	655	300	300	264	264	161
c0.51	0.12	0.12	0.12	0.12	0.12	0.12	0.30	0.30	0.12	0.12	c0.31
0.97	0.23	0.23	0.23	0.23	0.23	0.23	1.00	1.00	0.40	0.40	1.04
20.9	11.7	11.7	11.7	11.7	11.7	11.7	31.5	31.5	25.0	25.0	31.5
0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.12	1.12	1.12	1.12	1.12
33.9	0.8	0.8	0.8	0.8	0.8	0.8	52.8	52.8	31.8	31.8	109.3
48.9	12.5	12.5	12.5	12.5	12.5	12.5	84.3	84.3	31.8	31.8	109.3
D	D	B	B	B	B	B	F	F	C	C	F
48.9	48.9	12.5	12.5	12.5	12.5	12.5	84.3	84.3	79.4	79.4	E
D	D	B	B	B	B	B	F	F	E	E	E

Intersection Summary
 HCM Average Control Delay: 60.3 HCM Level of Service: E
 HCM Volume to Capacity ratio: 1.00
 Actuated Cycle Length (s): 90.0 Sum of lost time (s): 16.0
 Intersection Capacity Utilization: 81.7% ICU Level of Service: D
 Analysis Period (min): 15
 Critical Lane Group: c

Lanes and Geometrics

4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	160	0	0	0	100
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	50	50
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	0.85	0.79	0.45	0.45	0.850
Flt	0.979				0.950	
Flt Protected					1481	1326
Satd. Flow (prot)	2623	0	1510	1589	1481	1326
Flt Permitted					0.950	
Satd. Flow (perm)	2623	0	336	1589	1175	600
Right Turn on Red	Yes				Yes	Yes
Satd. Flow (RTOR)	21					216
Link Speed (mph)	30			30	30	30
Link Distance (ft)	631			396	289	
Travel Time (s)	14.3			9.0	6.6	
Intersection Summary						
Area Type:	CBD					

Volume

4: Broadway east & Ames Street

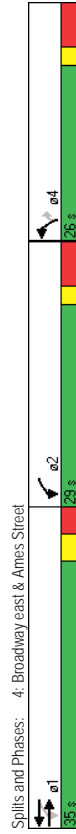
5/23/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	569	91	256	493	139	203
Contl. Peds. (#/hr)	323	323	323	138	271	
Contl. Bikes (#/hr)	247				3	
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	0%
Adj. Flow (vph)	612	98	269	519	148	216
Shared Lane Traffic (%)						
Lane Group Flow (vph)	710	0	269	519	148	216
Intersection Summary						

Timings
4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	569	256	493	139	203
Turn Type	pmm+pt Perm				
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9% 32.2% 38.9% 28.9% 28.9%				
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	19.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.21
v/c Ratio	0.83	0.57	1.01	0.47	0.73
Control Delay	21.6	16.1	64.2	32.5	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	16.1	64.2	32.5	14.8
LOS	C	B	E	C	B
Approach Delay	21.6		47.8	22.0	
Approach LOS	C		D	C	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.01					
Intersection Signal Delay: 32.8					
Intersection Capacity Utilization 71.6%					
Analysis Period (min) 15					



Phasings
4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9% 32.2% 38.9% 28.9% 28.9%				
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 80 (89%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL	NBR
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	710	269	519	148	216
v/c Ratio	0.83	0.57	1.01	0.47	0.73
Control Delay	21.6	16.1	64.2	32.5	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	16.1	64.2	32.5	14.8
Queue Length 50th (ft)	197	70	-329	72	20
Queue Length 95th (ft)	m217	m65	m301	m83	m28
Internal Link Dist (ft)	551		316	209	
Turn Bay Length (ft)	160				100
Base Capacity (vph)	859	474	512	313	297
Stavation 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	0.83	0.57	1.01	0.47	0.73
Intersection Summary					
- Volume exceeds capacity, queue is theoretically infinite.					
Queue shown is maximum after two cycles.					
m Volume for 95th percentile queue is metered by upstream signal.					

	EBT	EBR	WBL	WBT	NBL	NBR	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑	↑	↑	↑	↑	↑	
Volume (vph)	569	91	256	493	139	203	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width	10	12	11	11	11	11	
Total Lost time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Frb. ped/bikes	0.91	1.00	1.00	1.00	0.45	0.45	
Frb. ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00	
Frt	0.98	1.00	1.00	1.00	0.85	0.85	
Flt Protected	1.00	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	2624	1461	1589	1481	600	600	
Flt Permitted	1.00	0.25	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	2624	385	1589	1481	600	600	
Peak-Hour factor, PHF	0.93	0.93	0.95	0.95	0.94	0.94	
Adj. Flow (vph)	612	98	269	519	148	216	
RTOR Reduction (vph)	14	0	0	0	0	170	
Lane Group Flow (vph)	696	0	269	519	148	46	
Confl. Peds. (#/hr)	323	323			138	271	
Confl. Bikes (#/hr)	247				3		
Heavy Vehicles (%)	3%	3%	4%	4%	6%	6%	
Turn Type	pm+pt Perm						
Protected Phases	1	2	1	1	4		
Permitted Phases	1						
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Effective Green, g (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.21	0.21	
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	846	481	512	313	127		
v/s Ratio Prot	0.27	c0.14	c0.33	c0.10			
v/s Ratio Perm	0.82	0.18	0.56	1.01	0.47	0.36	
v/c Ratio	28.1	19.5	30.5	31.1	30.3		
Uniform Delay, d1	0.58	0.79	1.63	0.93	1.05		
Progression Factor	4.8	0.4	15.5	2.8	4.3		
Incremental Delay, d2	21.1	15.9	65.3	31.8	36.2		
Delay (s)	C	B	E	C	D		
Level of Service	C	B	E	C	D		
Approach Delay (s)	21.1		48.4	34.4			
Approach LOS	C		D	C			
Intersection Summary							
HCM Average Control Delay	35.3					HCM Level of Service	D
HCM Volume to Capacity ratio	0.72						
Actuated Cycle Length (s)	90.0					Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.6%					ICU Level of Service	C
Analysis Period (min)	15						
c Critical Lane Group							

Lanes and Geometrics

5: Broadway east & Third Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	11	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97	0.983	0.93	0.945	0.93	0.945	0.93	0.945	0.93	0.945	0.93	0.945
FI Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1444	2697	0	0	2731	0	0	0	0	0	1473	1304
FI Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1444	2697	0	0	2731	0	0	0	0	0	1473	1304
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	17	17	17	17	17	17	17	17	17	17	17	17
Link Speed (mph)	30	30	30	30	30	30	30	30	30	30	30	30
Link Distance (ft)	581	581	581	581	581	581	581	581	581	581	581	581
Travel Time (s)	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2

Intersection Summary

Area Type: CBD

Volume

5: Broadway east & Third Street

5/23/2014

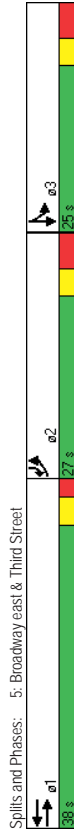
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	277	360	46	70	70	103	0	0	0	200	41	209
Volume (vph)	277	360	46	70	70	103	0	0	0	200	41	209
Cont'l. Peds. (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Cont'l. Bikes (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	334	434	55	768	768	444	0	0	0	217	45	227
Shared Lane Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lane Group Flow (vph)	334	489	0	0	1212	0	0	0	0	0	262	227

Intersection Summary

Timings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Configurations	5	4	4	4	4
Volume (vph)	277	360	730	41	209
Turn Type	Prot	Over			
Protected Phases	2	1	1	3	2
Permitted Phases	2	1	1	3	2
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	27.0	37.0	37.0	25.0	27.0
Total Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (%)	30.0%	42.2%	42.2%	27.8%	30.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	20.0	33.0	33.0	18.0	20.0
Actuated g/C Ratio	0.22	0.37	0.37	0.20	0.22
v/c Ratio	1.04	0.49	1.21	0.89	0.78
Control Delay	84.2	14.5	132.5	67.4	53.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	14.5	132.5	67.4	53.5
LOS	F	B	F	E	D
Approach Delay		42.8	132.5	60.9	
Approach LOS		D	F	E	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 140					
Control Type: Prelimed					
Maximum v/c Ratio: 1.21					
Intersection Signal Delay: 89.4					
Intersection Capacity Utilization: 87.3%					
Analysis Period (min): 15					



Spills and Phases: 5: Broadway east & Third Street

Phasings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Protected Phases	2	1	1	3	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	27.0	37.0	37.0	25.0	27.0
Minimum Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (s)	27.0	38.0	38.0	25.0	27.0
Total Split (%)	30.0%	42.2%	42.2%	27.8%	30.0%
Maximum Green (s)	20.0	33.0	33.0	18.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	7.0	17.0	17.0	6.0	7.0
Flash Dont Walk (s)	12.0	12.0	12.0	11.0	12.0
Pedestrian Calls (/hr)	0	0	0	0	0
90th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)	20.0	33.0	33.0	18.0	20.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBL	EBT	WBT	WBT	SBT	SBR
Lane Group	334	489	1212	262	227	
Lane Group Flow (vph)	1.04	0.49	1.21	0.89	0.78	
v/c Ratio	84.2	14.5	132.5	67.4	53.5	
Control Delay	0.0	0.0	0.0	0.0	0.0	
Queue Delay	84.2	14.5	132.5	67.4	53.5	
Total Delay	-214	47	-447	146	122	
Queue Length 50th (ft)	m#315	m81	#576	#286	#240	
Queue Length 95th (ft)	501	313	1132			
Internal Link Dist (ft)	340				160	
Turn Bay Length (ft)	321	1000	1001	295	290	
Base Capacity (vph)	0	0	0	0	0	
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	1.04	0.49	1.21	0.89	0.78	
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)	277	360	46	730	422	0	0	0	200	41	209		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	70	11	10	11	11	11	12	12	12	10	10		
Total Lost time (s)	7.0	5.0		5.0						7.0	7.0		
Lane Util. Factor	1.00	0.95		0.95						1.00	1.00		
Fpb. ped/bikes	1.00	0.97		0.93						1.00	1.00		
Ftbb. ped/bikes	1.00	1.00		1.00						1.00	1.00		
Frt	1.00	0.98		0.95						1.00	0.85		
Flt Protected	0.95	1.00		1.00						0.96	1.00		
Satd. Flow (prot)	1444	2698		2731						1474	1304		
Flt Permitted	0.95	1.00		1.00						0.96	1.00		
Satd. Flow (perm)	1444	2698		2731						1474	1304		
Peak-hour factor, PHF	0.83	0.83	0.83	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	334	434	55	768	444	0	0	0	217	45	227		
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0		
Lane Group Flow (vph)	334	478	0	0	1212	0	0	0	0	0	262		
Confl. Peds. (#/hr)			70	70	103								
Confl. Bikes (#/hr)			199		19								
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	4%	4%		
Parking (#/hr)	0												
Turn Type	Prot	2	1	1	1				Split	3	2		
Protected Phases													
Permitted Phases													
Actuated Green, G (s)	20.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0		
Effective Green, g (s)	20.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0		
Actuated q/C Ratio	0.22	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Clearance Time (s)	7.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Grp Cap (vph)	321	989		1001						295	290		
v/s Ratio Prot	c0.23	0.18		c0.44						c0.18	0.17		
v/s Ratio Perm													
v/c Ratio	1.04	0.48	1.21	1.21						0.89	0.78		
Uniform Delay, d1	35.0	21.9	28.5	28.5						35.0	33.0		
Progression Factor	0.80	0.62	1.00	1.00						1.00	1.00		
Incremental Delay, d2	53.0	1.2	104.3	104.3						30.3	18.8		
Delay (s)	81.2	14.8	132.8	132.8						65.3	51.7		
Level of Service	F	B	F	F						E	D		
Approach Delay (s)	41.8		132.8		0.0					59.0			
Approach LOS	D		F		A					E			
Intersection Summary													
HCM Average Control Delay	88.8											HCM Level of Service	F
HCM Volume to Capacity ratio	1.08												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	19.0
Intersection Capacity Utilization	87.3%											ICU Level of Service	E
Analysis Period (min)	15												
c. Critical Lane Group													

Lanes and Geometrics
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.952					
FIT Protected	0.969					
Satd. Flow (prot)	1577	0	1559	0	0	1545
FIT Permitted	0.969					
Satd. Flow (perm)	1577	0	1559	0	0	1545
Link Speed (mph)	30		30			30
Link Distance (ft)	239		263			289
Travel Time (s)	5.4		6.0			6.6
Intersection Summary						
Area Type:	CBD					

Volume
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Volume (vph)	20	11	312	0	0	226
Confl. Peds. (#/hr)	109	120		185	185	
Confl. Bikes (#/hr)				12		
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	6%	6%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	27	15	332	0	0	254
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	332	0	0	254
Intersection Summary						

5/23/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	W		T			T
Volume (veh/h)	20	11	312	0	0	226
Sign Control	Stop		Free			Free
Grade (%)	0%		0%			0%
Peak Hour Factor	0.74	0.74	0.94	0.94	0.89	0.89
Hourly flow rate (vph)	27	15	332	0	0	254
Pedestrians	185		109			120
Lane Width (ft)	12.0		11.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	15		8			9
Right turn flare (veh)			None			None
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			2.63			2.89
pX platoon unblocked						
vC conflicting volume	880	637			517	
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	880	637			517	
vCu unblocked vol	6.4	6.2			4.2	
IC 2 stage (s)						
IF (s)	3.5	3.3			2.3	
p0 queue free %	89	96			100	
GM capacity (veh/h)	248	369			866	
Direction_Lane #	WBL	NB 1	SB 1			
Volume Total	42	332	254			
Volume Left	27	0	0			
Volume Right	15	1700	866			
cSH	281					
Volume to Capacity	0.15	0.20	0.00			
Queue Length 95th (ft)	13	0	0			
Control Delay (s)	20.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	20.0	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	1.3					
Intersection Capacity Utilization	38.1%					
Analysis Period (min)	15					
	ICU Level of Service A					

5/23/2014
 Lanes and Geometrics
 7: Broadway east &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.983		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1632	0	1608	1693	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1632	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	396		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	668	97	110	775	0	20
Volume (vph)	668	97	110	775	0	20
Confl. Peds. (#/hr)	300	300	300	300	0	255
Confl. Bikes (#/hr)	264					
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	718	104	116	816	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	822	0	116	816	0	20
Intersection Summary						

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	668	97	110	775	0	20
Volume (veh/h)	668	97	110	775	0	20
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.93	0.93	0.95	0.95	1.00	1.00
Hourly flow rate (vph)	718	104	116	816	0	20
Pedestrians	255	300				
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage					21	25
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked	0.71			0.71	0.80	0.71
vC, conflicting volume	1123			1123	2118	1325
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	972			972	1469	1256
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)						
IC, 2 stage (s)						
IF (s)	2.2	2.2	2.2	2.2	3.5	3.3
p0 queue free %	70	70	70	70	100	78
gM capacity (veh/h)	382	382	382	382	59	89
Direction, Lane #						
	EB 1	WB 1	WB 2	NB 1		
Volume Total	823	116	816	20		
Volume Left	0	116	0	0		
Volume Right	104	0	0	20		
cSH	1700	382	1700	89		
Volume to Capacity	0.48	0.30	0.48	0.22		
Queue Length 95th (ft)	0	31	0	20		
Control Delay (s)	0.0	18.5	0.0	56.7		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	2.3	56.7			
Approach LOS			F			
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			76.8%		ICU Level of Service	D
Analysis Period (min)			15			

**Intersection *Synchro* Analysis
Weekday Evening Peak**

2014 Existing Condition

Lanes and Geometrics
1: Broadway & Western Connector

5/12/2014

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	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	0	225	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.84	0.96	0.86	0.86	0.98	0.86	0.98	0.86	0.95	0.95	0.64	0.64
Frt	0.981			0.992			0.974			0.950		0.850
FRT Protected	0.950			0.950			0.950			0.950		0.950
Satd. Flow (prot)	1501	2921	0	1486	2984	0	1525	2901	0	1583	1621	1330
FRT Permitted	0.950			0.950			0.950			0.950		0.950
Satd. Flow (perm)	1258	2921	0	1281	2984	0	1317	2901	0	1518	1621	852
Right Turn on Red			No			No			No		No	No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			30			30	
Link Distance (ft)		470			631			777			719	
Travel Time (s)		12.8			14.3			17.7			16.3	
Intersection Summary												
Area Type:	CBD											

Volume
1: Broadway & Western Connector

5/12/2014

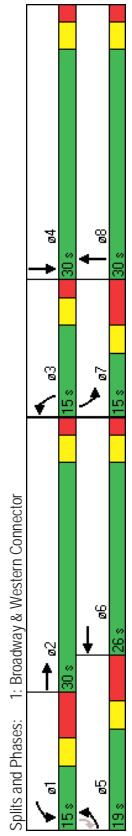
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	160	445	65	150	450	25	130	445	95	85	270	130
Confl. Peds. (#/hr)	412	321	321	412	192	230	88	88	20	88	88	192
Confl. Bikes (#/hr)			27									25
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	188	524	76	176	529	29	144	494	106	96	303	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	600	0	176	558	0	144	600	0	96	303	146
Intersection Summary												

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	27.0	12.0	25.0	9.0	27.0	12.0	30.0
Total Split (s)	19.0	30.0	15.0	26.0	15.0	30.0	15.0	30.0
Total Split (%)	21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	16.7%	33.3%
Maximum Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	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)	5.0	2.0	5.0	2.0	2.0	2.0	5.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	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	None	Max	None	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0
Flash Dont Walk (s)	15.0	13.0	13.0	15.0	15.0	15.0	15.0	0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
70th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
50th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
30th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
10th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
10th %ile Term Code	Max	Coord	Max	Coord	Max	MaxR	Max	MaxR

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2,EBT and 6,WBT, Start of Green
 Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Volume (vph)	160	445	150	450	130	445	85	270
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	5	2	1	6	3	8	7	4
Switch Phase	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	12.0	27.0	12.0	25.0	9.0	27.0	12.0	30.0
Minimum Split (s)	19.0	30.0	15.0	26.0	15.0	30.0	15.0	30.0
Total Split (s)	28.9%	33.3%	16.7%	28.9%	16.7%	33.3%	16.7%	33.3%
Total Split (%)	21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	16.7%	33.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	2.0	5.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.0	8.0	5.0	5.0	5.0	8.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	Max	None	Max
Act Effct Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Actuated g/C Ratio	0.12	0.28	0.08	0.23	0.11	0.28	0.08	0.28
v/c Ratio	1.03	0.74	1.52	0.80	0.85	0.74	0.77	0.67
Control Delay	115.5	36.0	272.0	44.4	77.4	30.2	79.8	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.5	36.0	272.0	44.4	77.4	30.2	79.8	37.5
LOS	F	D	F	D	E	C	E	D
Approach Delay	55.0	99.0	F	F	D	D	F	F
Approach LOS	D	F	F	F	D	D	F	F

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2,EBT and 6,WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.52
 Intersection Signal Delay: 72.1
 Intersection Capacity Utilization: 75.6%
 Analysis Period (min): 15



Queues
1: Broadway & Western Connector

5/12/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	188	600	176	558	144	600	96	303	146
v/c Ratio	1.03	0.74	1.52	0.80	0.85	0.74	0.77	0.67	1.40
Control Delay	115.5	36.0	272.0	44.4	77.4	30.2	79.8	37.5	262.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.5	36.0	272.0	44.4	77.4	30.2	79.8	37.5	262.7
Queue Length 50th (ft)	-115	163	-137	183	88	155	55	153	-112
Queue Length 95th (ft)	#226	208	m#151	m184	m#126	m202	#136	241	#227
Internal Link Dist (ft)	390	390	551	551	697	697	639	639	639
Turn Bay Length (ft)	100	295	295	250	250	225	225	225	225
Base Capacity (vph)	183	811	176	696	169	806	124	450	104
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.74	1.52	0.80	0.85	0.74	0.77	0.67	1.40
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.								

HCM Signalized Intersection Capacity Analysis
1: Broadway & Western Connector

5/12/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	160	445	65	150	450	25	130	445	95	85	270	130
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	10
Total Lost time (s)	8.0	5.0	8.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	8.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.64
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	1.00	1.00
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	1.00
Frt	1.00	0.98	1.00	1.00	0.99	1.00	0.97	1.00	0.97	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1501	2921	1486	2984	1525	2900	1593	1621	852	1593	1621	852
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1501	2921	1486	2984	1525	2900	1593	1621	852	1593	1621	852
Peak-Hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	188	524	76	176	529	29	144	494	106	96	303	146
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	188	600	0	176	558	0	144	600	0	96	303	146
Conf. Peds. (#/hr)	412	321	321	412	192	230	88	88	20	25	25	25
Conf. Bikes (#/hr)	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	5	7	4	5
Permitted Phases	5	2	1	6	3	8	7	4	5	7	4	5
Actuated Green, G (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	7.0	25.0	11.0
Effective Green, g (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	7.0	25.0	11.0
Actuated g/c Ratio	0.12	0.28	0.08	0.23	0.11	0.28	0.08	0.28	0.12	0.08	0.28	0.12
Clearance Time (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	183	811	116	696	169	806	124	450	104	96	303	146
v/s Ratio Prot	0.13	c0.21	0.12	0.19	c0.09	c0.21	0.06	0.19	c0.17	0.06	0.19	c0.17
v/s Ratio Perm	1.03	0.74	1.52	0.80	0.85	0.74	0.77	0.67	1.40	0.77	0.67	1.40
Uniform Delay, d1	39.5	29.5	41.5	32.5	39.3	29.6	40.7	28.9	39.5	40.7	28.9	39.5
Progression Factor	1.00	1.00	0.53	1.24	1.22	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	73.9	6.0	247.7	3.5	22.8	4.1	25.4	7.8	229.4	25.4	7.8	229.4
Delay (s)	113.4	35.5	269.6	43.8	70.5	29.8	66.1	36.7	268.9	66.1	36.7	268.9
Level of Service	F	D	F	D	E	C	E	D	F	E	D	F
Approach Delay (s)	54.1	97.9	37.7	104.1	37.7	104.1	37.7	104.1	37.7	104.1	37.7	104.1
Approach LOS	D	F	D	F	D	F	D	F	D	F	D	F
Intersection Summary												
HCM Average Control Delay	70.9 HCM Level of Service E											
HCM Volume to Capacity ratio	0.91											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 23.0											
Intersection Capacity Utilization	75.6% ICU Level of Service D											
Analysis Period (min)	15											
c. Critical Lane Group												

Lanes and Geometrics

2: Main Street & Galileo Way

5/12/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	11	10	10	11	10	11	10
Grade (%)	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	250	120	0	250	0	250	0	0	0	0	75
Storage Lanes	1	1	1	0	1	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.76	0.95	0.86	0.93	0.93	0.90	0.90	0.91	0.91	0.84	0.84	0.84
Frt	0.950	0.971	0.950	0.968	0.955	0.955	0.955	0.950	0.950	0.850	0.850	0.850
Flt Protected	1593	1551	0	1501	1474	0	2589	0	2589	0	1501	1637
Satd Flow (prot)	0.633	0.563	0.563	0.823	0.823	0.823	0.823	0.333	0.333	0.333	0.333	0.333
Flt Permitted	829	1551	0	765	1474	0	2129	0	2129	0	477	1637
Satd Flow (perm)	18	18	Yes	20	20	Yes	84	84	84	Yes	1129	1129
Right Turn on Red	30	30	30	30	30	30	30	30	30	30	30	30
Satd Flow (RTOR)	1009	1009	1009	483	483	483	810	810	810	810	777	777
Link Speed (mph)	22.9	22.9	22.9	11.0	11.0	11.0	18.4	18.4	18.4	18.4	17.7	17.7
Link Distance (ft)												
Travel Time (s)												

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Galileo Way

5/12/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	265	210	50	60	110	30	60	345	175	30	255	200
Contl. Peds. (#/hr)	508	199	199	199	67	508	67	180	180	180	180	67
Contl. Bikes (#/hr)			26			65		49				50
Peak Hour Factor	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)								0%				0%
Adj. Flow (vph)	298	236	56	71	129	35	67	388	197	36	307	241
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	292	0	71	164	0	0	652	0	36	307	241

Intersection Summary

Timings
2. Main Street & Galileo Way

5/12/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	EB	EB	WB	WB	NB	NB	SB	SB
Volume (vph)	265	210	60	110	60	345	30	255
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-3.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36
v/c Ratio	0.77	0.40	0.20	0.23	0.80	0.21	0.53	0.56
Control Delay	36.0	16.7	27.1	23.4	31.8	31.8	36.0	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	16.7	27.1	23.4	31.8	31.8	36.0	34.0
LOS	D	B	C	C	C	C	D	C
Approach Delay		26.4		24.5		31.8		34.9
Approach LOS		C		C		C		C
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 0.80								
Intersection Signal Delay: 30.3								
Intersection Capacity Utilization 131.3%								
Analysis Period (min) 15								



Phasings
2. Main Street & Galileo Way

5/12/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Maximum Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	298	292	71	164	652	36	307	241
Lane Group Flow (vph)	0.77	0.40	0.20	0.23	0.80	0.21	0.53	0.56
v/c Ratio	36.0	16.7	27.1	23.4	31.8	31.8	36.0	34.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.0	16.7	27.1	23.4	31.8	31.8	36.0	34.0
Total Delay	136	98	29	60	153	20	184	131
Queue Length 50th (ft)	#277	159	m52	m108	#226	m25	m203	m152
Queue Length 95th (ft)	929		403	730		697		75
Internal Link Dist (ft)			120					75
Turn Bay Length (ft)			387	733	357	699	811	170
Base Capacity (vph)	0	0	0	0	0	0	0	0
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	0.77	0.40	0.20	0.23	0.80	0.21	0.53	0.56

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.

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	265	210	50	60	110	30	345	415	175	30	255	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	11	11	10	10	11	10	11	10
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frpb. ped/bikes	1.00	0.95	1.00	1.00	0.93	1.00	0.91	1.00	1.00	1.00	1.00	0.84
Flpb. ped/bikes	0.76	1.00	0.86	1.00	0.86	1.00	0.99	1.00	0.91	1.00	1.00	1.00
Fr	1.00	0.97	1.00	0.97	1.00	0.97	0.95	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.99	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1205	1552	1291	1474	1474	2572	1361	1637	1129	1361	1637	1129
Flt Permitted	0.65	1.00	0.56	1.00	0.82	1.00	0.82	1.00	0.82	1.00	1.00	1.00
Satd. Flow (perm)	829	1552	766	1474	1474	2129	476	1637	1129	476	1637	1129
Peak-Hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Adj. Flow (vph)	298	236	56	71	129	35	67	388	197	36	307	241
RTOR Reduction (vph)	0	10	0	0	11	0	0	54	0	0	0	26
Lane Group Flow (vph)	298	282	0	71	153	0	0	598	0	36	307	215
Confl. Peds. (#/hr)	508	199	199	508	67	180	180	67	49	65	49	67
Confl. Bikes (#/hr)	26	26	26	65	65	65	65	65	49	65	49	67
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3
Actuated Green, G (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0
Effective Green, g (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	387	724	357	688	757	757	169	582	169	582	401	401
v/s Ratio Phot	0.18	0.18	0.18	0.10	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08
v/s Ratio Perm	c0.36	c0.36	c0.36	0.09	0.09	0.09	c0.28	c0.28	c0.28	c0.28	c0.28	c0.28
v/c Ratio	0.77	0.39	0.20	0.22	0.22	0.22	0.79	0.79	0.79	0.21	0.53	0.54
Uniform Delay, d1	20.0	15.6	14.1	14.3	14.3	26.0	20.2	23.0	23.0	23.1	23.1	23.1
Progression Factor	1.00	1.00	1.76	1.77	1.77	1.00	1.42	1.46	1.46	1.46	1.58	1.58
Incremental Delay, d2	13.7	1.6	1.0	0.6	0.6	8.2	1.2	1.4	1.4	2.1	2.1	2.1
Delay (s)	33.7	17.2	25.9	26.0	26.0	34.2	30.0	35.0	35.0	38.7	38.7	38.7
Level of Service	C	B	C	C	C	C	C	C	C	C	D	D
Approach Delay (s)	25.6	25.6	25.9	25.9	25.9	34.2	34.2	36.2	36.2	36.2	36.2	36.2
Approach LOS	C	C	C	C	C	C	C	D	D	D	D	D

Intersection Summary

HCM Average Control Delay 31.4 HCM Level of Service C
HCM Volume to Capacity ratio 0.78

Actuated Cycle Length (s) 90.0 Sum of lost time (s) 16.0

Intersection Capacity Utilization 131.3% ICU Level of Service H

Analysis Period (min) 15

c Critical Lane Group

Lanes and Geometrics
3: Main Street & Ames Street

5/12/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	12	12	12
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.86	0.980	0.929	0.995	0.995	0.989	0.989	0.989	0.979	0.979	0.979	0.850
Ped Bike Factor	0.86	0.980	0.929	0.995	0.995	0.989	0.989	0.989	0.979	0.979	0.979	0.850
FRT	0.980	0.929	0.995	0.995	0.989	0.989	0.989	0.989	0.979	0.979	0.979	0.850
FRT Protected	0.995	0.929	0.995	0.995	0.989	0.989	0.989	0.989	0.979	0.979	0.979	0.850
Satd. Flow (prot)	0	1341	0	0	1170	0	0	1424	0	0	1547	1295
FRT Permitted	0.958	0.947	0.947	0.947	0.947	0.947	0.947	0.947	0.947	0.947	0.947	0.705
Satd. Flow (perm)	0	1226	0	0	1079	0	0	1150	0	0	963	602
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	483	490	490	490	490	490	490	490	490	490	490	282
Travel Time (s)	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	6.4

Intersection Summary
Area Type: CBD

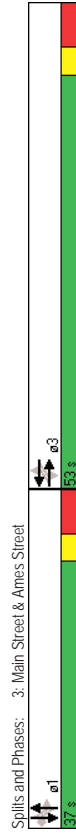
Volume
3: Main Street & Ames Street

5/12/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	40	315	60	10	40	55	55	175	20	70	90	105
Cont'l. Peds. (#/hr)	787	879	879	879	879	787	272	309	309	309	272	272
Cont'l. Bikes (#/hr)	45	45	45	45	45	42	19	19	19	19	6	6
Peak Hour Factor	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	43	335	64	13	51	71	61	194	22	84	108	127
Shared Lane Traffic (%)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	442	0	0	135	0	0	277	0	0	192	127

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	40	315	10	40	55	175	70	90
Volume (vph)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	3	3	3	3	1	1	1	1
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	43.0	43.0	43.0	43.0	29.0	29.0	29.0	29.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Spilt (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?	Max	Max	Max	Max	Max	Max	Max	Max
Recall Mode	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Act Effct Green (s)	0.50	0.50	0.32	0.32	0.32	0.32	0.32	0.32
Actuated g/C Ratio	0.72	0.25	0.75	0.75	0.62	0.65	0.65	0.65
v/c Ratio	24.7	14.4	41.7	41.7	32.8	41.2	41.2	41.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	14.4	41.7	41.7	32.8	41.2	41.2	41.2
LOS	C	B	D	D	C	C	D	D
Approach Delay	24.7	14.4	41.7	41.7	36.2	36.2	36.2	36.2
Approach LOS	C	B	B	D	D	D	D	D
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%). Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 75								
Control Type: Prelimed								
Maximum v/c Ratio: 0.75								
Intersection Signal Delay: 30.7								
Intersection Capacity Utilization: 79.2%								
Analysis Period (min): 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	43.0	43.0	43.0	43.0	29.0	29.0	29.0	29.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Spilt (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Maximum Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%). Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

Queues
3: Main Street & Ames Street

5/12/2014

	EBT	WBT	NBT	SBT	SBR
Lane Group	442	135	277	192	127
Lane Group Flow (vph)	0.72	0.25	0.75	0.62	0.65
v/c Ratio	24.7	14.4	41.7	32.8	41.2
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	24.7	14.4	41.7	32.8	41.2
Total Delay	196	42	139	114	76
Queue Length 50th (ft)	m318	67	#263	m167	m#120
Queue Length 95th (ft)	403	410	456	202	
Internal Link Dist (ft)					
Turn Bay Length (ft)	613	540	371	310	194
Base Capacity (vph)	0	0	0	0	0
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	0.72	0.25	0.75	0.62	0.65

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.

HCM Signalized Intersection Capacity Analysis
3: Main Street & Ames Street

5/12/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+	+	+	+			+	+			+
Volume (vph)	40	315	60	10	40	55	175	55	20	70	90	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fpb. ped/bikes	0.90	0.66	0.66	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Fpb. ped/bikes	0.95	0.95	0.97	0.97	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Frt	0.98	0.98	0.93	0.93	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1274	1274	1134	1134	1299	1299	1337	1337	602	602	602	602
Flt Permitted	0.96	0.96	0.95	0.95	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Satd. Flow (perm)	1227	1227	1079	1079	1150	1150	1150	1150	664	664	664	664
Peak-Hour factor, PHF	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.83	0.83
Adj. Flow (vph)	43	335	64	13	51	71	61	194	22	84	108	127
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	442	0	0	135	0	277	0	0	192	127	0
Confl. Peds. (#/hr)	787	879	879	787	272	309	309	272	19	19	19	6
Confl. Bikes (#/hr)	45	45	42	42	42	42	19	19	19	19	19	6
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0

Turn Type	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1
Permitted Phases	3	3	3	3	1	1
Actuated Green, G (s)	45.0	45.0	45.0	45.0	29.0	29.0
Effective Green, g (s)	45.0	45.0	45.0	45.0	29.0	29.0
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.32	0.32
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	614	614	540	540	371	371
v/s Ratio Prot	c0.36	0.13	0.13	c0.24	0.20	0.21
v/s Ratio Perm	0.72	0.25	0.25	0.75	0.62	0.65
Uniform Delay, d1	17.6	12.9	12.9	27.2	25.8	26.2
Progression Factor	1.00	1.00	1.00	1.00	0.90	0.89
Incremental Delay, d2	6.0	1.1	1.1	12.8	8.4	15.2
Delay (s)	23.6	14.0	14.0	40.1	31.6	38.5
Level of Service	C	B	B	D	C	D
Approach Delay (s)	23.6	14.0	14.0	40.1	34.4	34.4
Approach LOS	C	B	B	D	C	C

Intersection Summary	Value	Level of Service
HCM Average Control Delay	29.3	C
HCM Volume to Capacity ratio	0.73	
Actuated Cycle Length (s)	90.0	16.0
Intersection Capacity Utilization	79.2%	D
Analysis Period (min)	15	
c Critical Lane Group		

Lanes and Geometrics

4: Broadway east & Ames Street

5/12/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	160	0	0	0	0
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93	0.82	0.87	0.87	0.36	0.36
Frt	0.980				0.850	
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2727	0	1555	1637	1593	1282
Flt Permitted			0.284		0.950	
Satd. Flow (perm)	2727	0	382	1637	1390	467
Right Turn on Red	Yes					Yes
Satd. Flow (RTOR)	20					230
Link Speed (mph)	30			30		30
Link Distance (ft)	631			396		269
Travel Time (s)	14.3			9.0		6.1
Intersection Summary						
Area Type:	CBD					

Volume

4: Broadway east & Ames Street

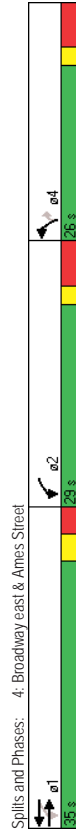
5/12/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	540	85	145	495	150	200
Confl. Peds. (#/hr)	392	392			85	443
Confl. Bikes (#/hr)		1.6				10
Peak Hour Factor	0.95	0.95	0.88	0.88	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0
Mid-Block Traffic (%)	0%			0%	0%	0%
Adj. Flow (vph)	568	89	165	562	172	230
Shared Lane Traffic (%)						
Lane Group Flow (vph)	657	0	165	562	172	230
Intersection Summary						

Timings
4: Broadway east & Ames Street

5/12/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	540	145	495	150	200
Turn Type	pmm+pt Perm				
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%				
Maximum Green (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	19.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.21
v/c Ratio	0.74	0.33	1.07	0.51	0.82
Control Delay	27.2	28.3	75.0	29.7	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	28.3	75.0	29.7	29.5
LOS	C	C	E	C	C
Approach Delay	27.2	64.4	29.6		
Approach LOS	C	E	C		
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.07					
Intersection Signal Delay: 42.9	Intersection LOS: D				
Intersection Capacity Utilization 64.8%	ICU Level of Service C				
Analysis Period (min) 15					



Phasings
4: Broadway east & Ames Street

5/12/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%				
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL	NBR
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	657	165	562	172	230
v/c Ratio	0.74	0.33	1.07	0.51	0.82
Control Delay	27.2	28.3	75.0	29.7	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	28.3	75.0	29.7	29.5
Queue Length 50th (ft)	191	73	-369	71	18
Queue Length 95th (ft)	250	m#1	m#528	m#110	m#50
Internal Link Dist (ft)	551	160	316	189	
Turn Bay Length (ft)					
Base Capacity (vph)	892	499	527	336	280
Stavation 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	0.74	0.33	1.07	0.51	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.

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑	↑
Volume (vph)	540	85	145	495	150	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	12	11	11	12	12
Total Lost time (s)	6.0	7.0	6.0	7.0	7.0	7.0
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	0.93	1.00	1.00	1.00	0.36	0.36
Fllb. ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Frt	0.98	1.00	1.00	1.00	1.00	0.85
Flt Protected	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2726	1486	1637	1593	467	467
Flt Permitted	1.00	0.28	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2726	445	1637	1593	467	467
Peak-Hour factor, PHF	0.95	0.95	0.88	0.88	0.87	0.87
Adj. Flow (vph)	568	89	165	562	172	230
RTOR Reduction (vph)	14	0	0	0	0	181
Lane Group Flow (vph)	643	0	165	562	172	49
Confl. Peds. (#/hr)	392	392	85	85	443	10
Confl. Bikes (#/hr)	16					
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Parking (#/hr)						0
Turn Type		pm+pt				Perm
Protected Phases	1	2	1	4		
Permitted Phases		1		4		4
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0	19.0
Effective Green, g (s)	29.0	51.0	29.0	19.0	19.0	19.0
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.21	0.21
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0	7.0
Lane Grp Cap (vph)	878	507	527	336	99	
v/s Ratio Prot	0.24	c0.08	c0.34	c0.11		
v/s Ratio Perm		0.11			0.10	
v/c Ratio	0.73	0.33	1.07	0.51	0.49	
Uniform Delay, d1	27.1	17.0	30.5	31.4	31.2	
Progression Factor	0.89	2.05	0.68	0.77	1.53	
Incremental Delay, d2	3.5	1.1	51.0	4.9	14.7	
Delay (s)	27.5	36.0	71.9	29.1	62.5	
Level of Service	C	D	E	C	E	
Approach Delay (s)	27.5		63.7	48.2		
Approach LOS	C		E	D		
Intersection Summary						
HCM Average Control Delay		46.9			HCM Level of Service	D
HCM Volume to Capacity ratio		0.68				
Actuated Cycle Length (s)		90.0			Sum of lost time (s)	20.0
Intersection Capacity Utilization		64.8%			ICU Level of Service	C
Analysis Period (min)		15				
c Critical Lane Group						

Lanes and Geometrics
5: Broadway east & Third Street

5/12/2014

	EBL	EBT	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	10	10	10
Grade (%)	340	0%	0%	0%	0%	0%	160
Storage Length (ft)	1	0	0	0	1	1	25
Taper Length (ft)	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.90					
Flt	0.950						0.850
Flt Protected	1501	2954	2671	0	1501	1343	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	1501	2954	2671	0	1501	1343	No
Right Turn on Red							
Satd. Flow (RTOR)							
Link Speed (mph)		30	30			30	
Link Distance (ft)		581	393			1212	
Travel Time (s)		13.2	8.9			27.5	
Intersection Summary							
Area Type:	CBD						

Volume
5: Broadway east & Third Street

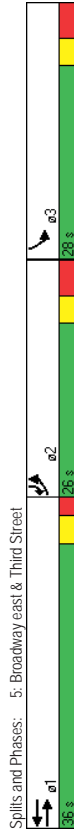
5/12/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	↔	↔	↔	↔	↔	↔
Volume (vph)	260	520	460	185	385	165
Cont'l. Peds. (#/hr)				123		
Cont'l. Bikes (#/hr)				159		1
Peak Hour Factor	0.95	0.95	0.87	0.87	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)			0%			0%
Adj. Flow (vph)	274	547	529	213	418	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	274	547	742	0	418	179
Intersection Summary						

Timings
5: Broadway east & Third Street

5/12/2014

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔
Volume (vph)	260	520	460	385	165
Turn Type	Prot	Over			
Protected Phases	2	1	1	3	2
Permitted Phases	2	1	1	3	2
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	36.0	36.0	28.0	26.0
Total Split (s)	26.0	36.0	36.0	28.0	26.0
Total Split (%)	28.9%	40.0%	40.0%	31.1%	28.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	19.0	31.0	31.0	21.0	19.0
Actuated g/C Ratio	0.21	0.34	0.34	0.23	0.21
v/c Ratio	0.86	0.54	0.81	1.19	0.63
Control Delay	65.7	22.2	35.0	145.2	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	22.2	35.0	145.2	43.5
LOS	E	C	D	F	D
Approach Delay		36.7	35.0	114.7	
Approach LOS		D	D	F	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.19					
Intersection Signal Delay: 57.7					
Intersection Capacity Utilization 76.5%					
Analysis Period (min) 15					



Spills and Phases: 5: Broadway east & Third Street

Phasings
5: Broadway east & Third Street

5/12/2014

Lane Group	EBL	EBT	WBT	SBL	SBR
Protected Phases	2	1	1	3	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	26.0	36.0	36.0	28.0	26.0
Minimum Split (s)	26.0	36.0	36.0	28.0	26.0
Total Split (s)	28.9%	40.0%	40.0%	31.1%	28.9%
Total Split (%)	19.0	31.0	31.0	21.0	19.0
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	4.0	2.0	2.0	4.0	4.0
All-Red Time (s)	Lag	Lead	Lead	Lag	Lag
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	3.0	15.0	15.0	7.0	3.0
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					



Movement	EBL	EBT	WBT	WBL	SBL	SBR
Lane Group Flow (vph)	274	547	742	418	179	
v/c Ratio	0.86	0.54	0.81	1.19	0.63	
Control Delay	65.7	22.2	35.0	145.2	43.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.7	22.2	35.0	145.2	43.5	
Queue Length 50th (ft)	159	165	198	-290	93	
Queue Length 95th (ft)	m#255	m213	259	#470	#166	
Internal Link Dist (ft)	501	313	1132			
Turn Bay Length (ft)	340				160	
Base Capacity (vph)	317	1017	920	350	284	
Station 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	0.86	0.54	0.81	1.19	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.					
m	Queue shown is maximum after two cycles.					
m	Volume for 95th percentile queue is metered by upstream signal.					



Movement	EBL	EBT	WBT	WBL	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	260	520	460	185	385	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	11	10	10
Total Lost time (s)	7.0	5.0	5.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Emp. ped/bikes	1.00	1.00	0.90	1.00	1.00	1.00
Flbb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.96	1.00	0.85	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1501	2954	2671	1501	1343	1343
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1501	2954	2671	1501	1343	1343
Peak-Hour factor, PHF	0.95	0.95	0.87	0.87	0.92	0.92
Adj. Flow (vph)	274	547	529	213	418	179
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	274	547	742	0	418	179
Confl. Peds. (#/hr)				123		
Confl. Bikes (#/hr)				159		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0					
Turn Type	Prot	1	1	3	2	2
Protected Phases	2	1	1			
Permitted Phases						
Actuated Green, G (s)	19.0	31.0	31.0	21.0	19.0	19.0
Effective Green, g (s)	19.0	31.0	31.0	21.0	19.0	19.0
Actuated g/C Ratio	0.21	0.34	0.34	0.23	0.21	0.21
Clearance Time (s)	7.0	5.0	5.0	7.0	7.0	7.0
Lane Grp Cap (vph)	317	1017	920	350	284	284
v/s Ratio Prot	c0.18	0.19	c0.28	c0.28	0.13	0.13
v/s Ratio Perm						
v/c Ratio	0.86	0.54	0.81	1.19	0.63	0.63
Uniform Delay, d1	34.3	23.7	26.8	34.5	32.3	32.3
Progression Factor	1.28	0.86	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.7	1.6	7.5	112.1	10.2	10.2
Delay (s)	64.5	21.9	34.3	146.6	42.5	42.5
Level of Service	E	C	C	F	D	D
Approach Delay (s)	36.1	34.3	115.4			
Approach LOS	D	C	F			
Intersection Summary						
HCM Average Control Delay	57.4					
HCM Volume to Capacity ratio	0.94					
Actuated Cycle Length (s)	90.0					
Intersection Capacity Utilization	76.5%					
Analysis Period (min)	15					
c. Critical Lane Group	E					

Lanes and Geometrics
6: Ames Street &

5/12/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	5	4	1	1	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	1	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.950	0.850	0.997			
Flt Protected	0.950					0.999
Satd. Flow (prot)	1624	1454	1616	0	0	1635
Flt Permitted	0.950					0.999
Satd. Flow (perm)	1624	1454	1616	0	0	1635
Link Speed (mph)	30	30	30			30
Link Distance (ft)	239	282	282			269
Travel Time (s)	5.4	6.4	6.4			6.1
Intersection Summary						
Area Type: CBD						

Volume
6: Ames Street &

5/12/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group						
Volume (vph)	30	40	265	5	5	225
Confl. Peds. (#/hr)	160	365	275	5	5	275
Confl. Bikes (#/hr)				41		
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	41	55	305	6	6	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	55	311	0	0	277
Intersection Summary						

5/12/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	30	40	265	5	5	225
Volume (veh/h)	30	40	265	5	5	225
Sign Control	Free	Free	Free	Free	Free	Free
Grade (%)	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Hourly flow rate (vph)	41	55	305	6	6	271
Pedestrians	275	160				365
Lane Width (ft)	12.0	11.0	11.0	11.0	11.0	11.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	23	12	28			28
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			282			269
pX platoon unblocked						
vC conflicting volume	1026	947				585
vC1 stage 1 conf vol						
vC2 stage 2 conf vol						
vCu unblocked vol	1026	947				585
IC single (s)	6.4	6.2				4.1
IC 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	77	69				99
GM capacity (veh/h)	176	177				766
Direction_Lane #	WB1	WB2	NB1	NB2	SB1	SB2
Volume Total	41	55	310	277		
Volume Left	41	0	0	6		
Volume Right	0	55	6	0		
cSH	176	177	1700	766		
Volume to Capacity	0.23	0.31	0.18	0.01		
Queue Length 95th (ft)	22	31	0	1		
Control Delay (s)	31.5	34.1	0.0	0.3		
Lane LOS	D	D	A	A		
Approach Delay (s)	33.0	0.0	0.0	0.3		
Approach LOS	D					
Intersection Summary						
Average Delay	4.8					
Intersection Capacity Utilization	37.6%			ICU Level of Service A		
Analysis Period (min)	15					

5/12/2014
 Lanes and Geometrics
 7: Broadway east &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.999		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1691	0	1608	1693	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1691	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	386		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

Volume
7: Broadway east &

5/12/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	735	5	5	620	0	125
Confl. Peds. (#/hr)	358	358				215
Confl. Bikes (#/hr)	22					
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	774	5	6	705	0	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	779	0	6	705	0	149

HCM Unsignalized Intersection Capacity Analysis
7: Broadway east &

5/12/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Volume (veh/h)	735	5	5	620	0	125
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	774	5	6	705	0	149
Pedestrians				215	358	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				18	30	
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked	0.75			0.86	0.75	
vC, conflicting volume	1137			1850	1349	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol				1018	1259	1300
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)				2.2	3.5	3.3
IC, 2 stage (s)				98	100	0
IF (s)				362	112	86
p0 queue free %						
GM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	779	6	705	149		
Volume Left	0	6	0	0		
Volume Right	5	0	0	149		
cSH	1700	362	1700	86		
Volume to Capacity	0.46	0.02	0.41	1.72		
Queue Length 95th (ft)	0	1	0	308		
Control Delay (s)	0.0	15.1	0.0	452.6		
Lane LOS	C	C	F	F		
Approach Delay (s)	0.0	0.1	452.6			
Approach LOS			F			
Intersection Summary						
Average Delay				41.2		
Intersection Capacity Utilization				66.6%	ICU Level of Service	C
Analysis Period (min)				15		

2014 Build Condition

Lanes and Geometrics
1: Broadway & Western Connector

5/22/2014

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	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	0	225	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.83	0.96	0.86	0.86	0.98	0.85	0.98	0.95	0.95	0.95	0.64	0.64
Frt	0.981			0.992			0.974			0.950		0.850
FRT Protected	0.950			0.950			0.950			0.950		0.950
Satd. Flow (prot)	1501	2923	0	1486	2982	0	1525	2901	0	1583	1621	1330
FRT Permitted	0.950			0.950			0.950			0.950		0.950
Satd. Flow (perm)	1247	2923	0	1283	2982	0	1289	2901	0	1518	1621	852
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)												
Link Speed (mph)	25			30			30			30		30
Link Distance (ft)	470			631			777			719		719
Travel Time (s)	12.8			14.3			17.7			16.3		16.3
Intersection Summary												
Area Type:	CBD											

Volume
1: Broadway & Western Connector

5/22/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	160	452	65	150	455	25	130	445	95	85	270	130
Confl. Peds. (#/hr)	412		321	412		192	192		88	88		192
Confl. Bikes (#/hr)			27			230			20			25
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	188	532	76	176	535	29	144	494	106	96	303	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	608	0	176	564	0	144	600	0	96	303	146
Intersection Summary												

Queues 5/22/2014
1: Broadway & Western Connector

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	188	608	176	564	144	600	96	303	146
v/c Ratio	1.03	0.75	1.52	0.81	0.85	0.74	0.77	0.67	1.40
Control Delay	115.5	36.4	272.0	44.9	77.1	30.3	79.8	37.5	262.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.5	36.4	272.0	44.9	77.1	30.3	79.8	37.5	262.7
Queue Length 50th (ft)	-115	165	-136	185	89	155	55	153	-112
Queue Length 95th (ft)	#226	211	m#152	m186	m#125	m202	#136	241	#227
Internal Link Dist (ft)	390	390	295	551	697	697	639	639	639
Turn Bay Length (ft)	100	295	295	250	250	225	225	225	225
Base Capacity (vph)	183	812	116	696	169	806	124	450	104
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.75	1.52	0.81	0.85	0.74	0.77	0.67	1.40
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.								

HCM Signalized Intersection Capacity Analysis 5/22/2014
1: Broadway & Western Connector

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	160	452	65	150	455	25	130	445	95	85	270	130
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	10
Total Lost time (s)	8.0	5.0	8.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	8.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frb. ped/bikes	1.00	0.96	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	1.00	0.64
Fllb. ped/bikes	1.00	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	0.98	1.00	1.00	0.99	1.00	0.97	1.00	0.97	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1501	2924	1486	2983	1525	2900	1593	1621	852	1593	1621	852
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1501	2924	1486	2983	1525	2900	1593	1621	852	1593	1621	852
Peak-Hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	188	532	76	176	535	29	144	494	106	96	303	146
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	188	608	0	176	564	0	144	600	0	96	303	146
Confl. Peds. (#/hr)	412	321	321	412	192	230	88	88	20	25	25	25
Confl. Bikes (#/hr)	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	5	7	4	5
Permitted Phases	5	2	1	6	3	8	7	4	5	7	4	5
Actuated Green, G (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	7.0	25.0	11.0
Effective Green, g (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	7.0	25.0	11.0
Actuated g/C Ratio	0.12	0.28	0.08	0.23	0.11	0.28	0.08	0.28	0.12	0.08	0.28	0.12
Clearance Time (s)	8.0	5.0	8.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	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	3.0	3.0
Lane Grp Cap (vph)	183	812	116	696	169	806	124	450	104	96	303	146
v/s Ratio Prot	0.13	c0.21	0.12	0.19	c0.09	c0.21	0.06	0.19	c0.17	0.06	0.19	c0.17
v/s Ratio Perm	1.03	0.75	1.52	0.81	0.85	0.74	0.77	0.67	1.40	0.77	0.67	1.40
Uniform Delay, d1	39.5	29.6	41.5	32.6	39.3	29.6	40.7	28.9	39.5	40.7	28.9	39.5
Progression Factor	1.00	1.00	0.53	1.24	1.21	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	73.9	6.3	247.6	3.7	22.6	4.1	25.4	7.8	229.4	25.4	7.8	229.4
Delay (s)	113.4	35.9	269.7	44.2	70.2	29.9	66.1	36.7	268.9	66.1	36.7	268.9
Level of Service	F	D	F	D	E	C	E	D	F	E	D	F
Approach Delay (s)	F	D	F	D	E	C	E	D	F	E	D	F
Approach LOS	D	D	F	F	D	D	D	D	F	D	D	F
Intersection Summary												
HCM Average Control Delay	70.9 HCM Level of Service E											
HCM Volume to Capacity ratio	0.91											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 23.0											
Intersection Capacity Utilization	73.1% ICU Level of Service D											
Analysis Period (min)	15											
c. Critical Lane Group												

Lanes and Geometrics

2: Main Street & Galileo Way

5/22/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	10	11	11	10	10	10	10	11	10
Lane Width (ft)	0	0%	0	250	120	0	250	0	0	0	0%	75
Storage Length (ft)	1	1	1	1	1	0	1	0	1	0	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.76	0.95	0.86	0.93	0.93	0.93	0.90	0.90	0.91	0.91	0.84	0.84
Frt	0.950	0.972	0.969	0.954	0.954	0.954	0.954	0.954	0.950	0.950	0.850	0.850
Flt Protected	1593	1555	0	1501	1480	0	2582	0	2582	0	1501	1637
Satd. Flow (prot)	0.649	0.553	0.553	0.824	0.824	0.824	0.329	0.329	0.329	0.329	0.329	0.329
Flt Permitted	826	1555	0	754	1480	0	2125	0	2125	0	472	1637
Satd. Flow (perm)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Turn on Red	17	17	17	19	19	19	87	87	87	87	39	39
Satd. Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	1009	1009	1009	483	483	483	810	810	810	810	777	777
Link Distance (ft)	22.9	22.9	22.9	11.0	11.0	11.0	18.4	18.4	18.4	18.4	17.7	17.7
Travel Time (s)												

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Galileo Way

5/22/2014

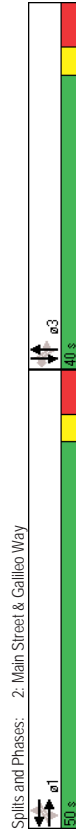
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	265	219	50	63	116	30	60	345	180	30	255	200
Volume (vph)	508	199	199	199	508	67	180	180	180	180	180	67
Contd. Peds. (#/hr)	26	26	26	26	26	26	49	49	49	49	49	50
Contd. Bikes (#/hr)	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Peak Hour Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Growth Factor	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Heavy Vehicles (%)	0	0	0	0	0	0	0	0	0	0	0	0
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	298	246	56	74	136	35	67	388	202	36	307	241
Shared Lane Traffic (%)	298	302	0	74	171	0	0	657	0	36	307	241
Lane Group Flow (vph)												

Intersection Summary

Timings
2. Main Street & Galileo Way

5/22/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	EB	EB	WB	WB	NB	NB	SB	SB
Volume (vph)	265	219	63	116	60	345	30	255
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	-3.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36
v/c Ratio	0.77	0.41	0.21	0.24	0.81	0.21	0.53	0.56
Control Delay	36.3	17.0	25.5	22.0	32.0	31.9	36.0	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	17.0	25.5	22.0	32.0	31.9	36.0	34.1
LOS	D	B	C	C	C	C	D	C
Approach Delay	26.6		23.0		32.0		34.9	
Approach LOS	C		C		C		C	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 0.81								
Intersection Signal Delay: 30.2								
Intersection Capacity Utilization 131.3%								
Analysis Period (min) 15								



Phasings
2. Main Street & Galileo Way

5/22/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Maximum Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

Queues
2: Main Street & Galileo Way

5/22/2014

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	298	302	74	171	657	36	307	241
Lane Group Flow (vph)	0.77	0.41	0.21	0.24	0.81	0.21	0.53	0.56
v/c Ratio	36.3	17.0	25.5	22.0	32.0	31.9	36.0	34.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.3	17.0	25.5	22.0	32.0	31.9	36.0	34.1
Total Delay	136	103	30	63	154	20	184	131
Queue Length 50th (ft)	#278	166	m57	m113	#230	m25	m204	m153
Queue Length 95th (ft)	929	403	730	697	75			
Internal Link Dist (ft)	120							
Turn Bay Length (ft)	385	735	352	701	812	168	582	427
Base Capacity (vph)	0	0	0	0	0	0	0	0
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	0.77	0.41	0.21	0.24	0.81	0.21	0.53	0.56

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.

HCM Signalized Intersection Capacity Analysis
2: Main Street & Galileo Way

5/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	
Volume (vph)	265	219	50	63	116	30	60	345	180	30	255	200	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	12	12	10	11	11	10	10	10	10	11	10	
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.95	1.00	1.00	0.93	1.00	0.91	1.00	1.00	1.00	1.00	0.84	
Flpb, ped/bikes	0.76	1.00	0.86	1.00	0.99	1.00	0.99	1.00	0.91	1.00	1.00	1.00	
Fr	1.00	0.97	1.00	0.97	1.00	0.95	1.00	0.99	1.00	1.00	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	0.99	1.00	0.99	1.00	0.95	1.00	1.00	1.00	
Satd. Flow (prot)	1209	1556	1295	1480	2566	1362	1637	1129	1362	1637	1129	1129	
Flt Permitted	0.65	1.00	0.55	1.00	0.82	1.00	0.82	1.00	0.33	1.00	1.00	1.00	
Satd. Flow (perm)	826	1556	754	1480	2125	472	1637	1129	472	1637	1129	1129	
Peak-Hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83	
Adj. Flow (vph)	298	246	56	74	136	35	67	388	202	36	307	241	
RTOR Reduction (vph)	0	9	0	0	10	0	0	56	0	0	0	25	
Lane Group Flow (vph)	298	293	0	74	161	0	0	601	0	36	307	216	
Confl. Peds. (#/hr)	508	199	199	508	67	180	180	67	49	65	49	67	
Confl. Bikes (#/hr)	26	26	26	65	65	49	49	26	49	65	49	26	
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	1	1	1	1	1	1	1	1	1	1	1	3	
Permitted Phases	1	1	1	1	1	1	1	1	1	1	1	3	
Actuated Green, G (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0	
Effective Green, g (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Grp Cap (vph)	385	726	0.19	352	691	756	756	168	582	168	582	401	
v/s Ratio Prot	0.19	0.19	0.19	0.11	0.11	0.11	0.11	0.19	0.19	0.19	0.19	0.19	
v/s Ratio Perm	c0.36	0.10	0.10	0.23	0.23	0.23	0.23	0.08	0.08	0.08	0.08	0.19	
v/c Ratio	0.77	0.40	0.21	0.23	0.23	0.23	0.23	0.08	0.08	0.08	0.08	0.19	
Uniform Delay, d1	20.0	15.8	14.2	14.4	14.4	26.1	20.2	23.0	23.1	20.2	23.0	23.1	
Progression Factor	1.00	1.00	1.63	1.63	1.63	1.00	1.43	1.46	1.58	1.43	1.46	1.58	
Incremental Delay, d2	14.1	1.7	1.1	0.7	0.7	8.5	1.2	1.4	2.1	1.2	1.4	2.1	
Delay (s)	34.1	17.4	24.3	24.1	24.1	34.5	30.0	35.0	38.6	30.0	35.0	38.6	
Level of Service	C	B	C	C	C	C	C	C	D	C	D	D	
Approach Delay (s)	25.7	C	C	24.1	C	34.5	C	36.2	C	C	36.2	D	
Approach LOS	C	C	C	C	C	C	C	D	C	C	D	D	
Intersection Summary													
HCM Average Control Delay	31.2											HCM Level of Service	C
HCM Volume to Capacity ratio	0.78												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.3%											ICU Level of Service	H
Analysis Period (min)	15												
c Critical Lane Group													

Lanes and Geometrics
3: Main Street & Ames Street

5/22/2014

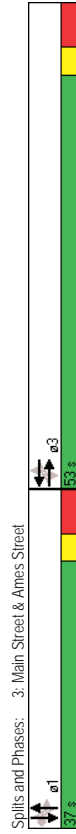
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	12	10	12
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	50
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.85	0.981	0.70	0.946	0.991	0.989	0.989	0.989	0.989	0.979	0.87	0.46
Frt	0.994	0.994	0.991	0.991	0.991	0.989	0.989	0.989	0.989	0.979	0.87	0.850
Flt Protected	0	1345	0	1329	0	1426	0	1426	0	1547	1295	0
Satd Flow (prot)	0.937	0.874	0	0.885	0	0.885	0	0.885	0	0.713	0.713	0
Flt Permitted	0	1190	0	1107	0	1161	0	1161	0	0	978	602
Satd Flow (perm)	No	No	No	No	No	No	No	No	No	No	No	No
Right Turn on Red	30	30	30	30	30	30	30	30	30	30	30	30
Satd Flow (RTOR)	483	483	490	536	536	536	536	536	536	282	282	6.4
Link Speed (mph)	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	6.4
Link Distance (ft)												
Travel Time (s)												
Intersection Summary												
Area Type:	CBD											

Volume
3: Main Street & Ames Street

5/22/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	54	315	60	25	57	55	55	179	20	59	77	97
Volume (vph)	787	879	879	879	879	787	272	272	309	309	309	272
Contl. Peds. (#/hr)												
Contl. Bikes (#/hr)			45			42			19			6
Peak Hour Factor	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	57	335	64	32	73	71	61	199	22	71	93	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	456	0	0	176	0	0	282	0	0	164	117
Intersection Summary												

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations								
Volume (vph)	54	315	25	57	55	179	59	77
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	39.0	39.0	39.0	39.0	28.0	28.0	28.0	28.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	-1.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	7.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Actuated g/C Ratio	0.50	0.50	0.32	0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.77	0.32	0.32	0.75	0.75	0.52	0.60	0.60
Control Delay	28.0	15.4	15.4	42.1	42.1	31.3	40.2	40.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	15.4	15.4	42.1	42.1	31.3	40.2	40.2
LOS	C	B	B	D	D	C	D	D
Approach Delay	28.0	15.4	15.4	42.1	42.1	35.0	35.0	35.0
Approach LOS	C	B	B	D	D	D	D	D
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%), Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 70								
Control Type: Prelimed								
Maximum v/c Ratio: 0.77								
Intersection Signal Delay: 31.1								
Intersection Capacity Utilization: 79.2%								
Analysis Period (min): 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	39.0	39.0	39.0	39.0	28.0	28.0	28.0	28.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Maximum Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%), Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

	EBT	WBT	NBT	SBT	SBR
Lane Group	456	176	282	164	117
Lane Group Flow (vph)	0.77	0.32	0.75	0.52	0.60
v/c Ratio	28.0	15.4	42.1	31.3	40.2
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	28.0	15.4	42.1	31.3	40.2
Total Delay	219	57	142	95	69
Queue Length 50th (ft)	m329	85	#268	m143	m109
Queue Length 95th (ft)	403	410	456	202	
Internal Link Dist (ft)					
Turn Bay Length (ft)	595	554	374	315	194
Base Capacity (vph)	0	0	0	0	0
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	0.32	0.75	0.52	0.60

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)	54	315	60	25	57	55	179	55	20	59	77	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	16	12	12	12	12	12	12	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fpb. ped/bikes	0.91			0.74			0.96				1.00	0.46
Fllb. ped/bikes	0.94			0.94			0.91				0.87	1.00
Frt	0.98			0.95			0.99				1.00	0.85
Flt Protected	0.99			0.99			0.99				0.98	1.00
Satd. Flow (prot)	1262			1254			1298				1342	602
Flt Permitted	0.94			0.87			0.89				0.71	1.00
Satd. Flow (perm)	1190			1106			1162				977	602
Peak-Hour factor, PHF	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.83	0.83
Adj. Flow (vph)	57	335	64	32	73	71	61	199	22	71	93	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	456	0	0	176	0	282	0	0	0	164	117
Confl. Peds. (#/hr)	787	879	879	787	272	309	309	272	19	19	6	6
Confl. Bikes (#/hr)	45			42			19				19	6
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0						0				0	0

Turn Type	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1
Permitted Phases	3	3	3	3	1	1
Actuated Green, G (s)	45.0	45.0	45.0	45.0	29.0	29.0
Effective Green, g (s)	45.0	45.0	45.0	45.0	29.0	29.0
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.32	0.32
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	595		553	374		315
v/s Ratio Prot	c0.38		0.16	c0.24		0.17
v/s Ratio Perm	0.77		0.32	0.75		0.52
Uniform Delay, d1	18.2		13.4	27.3		24.8
Progression Factor	1.03		1.00	1.00		0.98
Incremental Delay, d2	7.7		1.5	13.2		5.8
Delay (s)	26.5		14.9	40.5		30.2
Level of Service	C		B	D		C
Approach Delay (s)	26.5		14.9	40.5		33.4
Approach LOS	C		B	D		C

Intersection Summary		
HCM Average Control Delay	29.7	HCM Level of Service C
HCM Volume to Capacity ratio	0.76	
Actuated Cycle Length (s)	90.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service D
Analysis Period (min)	15	
c Critical Lane Group		

Lanes and Geometrics

4: Broadway east & Ames Street

5/22/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	160	0	0	0	0
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	50	50
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93	0.82	0.87	0.87	0.36	0.36
Flt	0.981		0.950		0.850	
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2744	0	1555	1637	1593	1282
Flt Permitted			0.279		0.950	
Satd. Flow (perm)	2744	0	376	1637	1390	468
Right Turn on Red	Yes					Yes
Satd. Flow (RTOR)	19					256
Link Speed (mph)	30			30		30
Link Distance (ft)	631			396		269
Travel Time (s)	14.3			9.0		6.1
Intersection Summary						
Area Type:	CBD					

Volume

4: Broadway east & Ames Street

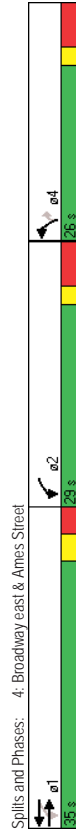
5/22/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	552	80	102	495	155	223
Confl. Peds. (#/hr)	392	392	392	85	443	10
Confl. Bikes (#/hr)	1.6					
Peak Hour Factor	0.95	0.95	0.88	0.88	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0
Mid-Block Traffic (%)	0%		0%		0%	
Adj. Flow (vph)	581	84	116	562	178	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	665	0	116	562	178	256
Intersection Summary						

Timings
4: Broadway east & Ames Street

5/22/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	552	102	495	155	223
Turn Type	pm+pt Perm				
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Detector Phase	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%				
Maximum Green (s)	3.0	2.0	3.0	2.0	2.0
Yellow Time (s)	3.0	5.0	3.0	5.0	5.0
All-Red Time (s)	0.0	0.0	0.0	0.0	-1.0
Lost Time Adjust (s)	6.0	7.0	6.0	7.0	6.0
Total Lost Time (s)					
Lead/Lag	Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Max	Max
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	20.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.22
v/c Ratio	0.74	0.23	1.07	0.53	0.84
Control Delay	27.3	24.9	76.3	30.5	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	24.9	76.3	30.5	30.4
LOS	C	C	E	C	C
Approach Delay	27.3		67.5	30.5	
Approach LOS	C		E	C	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.07					
Intersection Signal Delay: 43.4					
Intersection Capacity Utilization 62.1%					
Analysis Period (min) 15					



Spills and Phases: 4: Broadway east & Ames Street

Phasings
4: Broadway east & Ames Street

5/22/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9%				
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL	NBR
Lane Group					
Lane Group Flow (vph)	665	116	562	178	256
v/c Ratio	0.74	0.23	1.07	0.53	0.84
Control Delay	27.3	24.9	76.3	30.5	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	24.9	76.3	30.5	30.4
Queue Length 50th (ft)	194	53	-370	76	23
Queue Length 95th (ft)	253	m#66	m#536	m114	m#57
Internal Link Dist (ft)	551	160	316	189	
Turn Bay Length (ft)					
Base Capacity (vph)	897	497	527	336	303
Stavation 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	0.74	0.23	1.07	0.53	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	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑	↑	↑	←	←	←	
Volume (vph)	552	80	102	495	155	223	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width	10	12	11	11	12	12	
Total Lost time (s)	6.0	7.0	6.0	7.0	6.0	6.0	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Frb. ped/bikes	0.93	1.00	1.00	1.00	0.36		
Frb. ped/bikes	1.00	0.96	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)	2745	1489	1637	1593	468		
Flt Permitted	1.00	0.28	1.00	0.95	1.00		
Satd. Flow (perm)	2745	437	1637	1593	468		
Peak-Hour factor, PHF	0.95	0.95	0.88	0.88	0.87	0.87	
Adj. Flow (vph)	581	84	116	562	178	256	
RTOR Reduction (vph)	13	0	0	0	0	199	
Lane Group Flow (vph)	652	0	116	562	178	57	
Confl. Peds. (#/hr)	392	392			85	443	
Confl. Bikes (#/hr)	16				10		
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%	
Parking (#/hr)						0	
Turn Type		pm+pt				Perm	
Protected Phases	1	2	1	1	4		
Permitted Phases			1		4		
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0		
Effective Green, g (s)	29.0	51.0	29.0	19.0	20.0		
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.22		
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0		
Lane Grp Cap (vph)	885	505	527	336	104		
v/s Ratio Prot	0.24	c0.06	c0.34	0.11			
v/s Ratio Perm		0.07			c0.12		
v/c Ratio	0.74	0.23	1.07	0.53	0.55		
Uniform Delay, d1	27.1	15.5	30.5	31.5	31.0		
Progression Factor	0.89	2.23	0.73	0.78	1.77		
Incremental Delay, d2	3.5	0.7	51.3	5.2	17.0		
Delay (s)	27.5	35.4	73.4	29.9	71.9		
Level of Service	C	D	E	C	E		
Approach Delay (s)	27.5		66.9	54.7			
Approach LOS	C		E	D			
Intersection Summary							
HCM Average Control Delay	49.2					HCM Level of Service	D
HCM Volume to Capacity ratio	0.66						
Actuated Cycle Length (s)	90.0					Sum of lost time (s)	19.0
Intersection Capacity Utilization	62.1%					ICU Level of Service	B
Analysis Period (min)	15						
c. Critical Lane Group							

Lanes and Geometrics

5: Broadway east & Third Street

5/22/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				0.90							
Flt	0.979				0.957							0.850
Flt Protected	0.950											0.957
Satd. Flow (prot)	1501	2852	0	0	2675	0	0	0	0	0	0	1512
Flt Permitted	0.950											0.957
Satd. Flow (perm)	1501	2852	0	0	2675	0	0	0	0	0	0	1512
Right Turn on Red			Yes		No				Yes			No
Satd. Flow (RTOR)	22											
Link Speed (mph)	30				30				30			30
Link Distance (ft)	581				393				166			1212
Travel Time (s)	13.2				8.9				3.8			27.5
Intersection Summary												
Area Type:	CBD											

Volume

5: Broadway east & Third Street

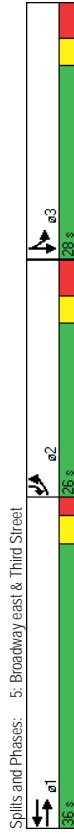
5/22/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	269	526	85	0	468	185	0	0	0	385	43	134
Cont'd. Peds. (#/hr)	36	36	20		123							
Cont'd. Bikes (#/hr)	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Growth Factor	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Heavy Vehicles (%)	0	0	0	0	0	0	0	0	0	0	0	0
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%				0%							0%
Adj. Flow (vph)	283	554	89	0	538	213	0	0	0	418	47	146
Shared Lane Traffic (%)	283	643	0	0	751	0	0	0	0	0	0	465
Lane Group Flow (vph)	283	643	0	0	751	0	0	0	0	418	47	146
Intersection Summary												

Timings
5: Broadway east & Third Street

5/22/2014

Lane Group	EBL	EBT	WBT	WBT	SBT	SBR
Lane Configurations	5	4	4	4	4	4
Volume (vph)	269	526	468	43	134	Over
Turn Type	Prot					
Protected Phases	2	1	1	3	2	
Permitted Phases	2	1	1	3	2	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	23.0	35.0	35.0	27.0	23.0	
Total Split (s)	26.0	36.0	36.0	28.0	26.0	
Total Split (%)	28.9%	40.0%	40.0%	31.1%	28.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	
Act Effrt Green (s)	19.0	31.0	31.0	21.0	19.0	
Actuated g/C Ratio	0.21	0.34	0.34	0.23	0.21	
v/c Ratio	0.89	0.64	0.82	1.32	0.51	
Control Delay	69.3	23.8	35.6	192.7	38.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.3	23.8	35.6	192.7	38.8	
LOS	E	C	D	F	D	
Approach Delay		37.7	35.6	155.9		
Approach LOS		D	D	F		
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green						
Natural Cycle: 95						
Control Type: Prelimed						
Maximum v/c Ratio: 1.32						
Intersection Signal Delay: 68.6						
Intersection Capacity Utilization 81.4%						
Analysis Period (min) 15						



Phasings
5: Broadway east & Third Street

5/22/2014

Lane Group	EBL	EBT	WBT	WBT	SBT	SBR
Protected Phases	2	1	1	3	2	
Permitted Phases	4.0	4.0	4.0	4.0	4.0	
Minimum Initial (s)	23.0	35.0	35.0	27.0	23.0	
Minimum Split (s)	26.0	36.0	36.0	28.0	26.0	
Total Split (s)	28.9%	40.0%	40.0%	31.1%	28.9%	
Maximum Green (s)	19.0	31.0	31.0	21.0	19.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
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	Max	Max	Max	Max	Max	
Walk Time (s)	3.0	15.0	15.0	7.0	3.0	
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	
Pedestrian Calls (/hr)	0	0	0	0	0	
90th %ile Green (s)	19.0	31.0	31.0	21.0	19.0	
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR	
70th %ile Green (s)	19.0	31.0	31.0	21.0	19.0	
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR	
50th %ile Green (s)	19.0	31.0	31.0	21.0	19.0	
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR	
30th %ile Green (s)	19.0	31.0	31.0	21.0	19.0	
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR	
10th %ile Green (s)	19.0	31.0	31.0	21.0	19.0	
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR	
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green						
Control Type: Prelimed						

5: Broadway east & Third Street

	EBL	EBT	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group	283	643	751	465	146			
Lane Group Flow (vph)	0.89	0.64	0.82	1.32	0.51			
v/c Ratio	69.3	23.8	35.6	192.7	38.8			
Control Delay	0.0	0.0	0.0	0.0	0.0			
Queue Delay	69.3	23.8	35.6	192.7	38.8			
Total Delay	165	192	202	-345	74			
Queue Length 50th (ft)	m#266	m242	263	#530	135			
Queue Length 95th (ft)	501	313	1132					
Internal Link Dist (ft)	340							
Turn Bay Length (ft)	317	997	921	353	284			
Base Capacity (vph)	0	0	0	0	0			
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	0.89	0.64	0.82	1.32	0.51			
Intersection Summary								
-	Volume exceeds capacity, queue is theoretically infinite.							
-	Queue shown is maximum after two cycles.							
#	95th percentile volume exceeds capacity, queue may be longer.							
-	Queue shown is maximum after two cycles.							
m	Volume for 95th percentile queue is metered by upstream signal.							

5: Broadway east & Third Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑	↑↑	↑↑	↑↑	↑↑						
Volume (vph)	269	526	85	0	468	185	0	0	0	385	43	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	70	11	12	12	11	11	12	12	12	10	10	70
Total Lost time (s)	7.0	5.0			5.0					7.0	7.0	7.0
Lane Util. Factor	1.00	0.95			0.95					1.00	1.00	1.00
Fpb. ped/bikes	1.00	0.99			0.90					1.00	1.00	1.00
Fpb. ped/bikes	1.00	1.00			1.00					1.00	1.00	1.00
Frt	1.00	0.98			0.96					1.00	0.85	1.00
Flt Protected	0.95	1.00			1.00					0.96	1.00	0.96
Satd. Flow (prot)	1501	2853			2676					1512	1343	1512
Flt Permitted	0.95	1.00			1.00					0.96	1.00	0.96
Satd. Flow (perm)	1501	2853			2676					1512	1343	1512
Peak-hour factor, PHF	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	554	89	0	538	213	0	0	0	418	47	146
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	283	629	0	0	751	0	0	0	0	0	465	146
Confl. Peds. (#/hr)			36	36		123						
Confl. Bikes (#/hr)			20	20	159							
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Parking (#/hr)	0											
Turn Type												
Prot	2	1			1					3	3	2
Protected Phases												
Permitted Phases												
Actuated Green, G (s)	19.0	31.0			31.0					21.0	19.0	19.0
Effective Green, g (s)	19.0	31.0			31.0					21.0	19.0	19.0
Actuated q/C Ratio	0.21	0.34			0.34					0.23	0.21	0.21
Clearance Time (s)	7.0	5.0			5.0					7.0	7.0	7.0
Lane Grp Cap (vph)	317	983			922					353	284	284
v/s Ratio Prot	c0.19	0.22			c0.28					c0.31	0.11	0.11
v/s Ratio Perm												
v/c Ratio	0.89	0.64			0.81					1.32	0.51	0.51
Uniform Delay, d1	34.5	24.8			26.9					34.5	31.4	31.4
Progression Factor	1.27	0.87			1.00					1.00	1.00	1.00
Incremental Delay, d2	24.2	2.5			7.8					16.15	6.5	6.5
Delay (s)	68.0	24.1			34.7					196.0	37.9	37.9
Level of Service	E	C			C					F	D	D
Approach Delay (s)		37.6			34.7			0.0		158.2		
Approach LOS		D			C			A		F		
Intersection Summary												
HCM Average Control Delay	68.8 HCM Level of Service E											
HCM Volume to Capacity ratio	0.98											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 19.0											
Intersection Capacity Utilization	81.4% ICU Level of Service D											
Analysis Period (min)	15											
c. Critical Lane Group												

Lanes and Geometrics
6: Ames Street &

5/22/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.929					
Flt Protected	0.977					
Satd. Flow (prot)	1552	0	1621	0	0	1637
Flt Permitted	0.977					
Satd. Flow (perm)	1552	0	1621	0	0	1637
Link Speed (mph)	30		30			30
Link Distance (ft)	239		282			269
Travel Time (s)	5.4		6.4			6.1
Intersection Summary						
Area Type: CBD						

Volume
6: Ames Street &

5/22/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	41	45	288	0	0	182
Confl. Peds. (#/hr)	160	165	275	275	275	275
Confl. Bikes (#/hr)			41			
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	56	62	331	0	0	219
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	331	0	0	219
Intersection Summary						

6: Ames Street &

5/22/2014

7: Broadway east &

5/22/2014

6: Ames Street &

5/22/2014

7: Broadway east &

5/22/2014

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	41	45	288	0	0	182
Sign Control	Stop	Free	Free	Free	Free	Free
Grade (%)	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Hourly flow rate (vph)	56	62	331	0	0	219
Pedestrians	275	160	160	160	165	165
Lane Width (ft)	12.0	11.0	11.0	11.0	11.0	11.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	23	12	12	12	13	13
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	0.99	0.99	282	0.99	0.99	269
pX platoon unblocked	985	771	606	606	606	606
vC conflicting volume						
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	979	762	595	595	595	595
vCu unblocked vol	6.4	6.2	4.1	4.1	4.1	4.1
IC 2 stage (s)						
IF (s)	3.5	3.3	2.2	2.2	2.2	2.2
p0 queue free %	70	77	100	100	100	100
cM capacity (veh/h)	187	272	751	751	751	751
Direction_Lane #	WBL	NB 1	SB 1			
Volume Total	118	331	219			
Volume Left	56	0	0			
Volume Right	62	0	0			
cSH	223	1700	751			
Volume to Capacity	0.53	0.19	0.00			
Queue Length 95th (ft)	69	0	0			
Control Delay (s)	37.8	0.0	0.0			
Lane LOS	E					
Approach Delay (s)	37.8	0.0	0.0			
Approach LOS	E					
Intersection Summary						
Average Delay	6.7					
Intersection Capacity Utilization	36.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor	0.993		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1681	0	1608	1693	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1681	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	396		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

Volume
7: Broadway east &

5/22/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	735	40	25	577	0	140
Confl. Peds. (#/hr)	358	358				215
Confl. Bikes (#/hr)	22					
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	774	42	28	656	0	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	816	0	28	656	0	167

HCM Unsignalized Intersection Capacity Analysis
7: Broadway east &

5/22/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Free	Free	Free	Free	Stop	Free
Volume (veh/h)	735	40	25	577	0	140
Sign Control	Free	Free	Free	Free	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	774	42	28	656	0	167
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked				0.75	0.86	0.75
vC, conflicting volume				1174	1865	1368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol				1064	1267	1323
vCu, unblocked vol				4.1	6.4	6.2
IC, single (s)						
IC, 2 stage (s)						
IF (s)				2.2	3.5	3.3
p0 queue free %				92	100	0
sM capacity (veh/h)				346	104	83
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	816	28	656	167		
Volume Left	0	28	0	0		
Volume Right	42	0	0	167		
cSH	1700	346	1700	83		
Volume to Capacity	0.48	0.08	0.39	2.00		
Queue Length 95th (ft)	0	7	0	367		
Control Delay (s)	0.0	16.3	0.0	574.5		
Lane LOS	C	C	C	F		
Approach Delay (s)	0.0	0.7	574.5			
Approach LOS			F			
Intersection Summary						
Average Delay	57.7					
Intersection Capacity Utilization	70.4%					ICU Level of Service
Analysis Period (min)	15					C

2019 Future Condition
With Cycle Track

Lanes and Geometrics
1: Broadway & Western Connector

5/23/2014

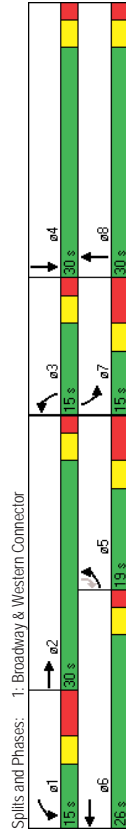
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	10	11	11	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	0	295	0	0	250	0	0	225	0	0
Storage Lanes	1	0	0	1	0	0	1	0	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.86	0.96	0.87	0.98	0.88	0.98	0.88	0.98	0.96	0.96	0.64	0.64
Frt	0.981			0.992			0.978			0.950		0.850
Flt Protected	0.950			0.950			0.950			0.950		0.950
Satd Flow (prot)	1501	2923	0	1486	2983	0	1525	2924	0	1583	1621	1330
Flt Permitted	0.950			0.950			0.950			0.950		0.950
Satd Flow (perm)	1294	2923	0	1290	2983	0	1347	2924	0	1535	1621	852
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)												
Link Speed (mph)	25			30			30			30		30
Link Distance (ft)	470			631			777			719		719
Travel Time (s)	12.8			14.3			17.7			16.3		16.3
Intersection Summary												
Area Type:	CBD											

Volume
1: Broadway & Western Connector

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	185	471	67	171	542	30	142	600	104	116	371	209
Confl. Peds. (#/hr)	412	321	321	412	192	88	88	88	88	88	88	192
Confl. Bikes (#/hr)	27			230			20					25
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		0%
Adj. Flow (vph)	218	554	79	201	638	35	158	667	116	130	417	235
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	633	0	201	673	0	158	783	0	130	417	235
Intersection Summary												

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
↖	↗	↖	↗	↖	↗	↖	↗
5	2	1	6	3	8	7	4
Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases							
Permitted Phases							
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	27.0	12.0	25.0	9.0	27.0	30.0
Total Split (s)	19.0	30.0	15.0	26.0	15.0	30.0	19.0
Total Split (%)	21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	21.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	C-Max	None
Act Effct Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
Actuated g/C Ratio	0.12	0.28	0.08	0.23	0.11	0.28	0.08
v/c Ratio	1.19	0.78	1.73	0.97	0.93	0.96	1.05
Control Delay	164.7	37.9	358.3	24.3	56.0	35.7	137.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.7	37.9	358.3	24.3	56.0	35.7	137.7
LOS	F	D	F	C	E	D	F
Approach Delay	70.4		101.1		39.1		241.4
Approach LOS	E		F		D		F
Intersection Summary							
Cycle Length: 90							
Actuated Cycle Length: 90							
Offset: 6 (7%), Referenced to phase 2:EFT and 6:WBT, Start of Green							
Natural Cycle: 130							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 2.26							
Intersection Signal Delay: 108.4							
Intersection Capacity Utilization 81.3%							
Analysis Period (min) 15							



EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
↖	↗	↖	↗	↖	↗	↖	↗
5	2	1	6	3	8	7	4
Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases							
Permitted Phases							
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	27.0	12.0	25.0	9.0	27.0	30.0
Total Split (s)	19.0	30.0	15.0	26.0	15.0	30.0	19.0
Total Split (%)	21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	21.1%
Maximum Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	2.0	5.0	2.0	2.0	5.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.0	8.0	5.0	5.0	8.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	C-Max	None
Walk Time (s)	7.0		7.0		7.0		10.0
Flash Dont Walk (s)	15.0		13.0		15.0		15.0
Pedestrian Calls (#/hr)	0		0		0		0
90th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	Coord	Max
70th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
70th %ile Term Code	Max	Coord	Max	Coord	Max	Coord	Max
50th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
50th %ile Term Code	Max	Coord	Max	Coord	Max	Coord	Max
30th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
30th %ile Term Code	Max	Coord	Max	Coord	Max	Coord	Max
10th %ile Green (s)	11.0	25.0	7.0	21.0	10.0	25.0	11.0
10th %ile Term Code	Max	Coord	Max	Coord	Max	Coord	Max
Intersection Summary							
Cycle Length: 90							
Actuated Cycle Length: 90							
Offset: 6 (7%), Referenced to phase 2:EFT and 6:WBT, Start of Green							
Control Type: Actuated-Coordinated							

Queues
1: Broadway & Western Connector

5/23/2014

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	218	633	201	673	158	783	130	417	235
v/c Ratio	1.19	0.78	1.73	0.97	0.93	0.96	1.05	0.93	2.26
Control Delay	164.7	37.9	358.3	24.3	56.0	35.7	137.7	61.1	618.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.7	37.9	358.3	24.3	56.0	35.7	137.7	61.1	618.9
Queue Length 50th (ft)	-151	174	-157	211	95	225	-81	230	-219
Queue Length 95th (ft)	#268	221	m37	m39	m95	m217	#191	#400	#357
Internal Link Dist (ft)	390	390	295	551	697	697	639	639	639
Turn Bay Length (ft)	100	295	295	551	697	697	639	639	639
Base Capacity (vph)	183	812	116	696	169	812	124	450	104
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.78	1.73	0.97	0.93	0.96	1.05	0.93	2.26
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.								

HCM Signalized Intersection Capacity Analysis
1: Broadway & Western Connector

5/23/2014

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Volume (vph)	185	471	67	171	542	30	142	600	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	11	11	11	11
Total Lost time (s)	8.0	5.0	8.0	5.0	5.0	5.0	8.0	5.0	8.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	0.98	1.00	0.98	1.00	1.00	0.64
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98	1.00	0.99	1.00	0.98	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1501	2924	1486	2984	1525	2924	1593	1621	852
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1501	2924	1486	2984	1525	2924	1593	1621	852
Peak-Hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.89
Adj. Flow (vph)	218	554	79	201	638	35	158	667	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	633	0	201	673	0	158	783	0
Confl. Peds. (#/hr)	412	321	321	412	192	192	88	88	192
Confl. Bikes (#/hr)	27	27	230	230	20	20	20	20	25
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	2%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	5
Permitted Phases	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0
Actuated Green, G (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0
Effective Green, g (s)	0.12	0.28	0.08	0.23	0.11	0.28	0.08	0.28	0.12
Actuated g/C Ratio	8.0	5.0	8.0	5.0	5.0	8.0	5.0	8.0	5.0
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	183	812	116	696	169	812	124	450	104
Lane Grp Cap (vph)	0.15	0.22	c0.14	c0.23	c0.10	c0.27	0.08	0.26	c0.28
v/s Ratio Prot	1.19	0.78	1.73	0.97	0.93	0.96	1.05	0.93	2.26
v/s Ratio Perm	39.5	30.0	41.5	34.2	39.7	32.1	41.5	31.6	39.5
Uniform Delay, d1	1.00	1.00	0.74	0.48	1.10	0.93	1.00	1.00	1.00
Progression Factor	127.4	7.3	333.0	5.1	9.3	4.3	94.4	27.5	596.3
Incremental Delay, d2	166.9	37.3	363.6	21.3	52.8	34.2	135.9	59.2	635.8
Delay (s)	F	D	F	C	D	C	F	E	F
Level of Service	E	D	F	C	D	C	F	E	F
Approach Delay (s)	70.5	100.0	37.3	245.2	37.3	245.2	37.3	245.2	37.3
Approach LOS	E	F	D	F	D	F	F	F	F
Intersection Summary									
HCM Average Control Delay	108.6 HCM Level of Service F								
HCM Volume to Capacity ratio	1.23								
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 26.0								
Intersection Capacity Utilization	81.3% ICU Level of Service D								
Analysis Period (min)	15								
c. Critical Lane Group									

Lanes and Geometrics

2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	10	11	11	10	10	10	10	11	10
Lane Width (ft)	0	0%	0	250	120	0	250	0	0	0	0%	75
Storage Length (ft)	1	1	1	0	1	0	1	0	1	0	1	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.77	0.96	0.88	0.94	0.94	0.94	0.90	0.90	0.92	0.92	0.84	0.84
Frt	0.950	0.977	0.974	0.955	0.955	0.955	0.955	0.955	0.950	0.950	0.850	0.850
Flt Protected	1593	1575	0	1501	1503	0	2591	0	2591	0	1501	1637
Satd. Flow (prot)	0.629	0.488	0.771	0.771	0.771	0.288	0.288	0.288	0.288	0.288	0.288	0.288
Flt Permitted	812	1575	0	677	1503	0	1998	0	418	1637	1129	1129
Satd. Flow (perm)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Turn on Red	14	16	82	30	30	30	30	30	30	30	30	35
Satd. Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	1009	483	810	777	777	777	777	777	777	777	777	777
Link Distance (ft)	22.9	11.0	18.4	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
Travel Time (s)												

Intersection Summary

Area Type: CBD

Volume

2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	394	275	51	69	144	31	62	388	193	35	305	268
Volume (vph)	508	199	199	508	67	65	49	180	180	180	180	67
Cont'd. Peds. (#/hr)	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Cont'd. Bikes (#/hr)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Peak Hour Factor	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Growth Factor	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles (%)	0	0	0	0	0	0	0	0	0	0	0	0
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	443	309	57	81	169	36	70	436	217	42	367	323
Shared Lane Traffic (%)	443	366	0	81	205	0	723	0	42	367	323	323
Lane Group Flow (vph)												

Intersection Summary

Timings
2. Main Street & Galileo Way

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	394	275	69	144	62	388	35	268
Volume (vph)								
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-3.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36
v/c Ratio	1.17	0.49	0.26	0.29	0.95	0.28	0.63	0.76
Control Delay	126.8	18.8	4.8	3.6	48.5	7.7	9.2	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.8	18.8	4.8	3.6	48.5	7.7	9.2	9.9
LOS	F	B	A	A	D	A	A	A
Approach Delay	77.9		3.9		48.5		9.4	
Approach LOS	E		A		D		A	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 26 (29%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 1.17								
Intersection Signal Delay: 41.6								
Intersection Capacity Utilization 139.3%								
Analysis Period (min) 15								



Phasings
2. Main Street & Galileo Way

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Maximum Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 26 (29%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

Queues
2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	443	366	81	205	723	42	367	323
Lane Group Flow (vph)	1.17	0.49	0.26	0.29	0.95	0.28	0.63	0.76
v/c Ratio	126.8	18.8	4.8	3.6	48.5	7.7	9.2	9.9
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	126.8	18.8	4.8	3.6	48.5	7.7	9.2	9.9
Total Delay	-303	133	9	21	188	6	79	58
Queue Length 50th (ft)	#478	209	m7	m12	#306	m6	m68	m47
Queue Length 95th (ft)	929	403	730				697	
Internal Link Dist (ft)			120					75
Turn Bay Length (ft)	379	742	316	710	763	149	582	424
Base Capacity (vph)	0	0	0	0	0	0	0	0
Station 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	1.17	0.49	0.26	0.29	0.95	0.28	0.63	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.							

HCM Signalized Intersection Capacity Analysis
2: Main Street & Galileo Way

5/23/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	
Volume (vph)	394	275	51	69	144	31	62	388	193	35	305	268	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	12	12	10	11	11	10	10	10	10	10	10	
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.84	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.94	1.00	0.91	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.77	1.00	0.88	1.00	0.88	1.00	1.00	0.92	1.00	1.00	1.00	0.85	
Fr	1.00	0.98	1.00	0.97	1.00	0.97	1.00	0.95	1.00	1.00	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.85	
Satd. Flow (prot)	1227	1575	1318	1502	2578	1378	1637	1129					
Flt Permitted	0.63	1.00	0.49	1.00	0.77	1.00	0.29	1.00	1.00	1.00	1.00	0.85	
Satd. Flow (perm)	813	1575	678	1502	1998	418	1637	1129					
Peak-Hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83	
Adj. Flow (vph)	443	309	57	81	169	36	70	436	217	42	367	323	
RTOR Reduction (vph)	0	7	0	0	9	0	0	53	0	0	0	23	
Lane Group Flow (vph)	443	359	0	81	196	0	0	670	0	42	367	300	
Confl. Peds. (#/hr)	508	199	199	508	67	180	180	67					
Confl. Bikes (#/hr)	26	65	65	26	49	49	26	49					
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Permitted Phases	1	1	1	1	1	1	3	3	3	3	3	3	
Actuated Green, G (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0	
Effective Green, g (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36	
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Grp Cap (vph)	379	735	316	701	710	710	149	582	401				
v/s Ratio Prot	0.23			0.13									
v/s Ratio Perm	c0.55			0.12			c0.34						
v/c Ratio	1.17	0.49	0.26	0.28	0.94	0.28	0.63	0.75					
Uniform Delay, d1	24.0	16.6	14.5	14.7	28.1	20.8	24.1	25.5					
Progression Factor	1.00	1.00	0.30	0.25	1.00	0.32	0.35	0.31					
Incremental Delay, d2	100.8	2.3	0.2	0.1	22.5	0.4	0.5	1.2					
Delay (s)	124.8	18.9	4.5	3.8	50.7	7.1	9.0	9.1					
Level of Service	F	B	A	A	A	D	A	A					
Approach Delay (s)	76.9		4.0	50.7		8.9							
Approach LOS	E		A	D		A							
Intersection Summary													
HCM Average Control Delay	41.8											HCM Level of Service	D
HCM Volume to Capacity ratio	1.07												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	16.0
Intersection Capacity Utilization	139.3%											ICU Level of Service	H
Analysis Period (min)	15												
c. Critical Lane Group													

Lanes and Geometrics
3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	12	10	12
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.84	0.980	0.980	0.945	0.990	0.990	0.990	0.990	0.944	0.988	0.988	0.72
Ped Bike Factor	0.84	0.980	0.980	0.945	0.990	0.990	0.990	0.990	0.944	0.988	0.988	0.72
Frt	0.994	0.994	0.994	0.991	0.991	0.991	0.991	0.991	0.988	0.988	0.988	0.988
Flt Protected	0	1331	0	0	1299	0	0	1429	0	0	1135	0
Satd Flow (prot)	0.927	0.927	0.927	0.773	0.773	0.703	0.703	0.703	0.714	0.714	0.714	0.714
Flt Permitted	0	1164	0	0	971	0	0	970	0	0	771	0
Satd Flow (perm)	No	No	No	No	No	No	No	No	No	No	No	No
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	483	483	483	490	490	536	536	536	282	282	282	282
Link Distance (ft)	11.0	11.0	11.0	11.1	11.1	12.2	12.2	12.2	6.4	6.4	6.4	6.4
Travel Time (s)												
Intersection Summary												
Area Type:	CBD											

Volume
3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	65	364	73	26	58	58	59	200	21	71	104	125
Contl. Peds. (#/hr)	787	879	879	879	879	879	272	272	309	309	309	272
Contl. Bikes (#/hr)			45			42			19			6
Peak Hour Factor	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	69	387	78	33	74	74	66	222	23	86	125	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	534	0	0	181	0	0	311	0	0	362	0
Intersection Summary												

Timings
3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø2
Lane Configurations	65	364	26	58	59	200	71	104	
Volume (vph)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Turn Type	3	3	3	3	1	1	1	1	2
Protected Phases	3	3	3	3	1	1	1	1	
Detector Phase	3	3	3	3	1	1	1	1	
Switch Phase	3	3	3	3	1	1	1	1	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	36.0	36.0	36.0	36.0	26.0	26.0	26.0	26.0	28.0
Total Split (s)	36.0	36.0	36.0	36.0	26.0	26.0	26.0	26.0	28.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	28.9%	28.9%	28.9%	28.9%	31%
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	18.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Lead/Lag					Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	28.0	28.0	0.31	0.31	0.20	18.0	0.20	18.0	
Actuated g/C Ratio	1.48	0.60	0.60	1.60	322.4	644.2	2.35	644.2	
v/c Ratio	249.2	36.0	36.0	322.4	644.2	644.2	0.0	644.2	
Control Delay	F	D	D	F	F	F	F	F	
Total Delay	249.2	36.0	36.0	322.4	644.2	644.2	0.0	644.2	
Approach Delay	F	D	D	F	F	F	F	F	
Approach LOS	F	D	D	F	F	F	F	F	
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 33 (37%), Referenced to phase 3:EBWB, Start of Green									
Natural Cycle: 150									
Control Type: Prelimed									
Maximum v/c Ratio: 2.35									
Intersection Signal Delay: 340.8									
Intersection Capacity Utilization 81.9%									
Analysis Period (min) 15									



Phasings
3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	ø2
Protected Phases	3	3	3	3	1	1	1	1	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	36.0	36.0	36.0	36.0	26.0	26.0	26.0	26.0	28.0
Total Split (s)	36.0	36.0	36.0	36.0	26.0	26.0	26.0	26.0	28.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	28.9%	28.9%	28.9%	28.9%	31%
Maximum Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
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)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	18.0
Lead/Lag					Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?					Yes	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
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	Max	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	9.0	9.0	9.0	9.0	4.0	4.0	4.0	4.0	4.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0
90th %ile Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	7.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR	MaxR
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 33 (37%), Referenced to phase 3:EBWB, Start of Green									
Control Type: Prelimed									

	EBT	WBT	NBT	SBT
Lane Group	534	181	311	362
Lane Group Flow (vph)	1.48	0.60	1.60	2.35
v/c Ratio	249.2	36.0	322.4	644.2
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	249.2	36.0	322.4	644.2
Total Delay	-432	87	-256	-354
Queue Length 50th (ft)	m#556	131	#416	m#401
Queue Length 95th (ft)	403	410	456	202
Internal Link Dist (ft)				
Turn Bay Length (ft)	362	302	194	154
Base Capacity (vph)	0	0	0	0
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.48	0.60	1.60	2.35

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.

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	65	364	73	26	58	59	200	21	71	104	125	
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vphpl)	12	12	12	12	16	12	12	12	12	12	12	
Lane Width	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Util. Factor	0.90	0.72	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Frb. ped/bikes	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Fllb. ped/bikes	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Frt	1248	1244	1366	1366	1366	1366	1366	1366	1366	1366	1366	
Fill Protected	0.93	0.77	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Satd. Flow (perm)	1164	970	971	971	971	971	971	971	971	971	971	
Peak-Hour factor, PHF	0.94	0.94	0.78	0.78	0.78	0.78	0.90	0.90	0.90	0.83	0.83	
Adj. Flow (vph)	69	387	78	33	74	74	66	222	23	86	125	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	534	0	0	181	0	0	311	0	0	362	
Confl. Peds. (#/hr)	787	879	879	787	272	309	309	272	19	19	6	
Confl. Bikes (#/hr)	45	45	42	42	19	19	19	19	19	19	6	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	
Protected Phases	3	3	3	3	3	3	1	1	1	1	1	
Permitted Phases	3	3	3	3	3	3	1	1	1	1	1	
Actuated Green, G (s)	28.0	28.0	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	18.0	
Effective Green, g (s)	28.0	28.0	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0	18.0	
Actuated q/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.20	0.20	0.20	0.20	0.20	
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Lane Grp Cap (vph)	362	362	302	302	302	194	194	194	154	154	154	
v/s Ratio Prot	c0.46	0.19	0.32	0.32	0.32	0.32	c0.47	c0.47	c0.47	c0.47	c0.47	
v/s Ratio Perm	1.48	0.60	1.60	1.60	1.60	1.60	2.35	2.35	2.35	2.35	2.35	
v/c Ratio	31.0	26.3	36.0	36.0	36.0	36.0	44.0	44.0	44.0	44.0	44.0	
Uniform Delay, d1	0.78	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	
Progression Factor	224.9	8.5	294.1	294.1	294.1	294.1	623.1	623.1	623.1	623.1	623.1	
Incremental Delay, d2	249.2	34.8	330.1	330.1	330.1	330.1	658.6	658.6	658.6	658.6	658.6	
Delay (s)	F	C	F	C	F	F	F	F	F	F	F	
Level of Service	F	C	F	C	F	F	F	F	F	F	F	
Approach Delay (s)	249.2	34.8	330.1	330.1	330.1	330.1	658.6	658.6	658.6	658.6	658.6	
Approach LOS	F	C	F	C	F	F	F	F	F	F	F	
Intersection Summary												
HCM Average Control Delay	346.1	1.82	1.82	1.82	1.82	1.82	44.0	44.0	44.0	44.0	44.0	
HCM Volume to Capacity ratio	90.0	90.0	90.0	90.0	90.0	90.0	44.0	44.0	44.0	44.0	44.0	
Actuated Cycle Length (s)	81.9%	ICU Level of Service	D	D	D	D	D	D	D	D	D	
Intersection Capacity Utilization	15	15	15	15	15	15	15	15	15	15	15	
Analysis Period (min)												
c Critical Lane Group												

Lanes and Geometrics

4: Broadway east & Ames Street

5/23/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	12	12
Grade (%)	0%	0%	16.0	0%	0%	0%
Storage Length (ft)	0	1	0	1	0	0
Storage Lanes	0	1	1	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.90	0.90	0.86	0.52	0.52	0.52
Frt	0.976	0.976	0.914	0.914	0.914	0.914
FIT Protected	0.950	0.950	0.982	0.982	0.982	0.982
Satd. Flow (prot)	2643	0	1555	1637	835	0
FIT Permitted	0.222	0.222	0.982	0.982	0.982	0.982
Satd. Flow (perm)	2643	0	314	1637	785	0
Right Turn on Red	No	No	No	No	Yes	Yes
Satd. Flow (RTOR)	83	83	83	83	83	83
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	631	631	396	269	269	269
Travel Time (s)	14.3	14.3	9.0	6.1	6.1	6.1
Intersection Summary						
Area Type:	CBD					

Volume

4: Broadway east & Ames Street

5/23/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	582	110	127	583	164	289
Confl. Peds. (#/hr)	392	392	392	85	443	443
Confl. Bikes (#/hr)	1.6	1.6	1.6	1.6	1.6	1.6
Peak Hour Factor	0.95	0.95	0.88	0.88	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	613	116	144	662	189	332
Shared Lane Traffic (%)	0%	0%	0%	0%	0%	0%
Lane Group Flow (vph)	729	0	144	662	521	0
Intersection Summary						

Lane Group	EBT	WBL	WBT	NBL	ø3
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	582	127	583	164	
Turn Type	pmt-pt				
Protected Phases	1	2	1	4	3
Permitted Phases	1				
Detector Phase	1				
Switch Phase	1				
Minimum Initial (s)	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (%)	26.7%	23.3%	26.7%	23.3%	27%
Yellow Time (s)	3.0	2.0	3.0	2.0	3.0
All-Red Time (s)	3.0	5.0	3.0	5.0	14.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	18.0	31.0	18.0	14.0	
Actuated g/C Ratio	0.20	0.34	0.20	0.16	
v/c Ratio	1.38	0.48	2.02	2.60	
Control Delay	205.9	9.4	487.5	745.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	205.9	9.4	487.5	745.6	
LOS	F	A	F	F	F
Approach Delay	205.9		402.1	745.6	
Approach LOS	F		F	F	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 60 (67%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 140					
Control Type: Prelimed					
Maximum v/c Ratio: 2.60					
Intersection Signal Delay: 419.6					
Intersection Capacity Utilization: 83.7%					
Analysis Period (min): 15					



Lane Group	EBT	WBL	WBT	NBL	ø3
Protected Phases	1	2	1	4	3
Permitted Phases	1				
Minimum Initial (s)	4.0	4.0	4.0	4.0	7.0
Minimum Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (s)	24.0	21.0	24.0	21.0	24.0
Total Split (%)	26.7%	23.3%	26.7%	23.3%	27%
Maximum Green (s)	18.0	14.0	18.0	14.0	7.0
Yellow Time (s)	3.0	2.0	3.0	2.0	3.0
All-Red Time (s)	3.0	5.0	3.0	5.0	14.0
Lead/Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	16.0	12.0	16.0	12.0	
Pedestrian Calls (#/hr)	0	0	0	0	
90th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	18.0	14.0	18.0	14.0	7.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 60 (67%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL
Lane Group	729	144	662	521
Lane Group Flow (vph)	1.38	0.48	2.02	2.60
v/c Ratio	205.9	9.4	487.5	745.6
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	205.9	9.4	487.5	745.6
Total Delay	-300	33	-618	-478
Queue Length 50th (ft)	m#380	m35	m#725	m#424
Queue Length 95th (ft)	551	316	189	
Internal Link Dist (ft)	160			
Turn Bay Length (ft)	529	301	327	200
Base Capacity (vph)	0	0	0	0
Station Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.38	0.48	2.02	2.60
Intersection Summary				
-	Volume exceeds capacity, queue is theoretically infinite.			
-	Queue shown is maximum after two cycles.			
#	95th percentile volume exceeds capacity, queue may be longer.			
-	Queue shown is maximum after two cycles.			
m	Volume for 95th percentile queue is metered by upstream signal.			

Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	EB	EB	WB	WB	NB	NB	
Volume (vph)	582	110	127	583	164	289	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width	10	12	11	11	12	12	
Total Lost time (s)	6.0	7.0	6.0	7.0			
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00		
Frb. ped/bikes	0.90	1.00	1.00	1.00	0.55		
Frb. ped/bikes	1.00	0.98	1.00	1.00	1.00		
Frt	0.98	1.00	1.00	0.91			
Flt Protected	1.00	0.95	1.00	0.98			
Satd. Flow (prot)	2643	1517	1637	835			
Flt Permitted	1.00	0.22	1.00	0.98			
Satd. Flow (perm)	2643	355	1637	835			
Peak-Hour factor, PHF	0.95	0.95	0.88	0.87	0.87	0.87	
Adj. Flow (vph)	613	116	144	662	189	332	
RTOR Reduction (vph)	0	0	0	0	70	0	
Lane Group Flow (vph)	729	0	144	662	451	0	
Confl. Peds. (#/hr)	392	392		85	443		
Confl. Bikes (#/hr)	16				10		
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%	
Parking (#/hr)						0	
Turn Type	pm+pt						
Protected Phases	1	2	1	1	4		
Permitted Phases	1						
Actuated Green, G (s)	18.0	32.0	18.0	14.0			
Effective Green, g (s)	18.0	32.0	18.0	14.0			
Actuated g/C Ratio	0.20	0.36	0.20	0.16			
Clearance Time (s)	6.0	7.0	6.0	7.0			
Lane Grp Cap (vph)	529	307	327	130			
v/s Ratio Prot	0.28	0.07	0.40	0.54			
v/s Ratio Perm	0.09						
v/c Ratio	1.38	0.47	2.02	3.47			
Uniform Delay, d1	36.0	21.8	36.0	38.0			
Progression Factor	0.94	0.37	0.69	1.48			
Incremental Delay, d2	176.1	2.6	466.5	1116.6			
Delay (s)	209.9	10.6	491.2	1173.0			
Level of Service	F	B	F	F			
Approach Delay (s)	209.9	405.4	1173.0				
Approach LOS	F	F	F				
Intersection Summary							
HCM Average Control Delay	530.6					HCM Level of Service	F
HCM Volume to Capacity ratio	1.99						
Actuated Cycle Length (s)	90.0					Sum of lost time (s)	44.0
Intersection Capacity Utilization	83.7%					ICU Level of Service	E
Analysis Period (min)	15						
c	Critical Lane Group						

Lanes and Geometrics

5: Broadway east & Third Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.980	0.956									0.850
Flt Protected	0.950											0.956
Satd. Flow (prot)	1501	2857	0	0	2659	0	0	0	0	0	1511	1343
Flt Permitted	0.950											0.956
Satd. Flow (perm)	1501	2857	0	0	2659	0	0	0	0	0	1511	1343
Right Turn on Red			Yes		No				Yes			No
Satd. Flow (RTOR)		21										
Link Speed (mph)		30			30				30			30
Link Distance (ft)		581			393				166			1212
Travel Time (s)		13.2			8.9				3.8			27.5
Intersection Summary												
Area Type:	CBD											

Volume

5: Broadway east & Third Street

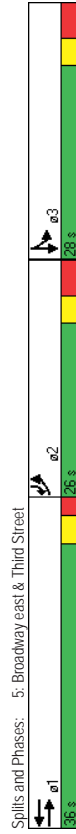
5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	325	566	87	0	492	207	0	0	0	454	44	223
Cont'l. Peds. (#/hr)	36	36	20									
Cont'l. Bikes (#/hr)	0	0	0									
Peak Hour Factor	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0									
Mid-Block Traffic (%)	0%	0%	0%									0%
Adj. Flow (vph)	342	596	92	0	566	238	0	0	0	493	48	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	342	688	0	0	804	0	0	0	0	0	541	242
Intersection Summary												

Timings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Configurations	5	4	4	4	4
Volume (vph)	325	566	492	44	223
Turn Type	Prot	Over	Over	Over	Over
Protected Phases	2	1	1	3	2
Permitted Phases	2	1	1	3	2
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	35.0	27.0	23.0	23.0
Total Split (s)	26.0	36.0	28.0	26.0	26.0
Total Split (%)	28.9%	40.0%	31.1%	28.9%	28.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	19.0	31.0	31.0	21.0	19.0
Actuated g/C Ratio	0.21	0.34	0.34	0.23	0.21
v/c Ratio	1.08	0.69	0.88	1.53	0.85
Control Delay	79.6	10.9	40.4	281.8	62.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	10.9	40.4	281.8	62.4
LOS	E	B	D	F	E
Approach Delay	33.7	40.4	214.0		
Approach LOS	C	D	F		
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 115					
Control Type: Prelimed					
Maximum v/c Ratio: 1.53					
Intersection Signal Delay: 89.7	Intersection LOS: F				
Intersection Capacity Utilization: 90.8%	ICU Level of Service E				
Analysis Period (min): 15					



Phasings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Protected Phases	2	1	1	3	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	23.0	35.0	27.0	23.0	23.0
Minimum Split (s)	26.0	36.0	28.0	26.0	26.0
Total Split (s)	28.9%	40.0%	31.1%	28.9%	28.9%
Maximum Green (s)	19.0	31.0	31.0	21.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	3.0	15.0	15.0	7.0	3.0
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (/hr)	0	0	0	0	0
90th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBL	EBT	WBT	SBT	SBR
Lane Group	342	688	804	541	242
Lane Group Flow (vph)	1.08	0.69	0.88	1.53	0.85
v/c Ratio	79.6	10.9	40.4	281.8	62.4
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	79.6	10.9	40.4	281.8	62.4
Total Delay	-227	167	223	-436	133
Queue Length 50th (ft)	m152	m64	#313	#632	#266
Queue Length 95th (ft)	501	313	1132		
Internal Link Dist (ft)	340			160	
Turn Bay Length (ft)	317	998	916	353	284
Base Capacity (vph)	0	0	0	0	0
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	1.08	0.69	0.88	1.53	0.85
Intersection Summary					
-	Volume exceeds capacity, queue is theoretically infinite.				
-	Queue shown is maximum after two cycles.				
#	95th percentile volume exceeds capacity, queue may be longer.				
-	Queue shown is maximum after two cycles.				
m	Volume for 95th percentile queue is metered by upstream signal.				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↑	↑↑	↑↑	↑↑	↑↑	↑↑					↑
Volume (vph)	325	566	87	0	492	207	0	0	0	454	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	70	11	12	12	11	11	12	12	12	10	10
Total Lost time (s)	70	50			50					70	70
Lane Util. Factor	1.00	0.95			0.95					1.00	1.00
Fpb. ped/bikes	1.00	0.99			0.89					1.00	1.00
Fipb. ped/bikes	1.00	1.00			1.00					1.00	1.00
Frt	1.00	0.98			0.96					1.00	0.85
Flt Protected	0.95	1.00			1.00					0.96	1.00
Satd. Flow (prot)	1501	2857			2658					1511	1343
Flt Permitted	0.95	1.00			1.00					0.96	1.00
Satd. Flow (perm)	1501	2857			2658					1511	1343
Peak-hour factor, PHF	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	342	596	92	0	566	238	0	0	0	493	48
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	342	674	0	0	804	0	0	0	0	0	541
Confl. Peds. (#/hr)			36	36	123						
Confl. Bikes (#/hr)			20	20	159						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%
Parking (#/hr)	0										
Turn Type	Prot	Prot					Split	Split	Split	Split	Over
Protected Phases	2	1			1		3	3	3	2	
Permitted Phases											
Actuated Green, G (s)	19.0	31.0			31.0					21.0	19.0
Effective Green, g (s)	19.0	31.0			31.0					21.0	19.0
Actuated q/C Ratio	0.21	0.34			0.34					0.23	0.21
Clearance Time (s)	7.0	5.0			5.0					7.0	7.0
Lane Grp Cap (vph)	317	984			916					353	284
v/s Ratio Prot	c0.23	0.24			c0.30					c0.36	0.18
v/s Ratio Perm											
v/c Ratio	1.08	0.69			0.88					1.53	0.85
Uniform Delay, d1	35.5	25.3			27.7					34.5	34.1
Progression Factor	1.07	0.42			1.00					1.00	1.00
Incremental Delay, d2	41.5	0.4			11.6					253.5	26.2
Delay (s)	79.5	11.1			39.4					288.0	60.4
Level of Service	E	B			D					F	E
Approach Delay (s)		33.8			39.4			0.0		217.7	
Approach LOS		C			D			A		F	
Intersection Summary											
HCM Average Control Delay	90.5 HCM Level of Service F										
HCM Volume to Capacity ratio	1.13										
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 19.0										
Intersection Capacity Utilization	90.8% ICU Level of Service E										
Analysis Period (min)	15										
c. Critical Lane Group											

Lanes and Geometrics
6: Ames Street &

5/23/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.929					
FIT Protected	0.977					
Satd. Flow (prot)	1552	0	1621	0	0	1637
FIT Permitted	0.977					
Satd. Flow (perm)	1552	0	1621	0	0	1637
Link Speed (mph)	30		30			30
Link Distance (ft)	239		282			269
Travel Time (s)	5.4		6.4			6.1
Intersection Summary						
Area Type:	CBD					

Volume
6: Ames Street &

5/23/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	41	45	323	0	0	249
Confl. Peds. (#/hr)	320	330	275	275	275	275
Confl. Bikes (#/hr)				41		
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	56	62	371	0	0	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	371	0	0	300
Intersection Summary						

6: Ames Street &

5/23/2014

7: Broadway east &

5/23/2014

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	41	45	323	0	0	249
Sign Control	Stop	Free	Free	Free	Free	Free
Grade (%)	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.73	0.73	0.87	0.87	0.83	0.83
Hourly flow rate (vph)	56	62	371	0	0	300
Pedestrians	275	320				
Lane Width (ft)	12.0	11.0	11.0	11.0	11.0	11.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	23	24				25
Right turn flare (veh)			None	None	None	None
Median type			None	None	None	None
Median storage (veh)						
Upstream signal (ft)	0.87	0.87	282	282	0.87	269
pX platoon unblocked						
vC conflicting volume	1266	976				646
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	1230	896				516
vCu unblocked vol	6.4	6.2				4.1
IC 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	44	64				100
GM capacity (veh/h)	100	171				705
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	118	371	300			
Volume Left	56	0	0			
Volume Right	62	0	0			
cSH	128	1700	705			
Volume to Capacity	0.92	0.22	0.00			
Queue Length 95th (ft)	151	0	0			
Control Delay (s)	125.4	0.0	0.0			
Lane LOS	F					
Approach Delay (s)	125.4	0.0	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay	18.7					
Intersection Capacity Utilization	38.9%					
Analysis Period (min)	15					
ICU Level of Service	A					

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.994		0.950		0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1683	0	1608	1693	0	1479
Flt Permitted			0.950			
Satd. Flow (perm)	1683	0	1608	1693	0	1479
Link Speed (mph)	30		30		30	
Link Distance (ft)	396		581		146	
Travel Time (s)	9.0		13.2		3.3	
Intersection Summary						
Area Type:	CBD					

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	830	40	26	690	0	140
Confl. Peds. (#/hr)		358	358			215
Confl. Bikes (#/hr)	22					
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	874	42	30	784	0	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	916	0	30	784	0	167

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	830	40	26	690	0	140
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	874	42	30	784	0	167
Pedestrians				215	358	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				18	30	
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked			0.78		0.81	0.78
vC, conflicting volume			1274		2096	1468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol			1210		1624	1459
vCu, unblocked vol			4.1		6.4	6.2
IC, single (s)			2.2		3.5	3.3
IC, 2 stage (s)			91		100	0
p0 queue free %			317		59	72
gM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	916	30	784	167		
Volume Left	0	30	0	0		
Volume Right	42	0	0	167		
cSH	1700	317	1700	72		
Volume to Capacity	0.54	0.09	0.46	2.31		
Queue Length 95th (ft)	0	8	0	395		
Control Delay (s)	0.0	17.5	0.0	723.3		
Lane LOS	C	C	F	F		
Approach Delay (s)	0.0	0.6	723.3			
Approach LOS			F			
Intersection Summary						
Average Delay						63.9
Intersection Capacity Utilization						75.9%
ICU Level of Service						D
Analysis Period (min)						15

2019 Future Condition
With Buffered Bike Lanes

Lanes and Geometrics
1: Broadway & Western Connector

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	10	11	10	11	11	11	12	11	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	100	0	295	0	295	0	250	0	225	0	225	0
Storage Lanes	1	0	1	0	1	0	1	0	1	0	1	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.85	0.96	0.87	0.98	0.87	0.98	0.87	0.98	0.96	0.96	0.96	0.64
Frt	0.981			0.992			0.978		0.850			0.850
FRT Protected	0.950			0.950			0.950		0.950			0.950
Satd. Flow (prot)	1501	2923	0	1486	2982	0	1525	2924	0	1583	1621	1330
FRT Permitted	0.950			0.950			0.950		0.950			0.950
Satd. Flow (perm)	1283	2923	0	1290	2982	0	1323	2924	0	1535	1621	852
Right Turn on Red	No	No	No	No	No	No	No	No	No	No	No	No
Satd. Flow (RTOR)												
Link Speed (mph)	25			30			30		30			30
Link Distance (ft)	470			631			777		719			719
Travel Time (s)	12.8			14.3			17.7		16.3			16.3
Intersection Summary												
Area Type:	CBD											

Volume
1: Broadway & Western Connector

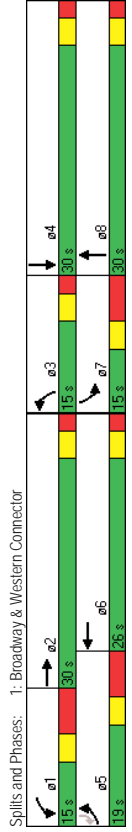
5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	185	471	67	171	542	30	142	600	104	116	371	209
Confl. Peds. (#/hr)	412	321	321	412	192	88	88	88	88	88	88	192
Confl. Bikes (#/hr)			27			230			20			25
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	218	554	79	201	638	35	158	667	116	130	417	235
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	633	0	201	673	0	158	783	0	130	417	235
Intersection Summary												

5/23/2014
Timings
1: Broadway & Western Connector

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
↖	↗	↖	↗	↖	↗	↖	↗
5	2	1	6	3	8	7	4
5	2	1	6	3	8	7	4
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
12.0	27.0	12.0	22.0	9.0	27.0	12.0	27.0
19.0	30.0	15.0	26.0	15.0	30.0	15.0	30.0
21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	16.7%	33.3%
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
0.0	0.0	0.0	0.0	0.0	-4.0	-4.0	0.0
8.0	5.0	8.0	5.0	5.0	4.0	1.0	8.0
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
None	C-Max	None	C-Max	None	Max	None	Max
11.0	25.0	7.0	21.0	10.0	25.0	7.0	21.0
0.12	0.28	0.08	0.23	0.11	0.28	0.12	0.32
1.19	0.78	1.73	0.97	0.93	0.96	0.67	0.80
164.7	37.9	355.9	47.0	56.6	35.0	55.8	41.2
164.7	37.9	355.9	47.0	56.6	35.0	55.8	41.2
F	D	F	D	E	C	E	D
70.4	118.1	F	38.6	D	217.2	F	F

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2,EBT and 6,WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.26
 Intersection Signal Delay: 107.1
 Intersection Capacity Utilization: 78.4%
 Analysis Period (min): 15



5/23/2014
Phasings
1: Broadway & Western Connector

EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
↖	↗	↖	↗	↖	↗	↖	↗
5	2	1	6	3	8	7	4
5	2	1	6	3	8	7	4
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
12.0	27.0	12.0	22.0	9.0	27.0	12.0	27.0
19.0	30.0	15.0	26.0	15.0	30.0	15.0	30.0
21.1%	33.3%	16.7%	28.9%	16.7%	33.3%	16.7%	33.3%
11.0	25.0	7.0	21.0	10.0	25.0	7.0	21.0
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5.0	2.0	5.0	2.0	2.0	5.0	2.0	5.0
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
None	C-Max	None	C-Max	None	Max	None	Max
11.0	25.0	7.0	21.0	10.0	25.0	7.0	21.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
None	C-Max	None	C-Max	None	Max	None	Max
7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
15.0	15.0	10.0	15.0	15.0	12.0	15.0	12.0
0	0	0	0	0	0	0	0
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR
11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0
Max	Coord	Max	Coord	Max	MaxR	Max	MaxR

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2,EBT and 6,WBT, Start of Green
 Control Type: Actuated-Coordinated

1: Broadway & Western Connector

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	218	633	201	673	158	783	130	417	235
v/c Ratio	1.19	0.78	1.73	0.97	0.93	0.96	0.67	0.80	2.26
Control Delay	164.7	37.9	355.9	47.0	56.6	35.0	55.8	41.2	618.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.7	37.9	355.9	47.0	56.6	35.0	55.8	41.2	618.9
Queue Length 50th (ft)	-151	174	-165	221	97	222	72	214	-219
Queue Length 95th (ft)	#268	221	m#156	m196	m97	m212	#149	#357	#357
Internal Link Dist (ft)	390	295	551	697	697	697	225	639	639
Turn Bay Length (ft)	100	295	295	250	250	250	225	225	225
Base Capacity (vph)	183	812	116	696	169	812	195	522	104
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.78	1.73	0.97	0.93	0.96	0.67	0.80	2.26
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.								

1: Broadway & Western Connector

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	185	471	67	171	542	30	142	600	104	116	371	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	10	10	11	10	11	11	11	12	11	10
Total Lost time (s)	8.0	5.0	8.0	8.0	5.0	5.0	5.0	5.0	4.0	1.0	8.0	8.0
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	0.98	1.00	0.98	1.00	0.98	1.00	1.00	1.00	0.64
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	1.00
Frt	1.00	0.98	1.00	0.99	1.00	0.99	1.00	0.98	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1501	2924	1486	2982	1525	2924	1525	2924	1593	1621	852	852
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1501	2924	1486	2982	1525	2924	1525	2924	1593	1621	852	852
Peak-Hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	218	554	79	201	638	35	158	667	116	130	417	235
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	218	633	0	201	673	0	158	783	0	130	417	235
Confl. Peds. (#/hr)	412	321	321	412	192	230	88	88	20	25	25	25
Confl. Bikes (#/hr)	27	27	27	27	27	27	27	27	27	27	27	27
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	custom
Protected Phases	5	2	1	6	3	8	7	4	5	4	4	5
Permitted Phases	5	2	1	6	3	8	7	4	5	4	4	5
Actuated Green, G (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	25.0	11.0	11.0
Effective Green, g (s)	11.0	25.0	7.0	21.0	10.0	25.0	7.0	25.0	11.0	25.0	11.0	11.0
Actuated g/C Ratio	0.12	0.28	0.08	0.23	0.11	0.28	0.12	0.28	0.12	0.32	0.12	0.12
Clearance Time (s)	8.0	5.0	5.0	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	3.0	3.0	3.0
Lane Grp Cap (vph)	183	812	116	696	169	812	195	522	104	130	417	235
v/s Ratio Prot	0.15	c0.22	0.14	c0.23	c0.10	c0.27	0.08	0.26	0.28	0.26	0.26	0.28
v/s Ratio Perm	1.19	0.78	1.73	0.97	0.93	0.96	0.67	0.80	2.26	0.67	0.80	2.26
Uniform Delay, d1	39.5	30.0	41.5	34.2	39.7	32.1	37.7	27.8	39.5	37.7	27.8	39.5
Progression Factor	1.00	1.00	0.55	1.20	1.12	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	127.4	7.3	333.0	5.1	9.3	4.3	8.3	12.1	596.3	8.3	12.1	596.3
Delay (s)	166.9	37.3	355.8	46.2	53.5	33.4	46.1	39.9	635.8	46.1	39.9	635.8
Level of Service	F	D	F	D	D	C	D	D	D	D	D	F
Approach Delay (s)	F	D	F	D	D	C	D	D	D	D	D	F
Approach LOS	E	E	E	F	F	D	D	D	D	D	D	F
Intersection Summary												
HCM Average Control Delay	107.1 HCM Level of Service F											
HCM Volume to Capacity ratio	1.29											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 28.0											
Intersection Capacity Utilization	78.4% ICU Level of Service D											
Analysis Period (min)	15											
c. Critical Lane Group												

Lanes and Geometrics

2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	10	11	11	10	10	10	10	11	10
Lane Width (ft)	0	0%	0	120	0	250	0	0	0	0	0%	75
Grade (%)	1	1	1	1	1	1	1	1	1	1	1	1
Storage Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	0.77	0.96	0.88	0.94	0.94	0.94	0.90	0.90	0.92	0.92	0.84	0.84
Ped Bike Factor	0.950	0.977	0.950	0.974	0.955	0.955	0.955	0.955	0.950	0.950	0.850	0.850
Flt Protected	1593	1575	0	1501	1503	0	0	2591	0	1501	1637	1343
Satd. Flow (prot)	0.629	0.488	0.488	0.771	0.771	0.771	0.288	0.288	0.288	0.288	0.288	0.288
Flt Permitted	812	1575	0	677	1503	0	0	1998	0	418	1637	1129
Satd. Flow (perm)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Turn on Red	14	16	16	82	82	82	82	82	82	82	82	35
Satd. Flow (RTOR)	30	30	30	30	30	30	30	30	30	30	30	30
Link Speed (mph)	1009	483	483	810	810	810	810	810	810	810	810	777
Link Distance (ft)	22.9	11.0	11.0	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	17.7
Travel Time (s)	Intersection Summary											

Area Type: CBD

Volume

2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	394	275	51	69	144	31	62	388	193	35	305	268
Contd. Peds. (#/hr)	508	199	199	199	67	508	67	180	180	180	180	67
Contd. Bikes (#/hr)	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Peak Hour Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Growth Factor	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Heavy Vehicles (%)	0	0	0	0	0	0	0	0	0	0	0	0
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	443	309	57	81	169	36	70	436	217	42	367	323
Adj. Flow (vph)	443	366	0	81	205	0	0	723	0	42	367	323
Shared Lane Traffic (%)	Intersection Summary											

Timings
2. Main Street & Galileo Way

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	394	275	69	144	62	388	35	268
Volume (vph)								
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	3	3	3	3
Detector Phase	1	1	1	1	3	3	3	3
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-3.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	5.0	8.0	8.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36
v/c Ratio	1.17	0.49	0.26	0.29	0.95	0.28	0.63	0.76
Control Delay	126.8	18.8	27.6	24.1	48.5	32.7	36.8	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	126.8	18.8	27.6	24.1	48.5	32.7	36.8	37.5
LOS	F	B	C	C	D	C	D	D
Approach Delay	77.9		25.1		48.5		36.9	
Approach LOS	E		C		D		D	
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 1.17								
Intersection Signal Delay: 51.9								
Intersection Capacity Utilization 139.3%								
Analysis Period (min) 15								



Phasings
2. Main Street & Galileo Way

5/23/2014

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	1	1	1	1	3	3	3	3
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (s)	50.0	50.0	50.0	50.0	40.0	40.0	40.0	40.0
Total Split (%)	55.6%	55.6%	55.6%	55.6%	44.4%	44.4%	44.4%	44.4%
Maximum Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 69 (77%), Referenced to phase 1:EBWB, Start of Green								
Control Type: Prelimed								

Queues
2: Main Street & Galileo Way

5/23/2014

	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group	443	366	81	205	723	42	367	323
Lane Group Flow (vph)	1.17	0.49	0.26	0.29	0.95	0.28	0.63	0.76
v/c Ratio	126.8	18.8	27.6	24.1	48.5	32.7	36.8	37.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	126.8	18.8	27.6	24.1	48.5	32.7	36.8	37.5
Total Delay	-303	133	35	82	188	24	225	168
Queue Length 50th (ft)	#478	209	m57	m130	#306	m26	m237	m182
Queue Length 95th (ft)		929		403	730		697	
Internal Link Dist (ft)		120						75
Turn Bay Length (ft)	379	742	316	710	763	149	582	424
Base Capacity (vph)	0	0	0	0	0	0	0	0
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	1.17	0.49	0.26	0.29	0.95	0.28	0.63	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.							

HCM Signalized Intersection Capacity Analysis
2: Main Street & Galileo Way

5/23/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4	4
Volume (vph)	394	275	51	69	144	31	62	388	193	35	305	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	11	11	10	10	10	10	11	10
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.84
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.94	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.77	1.00	1.00	0.88	1.00	1.00	1.00	0.95	1.00	0.92	1.00	1.00
Frt	1.00	0.98	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1227	1575	1318	1502	2578	1378	1637	1129	1378	1637	1129	1129
Flt Permitted	0.63	1.00	0.49	1.00	0.77	1.00	0.77	1.00	0.77	1.00	1.00	1.00
Satd. Flow (perm)	813	1575	678	1502	1998	418	1637	1129	1637	1129	1129	1129
Peak-Hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.83	0.83	0.83
Adj. Flow (vph)	443	309	57	81	169	36	70	436	217	42	367	323
RTOR Reduction (vph)	0	7	0	0	9	0	0	53	0	0	0	23
Lane Group Flow (vph)	443	359	0	81	196	0	0	670	0	42	367	300
Conf. Ped. (#/hr)	508	199	199	508	67	180	180	67	49	49	50	50
Conf. Bikes (#/hr)	26	26	26	65	65	65	65	49	49	49	49	49
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	1	1	1	1	1	1	1	1	1	1	1	1
Permitted Phases	1	1	1	1	1	1	1	1	1	1	1	1
Actuated Green, G (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0
Effective Green, g (s)	42.0	42.0	42.0	42.0	42.0	42.0	32.0	32.0	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47	0.47	0.36	0.36	0.36	0.36	0.36	0.36
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	379	735	316	701	710	710	149	582	401	582	401	401
v/s Ratio Prot	0.23	0.23	0.12	0.13	0.13	0.13	0.10	0.22	0.22	0.10	0.22	0.22
v/c Ratio Perm	c0.55	c0.55	0.12	0.12	0.12	0.12	0.094	0.28	0.28	0.094	0.28	0.28
v/c Ratio	1.17	0.49	0.26	0.28	0.28	0.28	0.94	0.94	0.94	0.28	0.63	0.75
Uniform Delay, d1	24.0	16.6	14.5	14.7	14.7	14.7	28.1	28.1	20.8	24.1	25.5	25.5
Progression Factor	1.00	1.00	1.70	1.68	1.68	1.68	1.00	1.00	1.44	1.46	1.53	1.53
Incremental Delay, d2	100.8	2.3	1.5	0.8	0.8	0.8	22.5	22.5	0.4	0.5	1.2	1.2
Delay (s)	124.8	18.9	26.2	25.5	25.5	25.5	50.7	50.7	30.3	35.7	40.2	40.2
Level of Service	F	B	C	C	C	C	D	D	C	D	D	D
Approach Delay (s)	76.9	76.9	25.7	25.7	25.7	25.7	50.7	50.7	37.4	37.4	37.4	37.4
Approach LOS	E	E	C	C	C	C	D	D	D	D	D	D
Intersection Summary												
HCM Average Control Delay	52.4 HCM Level of Service D											
HCM Volume to Capacity ratio	1.07											
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 16.0											
Intersection Capacity Utilization	139.3% ICU Level of Service H											
Analysis Period (min)	15											
c Critical Lane Group												

Lanes and Geometrics

3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	12	12	12	12	12	12	12	12	12	12	10	12
Lane Width (ft)	0	0	0	0	0	0	0	0	0	0	0	100
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	0	0	0	0	0	0	0	0	0	0	0	1
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25	50
Taper Length (ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.84	0.980	0.990	0.945	0.990	0.990	0.990	0.990	0.990	0.990	0.88	0.46
Ped Bike Factor	0.994	0.994	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.850
Flt Protected	0	1338	0	0	1321	0	0	1432	0	0	1549	1439
Satd. Flow (prot)	0.930	0.930	0.857	0.857	0.872	0.872	0.872	0.872	0.690	0.690	0.690	0.690
Flt Permitted	0	1173	0	0	1087	0	0	1157	0	0	964	669
Satd. Flow (perm)	No	No	No	No	No	No	No	No	No	No	No	No
Right Turn on Red	30	30	30	30	30	30	30	30	30	30	30	30
Satd. Flow (RTOR)	483	483	490	490	536	536	536	536	275	275	275	275
Link Speed (mph)	11.0	11.0	11.1	11.1	12.2	12.2	12.2	12.2	6.3	6.3	6.3	6.3
Link Distance (ft)												
Travel Time (s)												
Intersection Summary												
Area Type:	CBD											

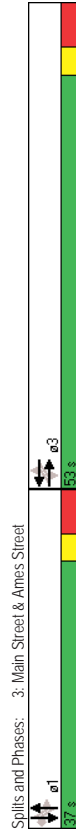
Volume

3. Main Street & Ames Street

5/23/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	65	364	73	26	58	58	59	200	21	71	104	125
Contd. Peds. (#/hr)	787	879	879	879	879	879	272	309	309	309	309	272
Contd. Bikes (#/hr)		45	45	45	45	45	19	19	19	19	19	6
Peak Hour Factor	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	69	387	78	33	74	74	66	222	23	86	125	151
Shared Lane Traffic (%)	0	534	0	0	181	0	0	311	0	0	211	151
Lane Group Flow (vph)	0	534	0	0	181	0	0	311	0	0	211	151
Intersection Summary												

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations								
Volume (vph)	65	364	26	58	59	200	71	104
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1	1	1
Detector Phase	3	3	3	3	1	1	1	1
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	39.0	39.0	39.0	39.0	28.0	28.0	28.0	28.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	0.0	-1.0	0.0
Total Lost Time (s)	8.0	8.0	8.0	8.0	7.0	8.0	7.0	8.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Actuated g/C Ratio	0.50	0.50	0.33	0.33	0.83	0.83	0.68	0.70
v/c Ratio	0.91	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Control Delay	42.1	15.7	49.5	36.8	43.5	36.8	43.5	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	15.7	49.5	36.8	43.5	36.8	43.5	39.6
LOS	D	B	D	D	D	D	D	D
Approach Delay	42.1	15.7	49.5	36.8	43.5	36.8	43.5	39.6
Approach LOS	D	B	D	D	D	D	D	D
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%), Referenced to phase 3:EBWB, Start of Green								
Natural Cycle: 90								
Control Type: Prelimed								
Maximum v/c Ratio: 0.91								
Intersection Signal Delay: 39.7								
Intersection Capacity Utilization: 80.3%								
Analysis Period (min): 15								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Protected Phases	3	3	3	3	1	1	1	1
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	39.0	39.0	39.0	39.0	28.0	28.0	28.0	28.0
Total Split (s)	53.0	53.0	53.0	53.0	37.0	37.0	37.0	37.0
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%
Maximum Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
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	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)	12.0	12.0	12.0	12.0	6.0	6.0	6.0	6.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
90th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
70th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
50th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
30th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	45.0	45.0	45.0	45.0	29.0	29.0	29.0	29.0
10th %ile Term Code	Coord	Coord	Coord	Coord	MaxR	MaxR	MaxR	MaxR
Intersection Summary								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 40 (44%), Referenced to phase 3:EBWB, Start of Green								
Control Type: Prelimed								

Queues
3: Main Street & Ames Street

5/23/2014

	EBT	WBT	NBT	SBT	SBR
Lane Group	534	181	311	211	151
Lane Group Flow (vph)	0.91	0.33	0.83	0.68	0.70
v/c Ratio	42.1	15.7	49.5	36.8	43.5
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	42.1	15.7	49.5	36.8	43.5
Total Delay	42.1	15.7	49.5	36.8	43.5
Queue Length 50th (ft)	286	59	163	124	90
Queue Length 95th (ft)	m#411	88	#309	m174	m#132
Internal Link Dist (ft)	403	410	456	195	100
Turn Bay Length (ft)					
Base Capacity (vph)	587	544	373	311	216
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	0.91	0.33	0.83	0.68	0.70

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.

HCM Signalized Intersection Capacity Analysis
3: Main Street & Ames Street

5/23/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+		+				+				
Volume (vph)	65	364	73	26	58	58	200	21	71	104	125	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	16	12	12	12	12	12	10	12
Total Lost time (s)	8.0						8.0				8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fpb. ped/bikes	0.90	0.74			0.96		0.96				1.00	0.46
Fllb. ped/bikes	0.94	0.95			0.92		0.92				0.88	1.00
Frt	0.98	0.94			0.99		0.99				1.00	0.85
Flt Protected	0.99	0.99			0.99		0.99				0.98	1.00
Satd. Flow (prot)	1254	1254			1257		1313				1370	669
Flt Permitted	0.93	0.86			0.87		0.87				0.69	1.00
Satd. Flow (perm)	1174	1087			1157		965				669	669
Peak-Hour factor, PHF	0.94	0.94	0.94	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.83	0.83
Adj. Flow (vph)	69	387	78	33	74	74	66	222	23	86	125	151
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	534	0	0	181	0	0	311	0	0	211	151
Confl. Peds. (#/hr)	787	879	879	787	272	309	309	309	19	19	272	272
Confl. Bikes (#/hr)	45	45	42	42	42	42	19	19	19	19	6	6
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0

Turn Type	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	3	3	3	3	1	1
Permitted Phases	3	3	3	3	1	1
Actuated Green, G (s)	45.0	45.0	45.0	45.0	29.0	29.0
Effective Green, g (s)	45.0	45.0	45.0	45.0	29.0	29.0
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.32	0.32
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	587	544	544	373	311	216
v/s Ratio Prot	c0.45	0.17		c0.27		0.22
v/s Ratio Perm	0.91	0.33		0.83		0.68
Uniform Delay, d1	20.6	13.5		28.3		26.5
Progression Factor	1.15	1.00		1.00		0.92
Incremental Delay, d2	16.6	1.6		19.3		10.7
Delay (s)	40.2	15.1		47.5		35.1
Level of Service	D	B		D		D
Approach Delay (s)	40.2	15.1		47.5		37.5
Approach LOS	D	B		D		D

Intersection Summary	Value	Unit
HCM Average Control Delay	37.9	HCM Level of Service
HCM Volume to Capacity ratio	0.88	D
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	80.3%	ICU Level of Service
Analysis Period (min)	15	D
c Critical Lane Group		

Lanes and Geometrics
4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	160	0	0	0	100
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	50	50
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	0.84	0.84	0.87	0.36	0.36
Frt	0.976				0.850	
Flt Protected			0.950		0.950	
Satd. Flow (prot)	2679	0	1555	1637	1593	1425
Flt Permitted			0.239		0.950	
Satd. Flow (perm)	2679	0	330	1637	1390	519
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	26					332
Link Speed (mph)	30			30		30
Link Distance (ft)	631			396		271
Travel Time (s)	14.3			9.0		6.3

Area Type: CBD

Volume
4: Broadway east & Ames Street

5/23/2014

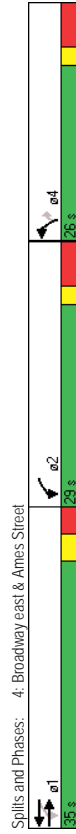
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	582	110	127	583	164	289
Confl. Peds. (#/hr)	392	392	392	85	443	10
Confl. Bikes (#/hr)	1.6					
Peak Hour Factor	0.95	0.95	0.88	0.88	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	613	116	144	662	189	332
Shared Lane Traffic (%)						
Lane Group Flow (vph)	729	0	144	662	189	332

Intersection Summary

Timings
4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑	↑
Volume (vph)	582	127	583	164	289
Turn Type	pmm+pt Perm				
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9% 32.2% 38.9% 28.9% 28.9%				
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.0	6.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Max	Max
Recall Mode	Max	Max	Max	Max	Max
Act Effct Green (s)	29.0	50.0	29.0	19.0	19.0
Actuated g/C Ratio	0.32	0.56	0.32	0.21	0.21
v/c Ratio	0.83	0.30	1.26	0.56	0.89
Control Delay	30.5	26.1	145.6	32.3	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	26.1	145.6	32.3	32.9
LOS	C	C	F	C	C
Approach Delay	30.5	124.3	32.7		
Approach LOS	C	F	C		
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: 90					
Control Type: Prelimed					
Maximum v/c Ratio: 1.26					
Intersection Signal Delay: 67.8	Intersection LOS: E				
Intersection Capacity Utilization 64.5%	ICU Level of Service C				
Analysis Period (min) 15					



Phasings
4: Broadway east & Ames Street

5/23/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Protected Phases	1	2	1	4	4
Permitted Phases	1	2	1	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	35.0	26.0	35.0	25.0	25.0
Total Split (s)	35.0	29.0	35.0	26.0	26.0
Total Split (%)	38.9% 32.2% 38.9% 28.9% 28.9%				
Maximum Green (s)	29.0	22.0	29.0	19.0	19.0
Yellow Time (s)	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	5.0	3.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	13.0	7.0	13.0	4.0	4.0
Flash Dont Walk (s)	16.0	12.0	16.0	14.0	14.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
90th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
70th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
50th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
30th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	29.0	22.0	29.0	19.0	19.0
10th %ile Term Code	Coord	MaxR	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 49 (54%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBT	WBL	WBT	NBL	NBR
Lane Group	729	144	662	189	332
Lane Group Flow (vph)	0.83	0.30	1.26	0.56	0.89
v/c Ratio	30.5	26.1	145.6	32.3	32.9
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	30.5	26.1	145.6	32.3	32.9
Total Delay	217	59	-493	81	27
Queue Length 50th (ft)	m#271	m63	m#600	m117	m#56
Queue Length 95th (ft)	551	160	316	197	100
Internal Link Dist (ft)	881	483	527	336	371
Turn Bay Length (ft)	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0.83	0.30	1.26	0.56	0.89
Reduced v/c Ratio	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.				

	EBT	EBR	WBL	WBT	NBL	NBR	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑	↑	↑	↑	↑	↑	
Volume (vph)	582	110	127	583	164	289	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width	10	12	11	11	12	12	
Total Lost time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Frb. ped/bikes	0.91	1.00	1.00	1.00	0.36	1.00	
Frb. ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00	
Frt	0.98	1.00	1.00	1.00	0.85	1.00	
Flt Protected	1.00	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	2679	1507	1637	1593	519	519	
Flt Permitted	1.00	0.24	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	2679	379	1637	1593	519	519	
Peak-Hour factor, PHF	0.95	0.95	0.88	0.88	0.87	0.87	
Adj. Flow (vph)	613	116	144	662	189	332	
RTOR Reduction (vph)	18	0	0	0	0	262	
Lane Group Flow (vph)	711	0	144	662	189	70	
Confl. Peds. (#/hr)	392	392	85	85	443	10	
Confl. Bikes (#/hr)	16	16	16	16	16	16	
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%	
Turn Type	pm+pt Perm						
Protected Phases	1	2	1	1	4		
Permitted Phases	1						
Actuated Green, G (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Effective Green, g (s)	29.0	51.0	29.0	19.0	19.0	19.0	
Actuated g/C Ratio	0.32	0.57	0.32	0.21	0.21	0.21	
Clearance Time (s)	6.0	7.0	6.0	7.0	7.0	7.0	
Lane Grp Cap (vph)	863	491	527	336	110		
v/s Ratio Prot	0.27	c0.07	c0.40	0.12			
v/s Ratio Perm	0.82	0.29	1.26	0.56	0.64	c0.14	
v/c Ratio	28.1	18.0	30.5	31.8	32.4		
Uniform Delay, d1	0.89	1.87	0.62	0.81	2.50		
Progression Factor	5.4	0.8	123.3	5.9	22.2		
Incremental Delay, d2	30.5	34.4	142.3	31.6	103.1		
Delay (s)	C	C	F	C	F		
Level of Service	C	C	F	C	F		
Approach Delay (s)	30.5	123.0	77.2				
Approach LOS	C	F	E				
Intersection Summary							
HCM Average Control Delay	78.6					HCM Level of Service	E
HCM Volume to Capacity ratio	0.79						
Actuated Cycle Length (s)	90.0					Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.5%					ICU Level of Service	C
Analysis Period (min)	15						
c	Critical Lane Group						

Lanes and Geometrics

5: Broadway east & Third Street

5/23/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	11	11	12	12	12	10	10	10
Grade (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Storage Length (ft)	340	125	0	0	0	0	0	0	0	0	0	160
Storage Lanes	1	1	0	0	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.980	0.956									0.850
Flt Protected	0.950											0.956
Satd. Flow (prot)	1501	2857	0	0	2659	0	0	0	0	0	1511	1343
Flt Permitted	0.950											0.956
Satd. Flow (perm)	1501	2857	0	0	2659	0	0	0	0	0	1511	1343
Right Turn on Red			Yes		No				Yes			No
Satd. Flow (RTOR)	21											
Link Speed (mph)	30				30				30			30
Link Distance (ft)	581				393				166			1212
Travel Time (s)	13.2				8.9				3.8			27.5

Intersection Summary

Area Type: CBD

Volume

5: Broadway east & Third Street

5/23/2014

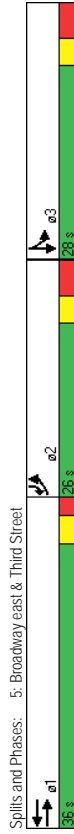
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	325	566	87	0	492	207	0	0	0	454	44	223
Contd. Peds. (#/hr)	36	36	20									
Contd. Bikes (#/hr)	159											
Peak Hour Factor	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block Traffic (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	342	596	92	0	566	238	0	0	0	493	48	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	342	688	0	0	804	0	0	0	0	0	0	541

Intersection Summary

Timings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Configurations	5	4	4	4	4
Volume (vph)	325	566	492	44	223
Turn Type	Prot	Over			
Protected Phases	2	1	1	3	2
Permitted Phases	2	1	1	3	2
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	23.0	35.0	35.0	27.0	23.0
Total Split (s)	26.0	36.0	36.0	28.0	26.0
Total Split (%)	28.9%	40.0%	40.0%	31.1%	28.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	5.0	5.0	7.0	7.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Recall Mode	Max	Max	Max	Max	Max
Act Effrt Green (s)	19.0	31.0	31.0	21.0	19.0
Actuated g/C Ratio	0.21	0.34	0.34	0.23	0.21
v/c Ratio	1.08	0.69	0.88	1.53	0.85
Control Delay	107.4	24.4	40.4	281.8	62.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	107.4	24.4	40.4	281.8	62.4
LOS	F	C	D	F	E
Approach Delay		51.9	40.4	214.0	
Approach LOS		D	D	F	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Natural Cycle: T15					
Control Type: Prelimed					
Maximum v/c Ratio: 1.53					
Intersection Signal Delay: 96.9	Intersection LOS: F				
Intersection Capacity Utilization: 90.8%	ICU Level of Service E				
Analysis Period (min): 15					



Phasings
5: Broadway east & Third Street

5/23/2014

Lane Group	EBL	EBT	WBT	SBT	SBR
Protected Phases	2	1	1	3	2
Permitted Phases	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	23.0	35.0	35.0	27.0	23.0
Minimum Split (s)	26.0	36.0	36.0	28.0	26.0
Total Split (s)	28.9%	40.0%	40.0%	31.1%	28.9%
Maximum Green (s)	19.0	31.0	31.0	21.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	2.0	2.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
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	Max	Max	Max	Max	Max
Walk Time (s)	3.0	15.0	15.0	7.0	3.0
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (/hr)	0	0	0	0	0
90th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
90th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
70th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
70th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
50th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
50th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
30th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
30th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
10th %ile Green (s)	19.0	31.0	31.0	21.0	19.0
10th %ile Term Code	MaxR	Coord	Coord	MaxR	MaxR
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green					
Control Type: Prelimed					

	EBL	EBT	WBT	WBT	SBT	SBR
Lane Group	342	688	804	541	242	
Lane Group Flow (vph)	1.08	0.69	0.88	1.53	0.85	
v/c Ratio	107.4	24.4	40.4	281.8	62.4	
Control Delay	0.0	0.0	0.0	0.0	0.0	
Queue Delay	107.4	24.4	40.4	281.8	62.4	
Total Delay	-224	205	223	-436	133	
Queue Length 50th (ft)	m#316	m247	#313	#632	#266	
Queue Length 95th (ft)	501	313	1132			
Internal Link Dist (ft)	340			160		
Turn Bay Length (ft)	317	998	916	353	284	
Base Capacity (vph)	0	0	0	0	0	
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	1.08	0.69	0.88	1.53	0.85	
Intersection Summary						
-	Volume exceeds capacity, queue is theoretically infinite.					
-	Queue shown is maximum after two cycles.					
#	95th percentile volume exceeds capacity, queue may be longer.					
-	Queue shown is maximum after two cycles.					
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	EB	EB	EB	WB	WB	WB						EB	
Volume (vph)	325	566	87	0	492	207	0	0	0	454	44	223	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	70	11	12	12	11	11	12	12	12	10	10	70	
Total Lost time (s)	70	50	50	50	50	50				70	70	70	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95				1.00	1.00	1.00	
Fpb. ped/bikes	1.00	0.99	0.89	1.00	0.89	1.00				1.00	1.00	1.00	
Fpb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00	
Frt	1.00	0.98	0.96	1.00	0.96	1.00				1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	1.00	1.00				0.96	1.00	1.00	
Satd. Flow (prot)	1501	2857	2658	1501	2658	1501				1511	1343	1343	
Flt Permitted	0.95	1.00	1.00	1.00	1.00	1.00				0.96	1.00	1.00	
Satd. Flow (perm)	1501	2857	2658	1501	2658	1501				1511	1343	1343	
Peak-hour factor, PHF	0.95	0.95	0.95	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	342	596	92	0	566	238	0	0	0	493	48	242	
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	342	674	0	0	804	0	0	0	0	0	0	541	
Confl. Peds. (#/hr)	36	36	36	123	159	159						1	
Confl. Bikes (#/hr)	20	20	20	159	159	159						1	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%	
Parking (#/hr)	0	0	0	0	0	0						0	
Turn Type	Prot	2	1	1	1	1				Split	3	2	
Protected Phases	2	1	1	1	1	1				3	3	2	
Permitted Phases													
Actuated Green, G (s)	19.0	31.0	31.0	31.0	31.0	31.0				21.0	19.0	19.0	
Effective Green, g (s)	19.0	31.0	31.0	31.0	31.0	31.0				21.0	19.0	19.0	
Actuated q/C Ratio	0.21	0.34	0.34	0.34	0.34	0.34				0.23	0.21	0.21	
Clearance Time (s)	7.0	5.0	5.0	5.0	5.0	5.0				7.0	7.0	7.0	
Lane Grp Cap (vph)	317	984	916	916	916	916				353	284	284	
v/s Ratio Prot	c0.23	0.24	c0.30	c0.30	c0.30	c0.30				c0.36	0.18	0.18	
v/s Ratio Perm													
v/c Ratio	1.08	0.69	0.88	0.88	0.88	0.88				1.53	0.85	0.85	
Uniform Delay, d1	35.5	25.3	27.7	27.7	27.7	27.7				34.5	34.1	34.1	
Progression Factor	1.24	0.87	1.00	1.00	1.00	1.00				1.00	1.00	1.00	
Incremental Delay, d2	64.7	2.7	11.6	11.6	11.6	11.6				253.5	26.2	26.2	
Delay (s)	108.8	24.6	39.4	39.4	39.4	39.4				288.0	60.4	60.4	
Level of Service	F	C	D	D	D	D				F	F	F	
Approach Delay (s)	52.6	39.4	39.4	39.4	39.4	39.4				217.7	F	F	
Approach LOS	D	D	D	D	D	D				A	F	F	
Intersection Summary													
HCM Average Control Delay	97.9											HCM Level of Service	F
HCM Volume to Capacity ratio	1.13												
Actuated Cycle Length (s)	90.0											Sum of lost time (s)	19.0
Intersection Capacity Utilization	90.8%											ICU Level of Service	E
Analysis Period (min)	15												
c. Critical Lane Group													

Lanes and Geometrics
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.930					
FIT Protected	0.977					
Satd. Flow (prot)	1693	0	1863	0	0	1863
FIT Permitted	0.977					
Satd. Flow (perm)	1693	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	239		275			277
Travel Time (s)	5.4		6.3			6.3
Intersection Summary						
Area Type:	Other					

Volume
6: Ames Street &

5/23/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	41	45	323	0	0	249
Confl. Peds. (#/hr)	160	165	275	275	275	275
Confl. Bikes (#/hr)			41			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	45	49	351	0	0	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	351	0	0	271
Intersection Summary						

5/23/2014
 HCM Unsignalized Intersection Capacity Analysis
 6: Ames Street &

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	41	45	323	0	0	249
Sign Control	Stop	Free	Free	Free	Free	Free
Grade (%)	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	49	351	0	0	271
Pedestrians	275	160	160	165	165	165
Lane Width (ft)	12.0	12.0	12.0	12.0	12.0	12.0
Walking Speed (ft/s)	4.0	4.0	4.0	4.0	4.0	4.0
Percent Blockage	23	13	13	14	14	14
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)			275			277
pX platoon unblocked						
vC conflicting volume	1057	791				626
vC1 stage 1 conf vol						
vC2 stage 2 conf vol	1057	791				626
vCu unblocked vol	6.4	6.2				4.1
IC 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	73	81				100
cM capacity (veh/h)	167	259				737
Direction, Lane #	WBL	NB 1	SB 1			
Volume Total	93	351	271			
Volume Left	45	0	0			
Volume Right	49	0	0			
cSH	205	1700	737			
Volume to Capacity	0.46	0.21	0.00			
Queue Length 95th (ft)	54	0	0			
Control Delay (s)	36.5	0.0	0.0			
Lane LOS	E					
Approach Delay (s)	36.5	0.0	0.0			
Approach LOS	E					

Intersection Summary		
Average Delay	4.8	
Intersection Capacity Utilization	37.0%	ICU Level of Service A
Analysis Period (min)	15	

5/23/2014
 Lanes and Geometrics
 7: Broadway east &

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%	0%	0%	0%	0%	0%
Storage Length (ft)	0	40	0	0	0	0
Storage Lanes	0	1	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Pod Bike Factor						
Flt	0.994					0.865
Flt Protected		0.950				
Satd. Flow (prot)	1683	0	1608	1693	0	1479
Flt Permitted		0.950				
Satd. Flow (perm)	1683	0	1608	1693	0	1479
Link Speed (mph)	30		30	30		30
Link Distance (ft)	396		581	146		146
Travel Time (s)	9.0		13.2	3.3		3.3

Intersection Summary	
Area Type:	CBD

Volume
7: Broadway east &

5/23/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	830	40	26	690	0	140
Confl. Peds. (#/hr)		358	358			215
Confl. Bikes (#/hr)		22				
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	874	42	30	784	0	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	916	0	30	784	0	167

HCM Unsignalized Intersection Capacity Analysis
7: Broadway east &

5/23/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EBT	EBR	WBL	WBT	NBL	NBR
Volume (veh/h)	830	40	26	690	0	140
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	874	42	30	784	0	167
Pedestrians				215	358	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				18	30	
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	3%			581		
pX, platoon unblocked			0.72		0.85	0.72
vC, conflicting volume			1274		2096	1468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol			1184		1449	1455
vCu, unblocked vol			4.1		6.4	6.2
IC, single (s)						
IC, 2 stage (s)			2.2		3.5	3.3
IF (s)			90		100	0
p0 queue free %			298		78	66
GM capacity (veh/h)						
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	916	30	784	167		
Volume Left	0	30	0	0		
Volume Right	42	0	0	167		
cSH	1700	298	1700	66		
Volume to Capacity	0.54	0.10	0.46	2.51		
Queue Length 95th (ft)	0	8	0	409		
Control Delay (s)	0.0	18.4	0.0	817.6		
Lane LOS		C		F		
Approach Delay (s)	0.0	0.7		817.6		
Approach LOS		F		F		
Intersection Summary						
Average Delay						72.2
Intersection Capacity Utilization						75.9%
ICU Level of Service						D
Analysis Period (min)						15

Ames Street Residences
Transportation Impact Study
Technical Appendix
Garage Occupancy Counts

East Garage May 13-17, 2013

0:00 - 0:59	46	58	74	72	74	65
1:00 - 1:59	42	55	74	73	72	63
2:00 - 2:59	40	53	70	69	70	60
3:00 - 3:59	40	53	68	65	67	59
4:00 - 4:59	42	60	68	67	67	61
5:00 - 5:59	74	83	87	88	92	85
6:00 - 6:59	126	150	138	133	136	137
7:00 - 7:59	207	252	224	211	224	224
8:00 - 8:59	387	387	384	356	356	374
9:00 - 9:59	556	561	565	522	501	541
10:00 - 10:59	629	639	650	605	599	624
11:00 - 11:59	663	682	689	634	635	661
12:00 - 12:59	660	698	702	640	638	668
13:00 - 13:59	643	657	678	615	586	636
14:00 - 14:59	591	594	621	576	494	575
15:00 - 15:59	550	529	547	498	428	510
16:00 - 16:59	447	416	447	400	337	409
17:00 - 17:59	295	283	296	291	228	279
18:00 - 18:59	176	212	209	201	155	191
19:00 - 19:59	117	145	144	168	122	139
20:00 - 20:59	91	108	123	129	110	112
21:00 - 21:59	73	88	90	104	100	91
22:00 - 22:59	64	73	76	90	93	79
23:00 - 23:59	61	66	67	75	78	69

Mon Tue Wed Thu Fri Weekday Av

North Garage M-F May 13-17, 2013

0:00 - 0:59	86	64	72	52	271	109
1:00 - 1:59	85	64	72	51	268	108
2:00 - 2:59	83	62	73	52	266	107
3:00 - 3:59	81	61	71	52	266	106
4:00 - 4:59	87	68	75	61	269	112
5:00 - 5:59	123	115	114	103	306	152
6:00 - 6:59	268	293	285	263	451	312
7:00 - 7:59	484	494	498	510	596	516
8:00 - 8:59	728	756	733	790	744	750
9:00 - 9:59	904	963	921	956	844	918
10:00 - 10:59	947	1,022	985	1,018	883	971
11:00 - 11:59	956	1,026	969	1,017	858	965
12:00 - 12:59	957	1,013	970	1,004	821	953
13:00 - 13:59	952	989	972	992	782	937
14:00 - 14:59	889	937	932	940	701	880
15:00 - 15:59	753	799	810	796	555	743
16:00 - 16:59	509	573	549	530	388	510
17:00 - 17:59	294	311	304	303	234	289
18:00 - 18:59	192	183	195	191	166	185
19:00 - 19:59	120	105	126	122	105	116
20:00 - 20:59	101	83	93	88	89	91
21:00 - 21:59	81	79	76	70	79	77
22:00 - 22:59	75	72	65	64	74	70
23:00 - 23:59	67	66	59	62	68	64
	Mon	Tue	Wed	Thu	Fri	Weekday Av

West Garage May 13-17, 2013

0:00 - 0:59	44	42	50	52	74	52
1:00 - 1:59	44	41	51	52	71	52
2:00 - 2:59	46	43	52	53	70	53
3:00 - 3:59	49	45	55	55	69	55
4:00 - 4:59	50	48	57	57	69	56
5:00 - 5:59	62	58	72	64	78	67
6:00 - 6:59	103	106	117	108	109	109
7:00 - 7:59	163	178	189	175	159	173
8:00 - 8:59	270	292	294	295	287	288
9:00 - 9:59	417	444	454	465	409	438
10:00 - 10:59	485	503	516	517	448	494
11:00 - 11:59	508	523	531	519	454	507
12:00 - 12:59	516	518	528	515	444	504
13:00 - 13:59	502	504	515	509	421	490
14:00 - 14:59	467	469	479	481	390	457
15:00 - 15:59	428	418	421	425	335	405
16:00 - 16:59	328	323	328	314	234	305
17:00 - 17:59	199	199	195	215	139	189
18:00 - 18:59	119	109	117	158	109	122
19:00 - 19:59	97	74	84	150	93	100
20:00 - 20:59	79	61	70	103	84	79
21:00 - 21:59	53	52	55	72	81	63
22:00 - 22:59	48	51	50	69	81	60
23:00 - 23:59	42	50	52	62	77	57
	Mon	Tue	Wed	Thu	Fri	Weekday Av