
95 FAWCETT STREET
Cambridge, Massachusetts

Transportation Impact Study

Prepared For:
KEMS Corporation

Prepared by:
Design Consultants, Inc.



October 2015

EXECUTIVE SUMMARY

This Transportation Impact Study (TIS) was prepared to analyze the impact of the proposed residential building at 95 Fawcett Street in the Alewife Overlay District (AOD) in Cambridge, Massachusetts, on surrounding traffic operations. Currently, the site has a 20,522 square foot (SF), one-floor storage warehouse. The proposed project will involve tearing down the warehouse to construct a new five-floor residential building. The new building will consist of 2 residential studios, 34 1-bedroom residential units, and 14 2-bedroom residential units. There will be 25 vehicle parking spaces on the ground floor garage and 23 parking spaces on the basement floor garage for the residences. The project will also provide 1,583 SF of bicycle parking and a bike repair area on the ground floor. There will be one basement ramp at the front of the building which will provide access to Fawcett Street, and there will be a side entry to access bicycle parking.

Land use surrounding the site is mixed, including residential buildings, commercial office buildings, and light industrial use. There are two new residential buildings located on the opposite side of Fawcett Street of the project site. Commercial offices and light industrial spaces are located along the east-west segment of Fawcett Street. The Fresh Pond Mall is located about 0.5 miles east of the site. It includes various retail and grocery stores such as Whole Foods Market and Trader Joe's. The project site will have access to Concord Avenue and Route 2 for commutes to Cambridge and Boston via Fawcett Street.

Analyses of 2015 Existing, 2015 Build, and 2020 Future traffic conditions were carried out to assess the impact that the new development at 95 Fawcett Street will have on local operations. Parking analyses, transit analyses, and pedestrian/bicycle analyses was also carried out to determine the influence of the proposed project on multi-modal transportation. Given the results of these analyses, a Transportation Demand Management (TDM) program was recommended to minimize possible adverse impact to the surrounding traffic network.

Study Area

The following three intersections in Cambridge, Massachusetts were analyzed as part of this traffic study:

- Concord Avenue at Fawcett Street
- Concord Avenue at Moulton Street
- Fawcett Street at Spur Road

Each of the study intersections above is highlighted relative to the project site in Figure 1.b.1. See Section B for detailed descriptions of existing conditions.

Traffic Analysis

For each intersection, capacity analyses were carried out under three scenarios: Existing Conditions, Build Condition in year 2015, and Future Condition in year 2020. Each scenario is explained in the report. The City of Cambridge Guidelines for Transportation Impact Study (TIS) require a 5-year planning horizon. The Existing Conditions analysis is based on recent traffic counts carried out in the study area. The Build scenario takes the predicted site specific traffic

volumes and sums them with the Existing Conditions scenario. The Future Condition scenario analyzes the Build Condition volumes plus any background traffic volumes generated by nearby developments. Additionally, these volumes are increased by a one half percent annual growth rate through the year 2020 to arrive at the final Future Condition volumes. Detailed breakdowns of each of these scenarios is included in Section 5 of this report.

Level of Service (LOS) is a term used to qualitatively measure the performance of traffic conditions at each intersection and is explained further in the body of this study.

A comparison table showing the results of these analyses is shown below in Table A.

Table A: LOS Summary

ID	East-West Road	North-South Road	Lane	Existing (2015)		Build (2015)		Future (2020)	
				AM	PM	AM	PM	AM	PM
1	Concord Avenue	Moulton Street/ Neville Place	<i>EB LTR</i>	A	A	A	A	A	A
			<i>WB LTR</i>	A	B	A	B	A	B
			<i>NB LTR</i>	B	B	B	B	B	B
			<i>SB LTR</i>	B	C	B	C	B	C
			<i>Overall</i>	A	B	A	B	A	B
2	Concord Avenue	Fawcett Street	<i>EB LT</i>	A	A	A	A	A	A
			<i>EB T</i>	A	A	A	A	A	A
			<i>WB LTR</i>	A	A	A	A	A	A
			<i>SB LR</i>	F	F	F	F	F	F
			<i>Overall</i>	B	C	C	C	C	D
3	70 Fawcett Street Driveway	Fawcett Street	<i>WB LR</i>	A	A	A	A	B	A
			<i>NB TR</i>	A	A	A	A	A	A
			<i>SB LT</i>	A	A	A	A	A	A
			<i>Overall</i>	A	A	A	A	A	A

Transportation Demand Management

The proponent has agreed to put a Transportation Demand Management program in place to encourage alternative transportation modes and reduce site-generated automobile trips. The goal of the program is to encourage carpooling, bicycle commuting, walking and use of public transit.

The Transportation Demand Management (TDM) Plan consists of contacting a car-sharing provider (e.g. Zipcar) for possible, and providing at least one car-sharing space in the garage for the residents.

Other proposed mitigation could include improving pedestrian and bicycling facilities in the area, such as installing pedestrian wayfinding signage near the site. The proponent has also included a bicycle repair area for repairs and maintenance for residents of the building. Other potential



mitigation measures could include joining a local Transportation Management Association (TMA) and providing shuttles between the MBTA Alewife Station and the site.

Conclusion

This Transportation Impact Study (TIS) was prepared to analyze the traffic impact of the 95 Fawcett Street residential project. Currently there is a 20,522 square-foot, one floor storage warehouse on site, the proposed project consists of the construction of one new building that will house 50 residential units.

From a safety perspective, there are no significant issues in the existing conditions for the included study intersections. An analysis of the most recent three years of crash data from MassDOT shows that one of the three intersections included in the study area has a crash rate above the state or district wide average, though it should be noted that this rate is skewed by very low hourly volumes, and that there were no reported injury crashes at the location. See Section 2.d for more detailed safety analyses.

Capacity analyses were carried out on the three study intersections for the weekday AM and weekday PM peak hour periods. In order to determine the specific impact the proposed project will have on traffic operations, analysis was carried out for 2015 Existing conditions, 2015 Build conditions, and 2020 Future conditions. The results indicate that the development will have minimal adverse impact on traffic operations in the study area.

The project was evaluated against the City of Cambridge Planning Board Criteria to determine if the project will have any significant impacts to the City's transportation network. All five of the criteria are met with one exception. The Pedestrian Level-of-Service (PLOS) at Concord Avenue and Fawcett Street operates at F during Existing and Build conditions. However, this is an existing condition that continues into the future condition. Moreover, there is a pedestrian-actuated flashing beacon that facilitates pedestrian movements across Concord Street, which is not reflected in the PLOS. So although in theory the PLOS is F, the reality is that PLOS is effectively much higher due to the beacon facilitating pedestrian movements across Concord Street. Also, the proponent is committed to working with the City of Cambridge to implement appropriate measures to mitigate existing deficiencies within the scope of its project. A more detailed evaluation of the project in terms of the Planning Board criteria is included in Section 13 of this report.

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CITY OF CAMBRIDGE
Special Permit Transportation Impact Study (TIS)

Summary Sheet

Planning Board Permit Number: _____

PROJECT NAME: 95 Fawcett Street
 Address: 95 Fawcett Street, Cambridge MA

Owner/Developer Name: KEMS Corporation
 Contact Person: Ed Doherty
 Contact Address: 35 Doty Avenue
Danvers, MA 01923
 Contact Phone: (978) 360-9558

SIZE:
 ITE sq. ft.: 50 Dwelling Units
 Zoning sq. ft.: 57,048 SF
 Land Use Type: Residential

PARKING:
 Existing Parking Spaces: 9 Use: Commercial
 New Parking Spaces: 48 Use: Residential
 Date of Parking Registration Approval: _____

TRIP GENERATION:

	Daily	AM Peak Hour	PM Peak Hour	Saturday Peak Hour (retail only)
Total Trips	372	24	39	-
Vehicle	131	10	12	-
Transit	123	9	11	-
Pedestrian	42	3	4	-
Bicycle	22	2	2	-

MODE SPLIT (PERSON TRIPS): Vehicles (SOV): 35.4 % Bicycle: 5.5 %
 Rideshare (HOV): 4.4 % Pedestrian: 10.5 %
 Transit: 30.8 %

TRANSPORTATION CONSULTANT:
 Company Name: Design Consultants, Inc
 Contact Name: Tom Bertulis P.E., P.T.O.E
 Phone: 617-776-3350 ext 115

Date of Building Permit Approval: _____

4. Lane Queue (for signalized intersections critical lane)

Intersection	No. of Lanes Analyzed	A.M. Peak Hour			P.M. Peak Hour		
		Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
<i>Concord Avenue/Mouton Street</i>	<i>WB</i>	<i>4</i>	<i>4</i>	<i>N</i>	<i>4</i>	<i>4</i>	<i>N</i>
<i>Concord Avenue/Mouton Street</i>	<i>EB</i>	<i>11</i>	<i>11</i>	<i>N</i>	<i>14</i>	<i>14</i>	<i>N</i>

5. Pedestrian and Bicycle Facilities

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing PLOS	With Project	Meets Criteria?	Existing PLOS	With Project	Meets Criteria?
<i>Concord Avenue/Moulton Street</i>	<i>C</i>	<i>C</i>	<i>N</i>	<i>C</i>	<i>C</i>	<i>N</i>
<i>Concord Avenue/Fawcett Street west-leg</i>	<i>F</i>	<i>F</i>	<i>Y</i>	<i>F</i>	<i>F</i>	<i>Y</i>
<i>Fawcett Street/Spur Road south-leg</i>	<i>A</i>	<i>A</i>	<i>N</i>	<i>A</i>	<i>A</i>	<i>N</i>

Adjacent Street or Public Right-of-Way	Sidewalks or Walkways Present?	Meets Criteria?	Bicycle Facilities or Right-of-Ways Present?	Meets Criteria?
<i>Fawcett Street</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>Y</i>
On-Site:				

Introduction

On July 20, 2015, DCI submitted a TIS scoping letter to the City of Cambridge for the proposed project located at 95 Fawcett Street in the Alewife Overlay District (AOD) in Cambridge, Massachusetts. DCI coordinated with the Cambridge Traffic, Parking, and Transportation Department (TP&T) and confirmed the Traffic Impact Study scope on August 10, 2015. A copy of the City's scoping letter is attached in the Appendix. The study analyzed the impact of the proposed residential building on surrounding traffic operations. The study was completed in October 2015.

Project Description

The proposed residential project will demolish an existing 20,522 square foot one-floor warehouse, which is currently being used as a furniture store. The estimated total square footage of the new five floor building will be 79,853 square feet. It will accommodate 50 residential units supported by 48 parking spaces. There will be 25 parking spaces in a ground level garage and 23 parking spaces on the basement level parking garage. A curb cut is proposed to be located at the north side of the building, providing access to Fawcett Street from the ground level garage. As requested in the scoping letter, DCI performed a sight distance analysis for three different locations for the proposed curb cut. The sight distance analysis is shown in Figure D. With input from TP&T, it was decided that option B will be the final location for the curb cut. The basement level parking will be accessed from inside of the building through a parking elevator. Pedestrians will be able to access the site from the existing sidewalks along Fawcett Street. The project will also provide 1,583 square feet of secure space for bicycle parking. An existing conditions plan is shown in Figure A, project site plans are shown in Figures B1 and B2, and a bicycle parking layout plan is shown in Figure C.

Activities other than the daily comings and goings of residents were also noted, such as weekly trash pickup and move-in/move-out activity. The developer will provide weekly curbside pickup of trash for the residents of 95 Fawcett Street by a private contractor. As a residential building, the logistics of residents moving in and out of 95 Fawcett Street was addressed. The on-site parking garage will be sized so that large vans and small trucks will be able to pull in, park and unload without blocking traffic or taking up space along Fawcett Street. The garage will have a maximum height of 9 feet, allowing vehicles shorter than that to pull in. There will also be sufficient space for these smaller moving vehicles to turn around to exit the garage. Additionally, the aisle in the garage will be designed for two-way traffic. Residents utilizing larger vehicles such as box trucks and 18 wheelers will need to obtain a moving van permit from the City of Cambridge prior to moving in in order to use on street parking spaces for loading and unloading. The developer will be responsible for informing residents of this process. Based on research and discussions with the architect, it was determined that the national average turnover rate for rental condominium units is roughly 30-40% annually. Therefore, it is expected that after the initial move in process there will be 15-20 units of turnover per year.

2005 Concord-Alewife Plan

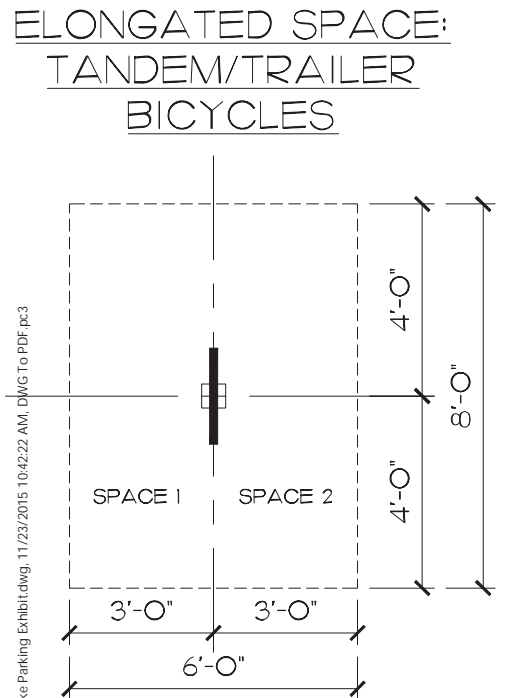
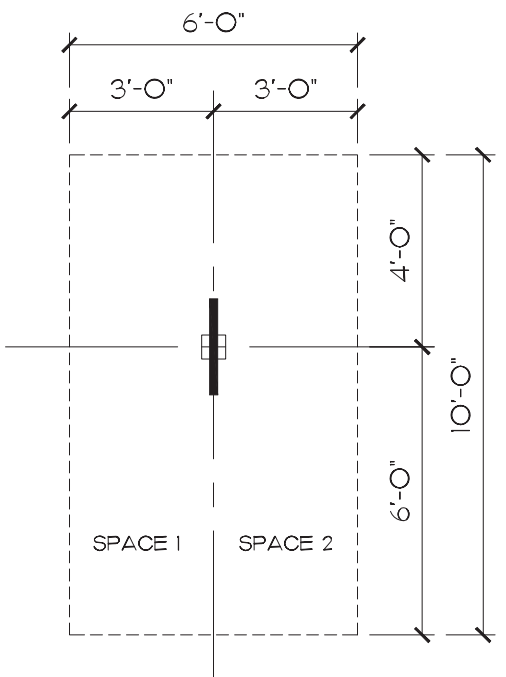
In November, 2005, the City of Cambridge released the Concord-Alewife Plan. This plan addresses issues in the area including appropriate mix of land uses, the character of future development, as well as traffic and access. The plan lays out goals for each issue, as well as zoning changes needed to accomplish these goals. The proposed project at 95 Fawcett Street will be consistent with the Concord-Alewife Plan, as the proponent will be making efforts to improve pedestrian and bicycle mobility, reduce traffic congestion, and minimize the need for vehicle parking.

Major transportation goals of the Concord-Alewife Plan focus on reducing the number of new vehicle trips into and out of the area while still encouraging development. The proponent at 95 Fawcett Street will make use of several transportation demand management (TDM) measures that will support the goal of a reduced vehicular mode share. The proposed TDM program is discussed in Section 14.

There is an abundance of bicycling infrastructure within riding distance of the project site, including a cycle track along Concord Avenue that connects to a mixed use path which eventually provides connections to the Paul Dudley White Bike Path along the Charles River. The Alewife Linear Park is a mixed use path connecting the Fitchburg Cutoff Bike Path to the Somerville Community Path, and can be accessed just one mile north of the project site. With these facilities nearby, the development at 95 Fawcett Street is perfectly located for an anticipated higher non-vehicular mode split. The aforementioned paths are also used by pedestrians. Ensuring that there are safe, comfortable connections into and out of the project area will increase connectivity for pedestrians and encourage people to walk, ride bicycles, and take public transit.

Pedestrian/Bicycle Bridge

As part of the ongoing development in the area, the City of Cambridge is considering to construct a pedestrian and bicycle bridge across the train tracks north of the project area. This bridge would provide much needed non-motorized access for the residents in Alewife Overlay District to the MBTA Alewife Station. The City has started a feasibility study of the proposed bicycle and pedestrian bridge and commuter rail station. The location of the development at 95 Fawcett Street is not likely to impact the landing of the bridge or the proposed crosswalk. However, the bridge landing is likely to be close enough to 95 Fawcett Street to give convenient access for residents of 95 Fawcett Street to the Alewife Station. Indeed, the TDM section of this study recommends the proponent consider assisting with the bridge project.



STANDARD SPACE

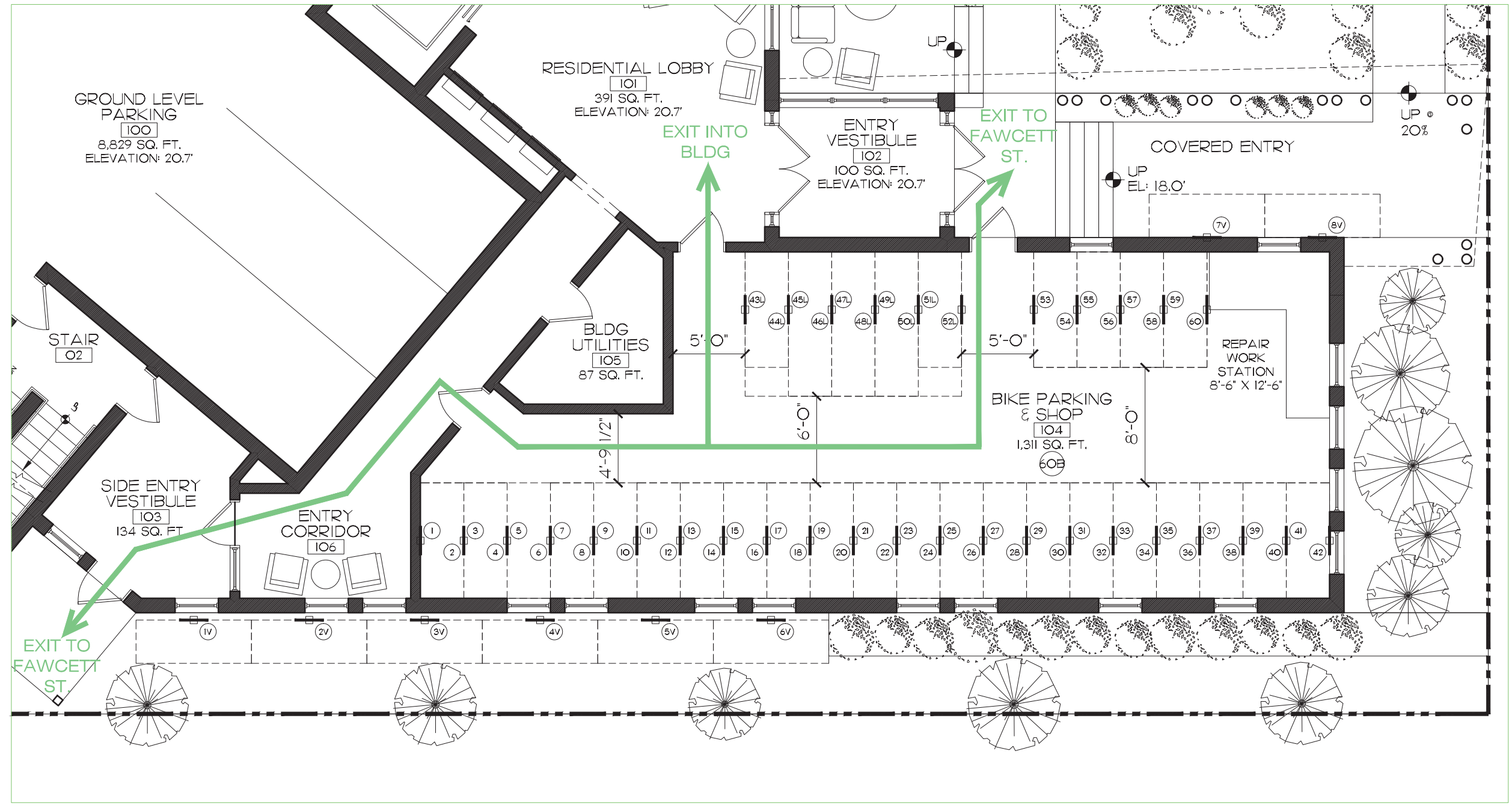
STANDARD SPACE
- NUMBER OF SPACE

##L ELONGATED SPACE
'L' - ELONGATED ANNOTATION
- NUMBER OF SPACE

##V SHORT TERM/VISITOR SPACE
'V' - VISITOR ANNOTATION
- NUMBER OF SPACE

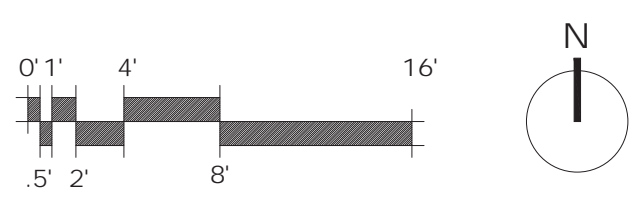
PARKING SPACES PROVIDED (50 TOT. UNITS):

	REQ'D.	PROP.
LONG TERM: (1 PER FIRST 20 UNITS + 1.05 X REMAINING UNITS)	51.5 (52)	60
SHORT TERM: (0.1 PER UNIT)	5	8
TOTAL:	57	68



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1 PROPOSED BICYCLE PARKING - LONG & SHORT TERM (PER CHAPTER 6.100 CAMBRIDGE ZONING)



BICYCLE PARKING
95 FAWCETT ST.
CAMBRIDGE, MA

11/23/2015

O'SULLIVAN ARCHITECTS, INC.
ARCHITECTURE ■ DESIGN ■ PLANNING
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1. Existing Conditions

a. Roadways

Fawcett Street is classified as a local street in Cambridge, Massachusetts. It travels in a generally north-south direction from its intersection with Concord Avenue to the project site, after which it curves east-west from the site to its intersection with Smith Place. Fawcett Street is approximately 0.5 miles long and carries one travel lane in either direction. Along the north-south segment, Fawcett Street has designated on-street parallel parking spaces on the east side of the street. Parking is not allowed on the west side of the street. Along the east-west segment, Fawcett Street provides on-street parallel parking spaces on the south side and north side of the street. The curb-to-curb distance ranges from 30 to 35 feet. Two-way traffic is separated by a solid double yellow line along the north-south segment.

Concord Avenue is classified as an urban principal arterial and runs in a generally northwest-southeast direction. It connects Spring Street in Lexington to Waterhouse Street in Cambridge, which eventually accesses Massachusetts Avenue in Cambridge. It spans approximately 7.6 miles and carries one 8-foot travel lane and one 9-foot travel lane in the eastbound direction, one 9-foot travel lane in the westbound direction, and one 5-foot cycletrack in each direction in the vicinity of the study area. The curb to curb distance is 32 feet. A solid double yellow line separates opposing directions of traffic. On-street parking is prohibited along both sides of the street. A yield-to-pedestrian sign and a pedestrian warning sign have been installed at Concord Avenue's intersection with Fawcett Street alerting motorists where the pedestrians may cross the street. At this intersection a row of yield markings (a.k.a. "shark teeth") has been painted facing oncoming traffic to alert drivers of the pedestrian crossing. In the area of the project, a 7-foot concrete sidewalk is provided on both sides of the street.

Moulton Street is classified as a local street in Cambridge. It travels in a generally south-north direction from its intersection with Concord Avenue, to its intersection with Wilson Road, where it becomes Wilson Road. Moulton Street is approximately 830 feet long. On-street parking is allowed on the east side of street, starting from approximately 360 feet away from the intersection with Concord Avenue to the end of the street. On-street parking is prohibited on the west side of the street. The curb-to-curb distance is 26 feet. Moulton Street provides a 6-foot sidewalk on the east side of the street and a 5-foot sidewalk on the west side of the street.

b. Intersections

The project study area includes the following three intersections. The study intersections are shown relative to the project site in Figures 1.b.1 to 1.b.3.

The intersection of **Fawcett Street and Concord Avenue** is an unsignalized, three-legged T-intersection. Fawcett Street runs south-north, and Concord Avenue runs east-west. Concord Avenue's eastbound approach carries two travel lanes, while its westbound approach carries one travel lane. Fawcett Street carries one lane in each direction. Continental crosswalks are placed across the Concord Avenue eastbound approach and the Fawcett Street southbound approach to the intersection. See Figure 1.b.1 for a layout of the intersection of Fawcett Street and Concord Avenue.

The intersection of **Moulton Street, Concord Avenue and the driveway of Neville Place at Fresh Pond** forms an offset four-legged intersection controlled by a traffic signal. Neville Place offers local seniors personalized assisted living. The southbound approach on Moulton Street carries one travel lane. The driveway of The Neville Place at Fresh Pond's provides one approaching lane and one receiving lane. The Concord Avenue eastbound approach provides two travel lanes, and its westbound approach provides one travel lane. Continental crosswalks are placed across the Moulton Street approach, Neville Place driveway approach, and Concord Avenue westbound approach. See Figure 1.b.2 for a layout of the intersection of Moulton Street, Concord Avenue and the Neville Place Driveway.

The intersection of **Fawcett Street and Spur Road** is an unsignalized intersection. Spur Road carries one travel lane in each direction. It provides a 4.5 foot shoulder on each side of the street, which could accommodate bicycles. The curb to curb distance along Spur Road is 29 feet. Two continental crosswalks are placed at the intersection; one is placed crossing Spur Road and the other provides a crossing over Fawcett Street's northbound approach. See Figure 1.b.3 for a layout of the intersection of Fawcett Street and Spur Road.


c. Parking

The existing site has a curb cut located on the northern end of the storage warehouse providing access to a surface lot that accommodates vehicle parking. The parking spaces are not striped. There is off-site parking along Fawcett Street. See Figure 1.c.1 for existing on-street curb regulations in the study area.

d. Transit Services

Within the vicinity of the project, MBTA bus lines 74, 75, and 78 run through the area. There is also an MBTA Red Line station at Alewife and an MBTA Commuter Rail station at Belmont.

MBTA bus routes 74 and 75 run between Belmont Center and Harvard Station along Concord Avenue. These routes provide access to the MBTA Red Line, which runs from Alewife through



downtown Boston to Dorchester and Quincy. Route 74 travels the northern edge of Fresh Pond along Concord Avenue, while Route 75 travels the southern edge of Fresh Pond via Huron Avenue. Both Routes run at 30 minute to one hour and 10 minute intervals.

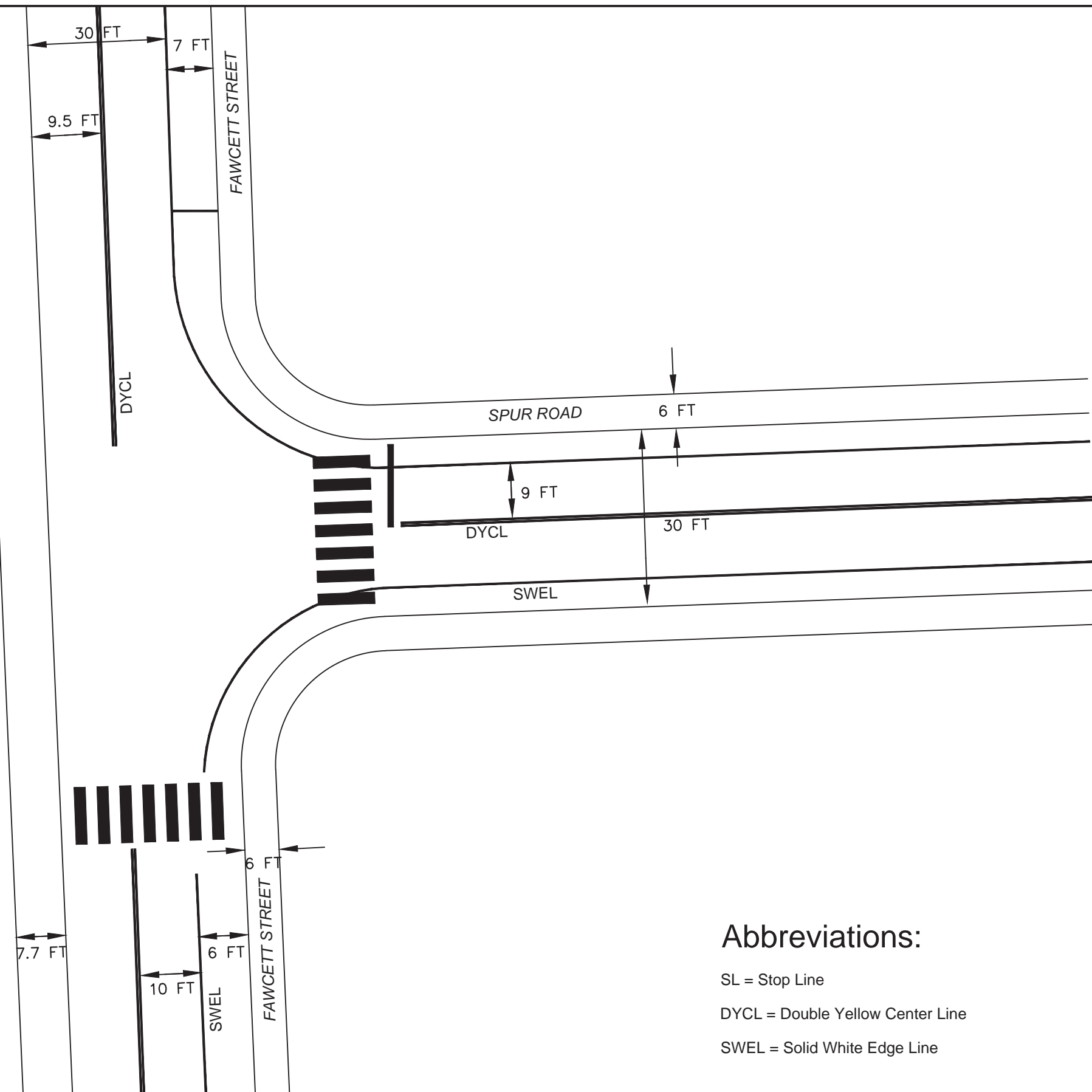
MBTA Route 78 runs from Arlmont Village to Harvard Station. Arlmont Village is the area bordered by Arlington, Belmont, and Lexington. In the vicinity of the study area, Route 78 runs along Concord Avenue. Route 78 runs at 20 minute to hourly intervals. Route 78 also provides access to the MBTA Red Line, giving travelers in the project area three options for bus connections to the Red Line.

Alewife Station is approximately one mile northwest of the project site. Alewife Station is the northernmost stop on the MBTA Red Line. From Alewife, the Red Line travels through Somerville, Cambridge, downtown Boston, south Boston, Dorchester and Quincy. The Red Line runs at 9 to 16 minute intervals.

Belmont Station is on the Fitchburg line of the MBTA Commuter Rail. This line runs between Fitchburg and downtown Boston. The Fitchburg line runs approximately twice an hour during the AM and PM peak hours, with trains running at various times between those peak periods. Figure 1.d.1 illustrates existing MBTA services in the study area.

e. Land Use

The proposed project is in the Alewife Overlay District of Cambridge. Land use surrounding the site is mixed. In the immediate project area, there are several residential buildings, as well as commercial office space and light industrial use. On Fawcett Street, there are two new residential buildings, both opposite the project site. Commercial offices and light industrial spaces are located further down Fawcett Street, along its east-west segment. There is significant recreational space in the area, with Fresh Pond just south of the site, as well as several nearby parks, including Lusitania Field, Danehy Park, and Callanan Playground. There are two schools in the area, including Tobin Elementary School southeast of the site and the Fayerweather Street School west of the site. The Fresh Pond Mall is located about 0.5 miles east of the Site, housing various retail stores and grocery stores such as Whole Foods Market and Trader Joe's. See Figure 1.e.1 for a layout of the land uses surrounding the project site.



Abbreviations:

- SL = Stop Line
- DYCL = Double Yellow Center Line
- SWEL = Solid White Edge Line

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Design Consultants, Inc.
 Consulting Engineers and Surveyors

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68 PLEASANT STREET
 NEWBURYPORT, MA 01950
 978-358-7173

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REVISIONS		

**95 FAWCETT STREET
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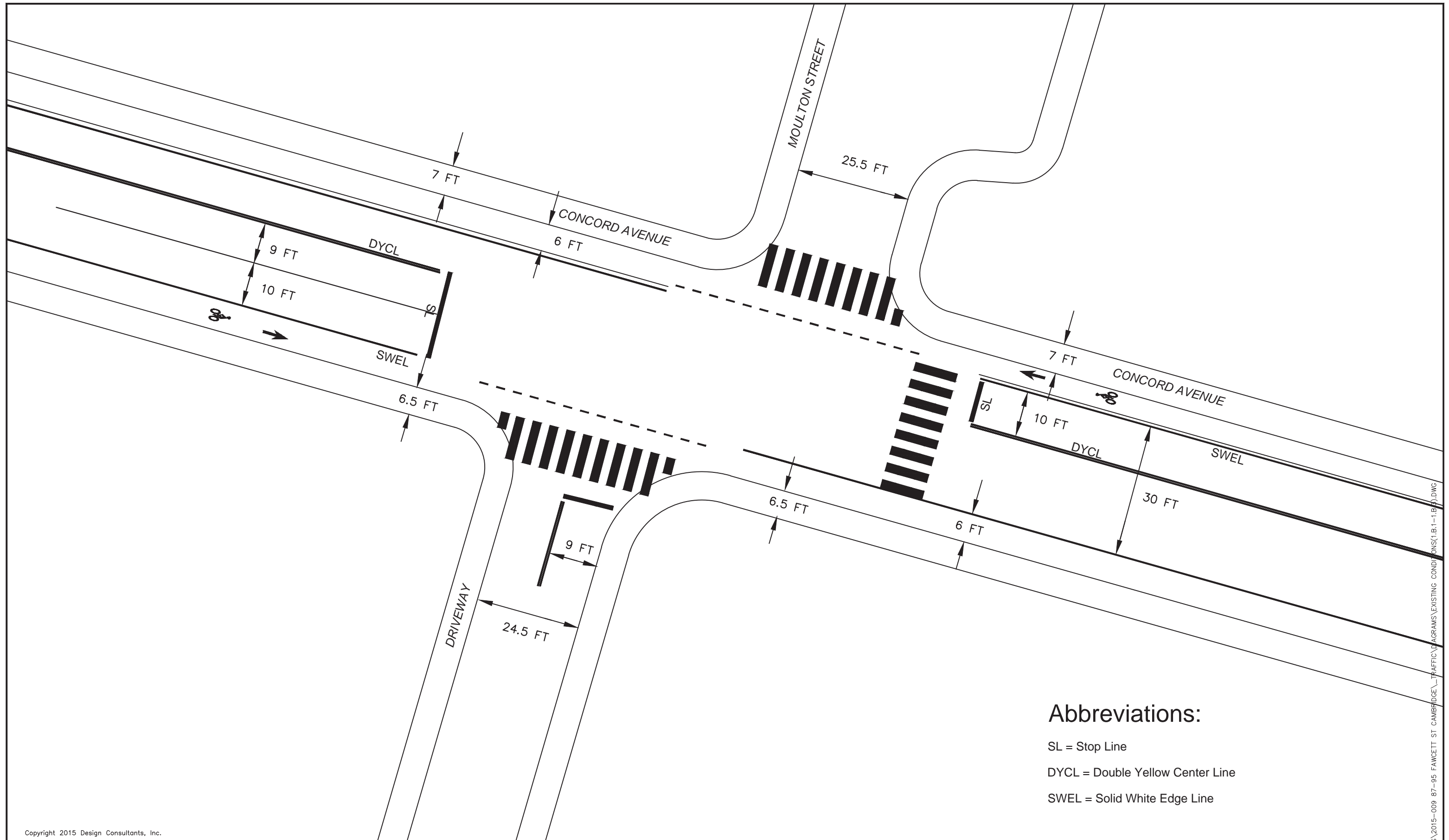
**Fawcett Street and
 Spur Road**

PROJECT NO.
 2015-009

DATE: OCTOBER 2015

Figure 1.b.2

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Abbreviations:

- SL = Stop Line
- DYCL = Double Yellow Center Line
- SWEL = Solid White Edge Line

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**95 FAWCETT STREET
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**Concord Avenue and
 Moulton Street**

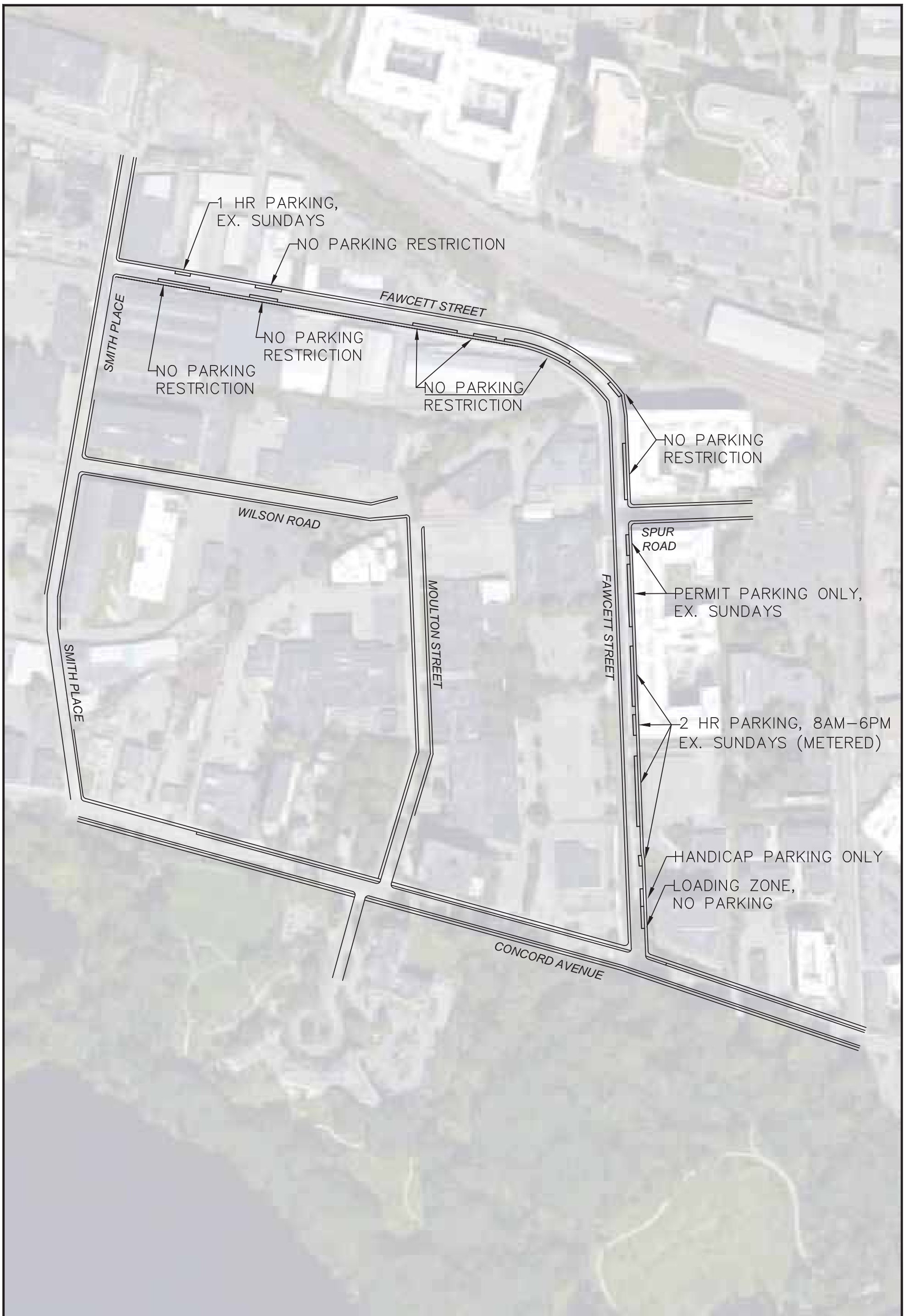
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Figure 1.b.3

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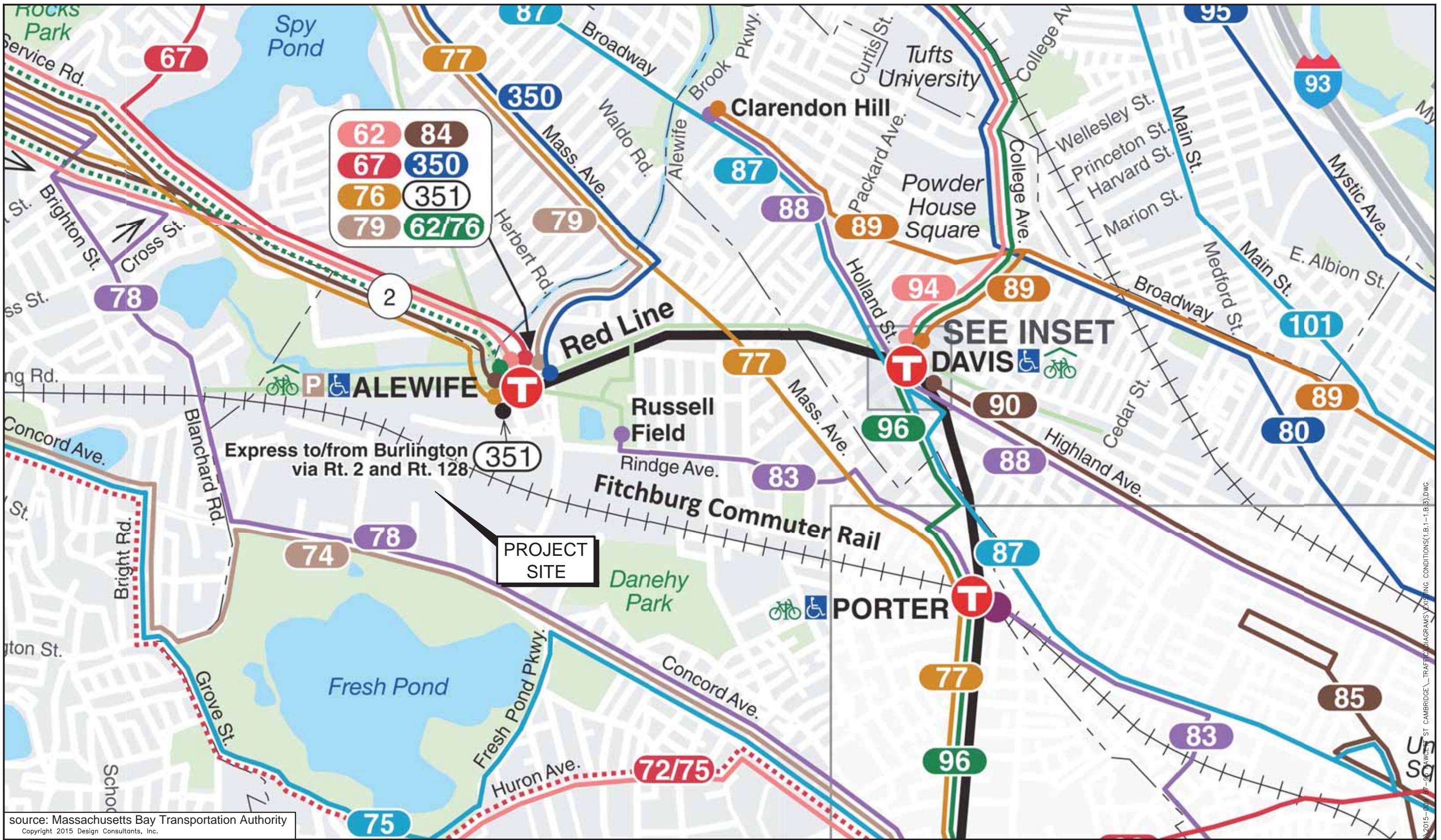
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**Existing Offsite
 Parking**

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Figure 1.c.1



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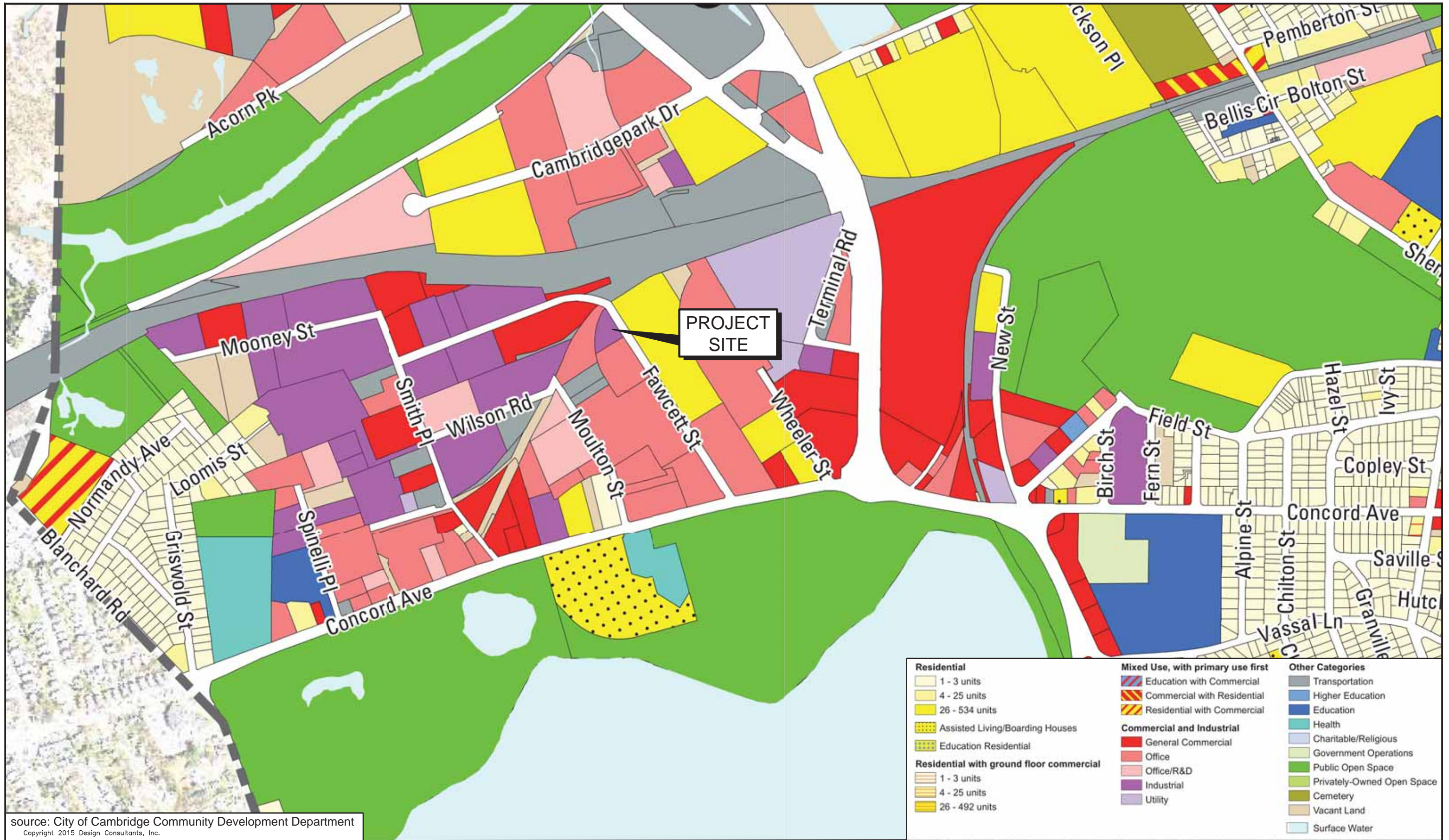
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95 FAWCETT STREET
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MBTA Service Map

PROJECT NO.
2015-009
DATE: OCTOBER 2015
Figure 1.d.1

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Land Use Map

PROJECT NO.
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 Figure 1.e.1

2. Data Collection

a. Automatic Traffic Recorder (ATR) Counts

Automatic traffic recorder (ATR) data was taken in two locations in the vicinity of the project area. These ATR collected data including traffic volumes, vehicle speeds, vehicle classification and gaps between vehicles. An ATR was placed on Concord Avenue just east of Fawcett Street, and on Fawcett Street just north of the site at 95 Fawcett Street. ATR data were collected over a 48-hour period on a typical Wednesday (September 9, 2015) and Thursday (September 10, 2015). The ATR data are summarized in Table 2.a.1.

Table 2.a.1: Existing Traffic Volume Summary

Location	AADT	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Volume	K	Peak Direction	Volume	K	Peak Direction
Fawcett Street south of 95 Fawcett Street	2731	248	9%	55% NB	230	8%	60% NB
Concord Avenue east of Fawcett Street	10885	1591	15%	53% WB	1612	15%	53% WB

b. Pedestrian and bicycle counts

Pedestrian and bicycle counts were carried out at the same locations as the ATR. These studies count cyclists traveling in both directions, as well as pedestrians on either side of the road. This data is summarized in Table 2.b.1.

Table 2.b.1: Pedestrian and Bicycle Count Summary

	Fawcett Street				Concord Avenue			
	Bikes		Pedestrians		Bikes		Pedestrians	
	Northbound	Southbound	Northbound	Southbound	Eastbound	Westbound	Eastbound	Westbound
6:30AM - 7:30AM	0	2	5	31	21	9	33	37
7:30AM - 8:30AM	1	4	16	34	38	28	40	45
8:30AM - 9:30AM	1	2	10	20	21	37	41	62
9:30AM - 10:30AM	0	2	10	7	20	12	29	27
10:30AM - 11:30AM	1	2	5	13	10	11	36	30
11:30AM - 12:30PM	0	0	23	28	10	14	45	53
12:30PM - 1:30PM	0	1	16	13	11	12	18	42
1:30PM - 2:30PM	2	1	15	11	10	8	21	22
2:30PM - 3:30PM	4	3	19	19	7	14	24	38
3:30PM - 4:30PM	0	1	19	14	12	9	37	22
4:30PM - 5:30PM	4	4	17	25	31	22	51	51
5:30PM - 6:30PM	4	1	23	20	19	47	50	48

c. Intersection Turning Movement Counts (TMC's)

In September, 2015, DCI collected traffic counts at five intersections. DCI collected the data on a typical Wednesday (September 9, 2015) for two hours during the AM peak period and two hours during the PM peak period. Data was collected from 7:00AM to 9:00AM and from 4:00PM to 6:00PM. TMCs were collected at the intersections listed below.

- Concord Avenue at Fawcett Street
- Concord Avenue at Moulton Street
- Fawcett Street at Smith Place
- Fawcett Street at Spur Road (between 80 Fawcett Street and 90 Fawcett Street)
- In/out driveway counts at parking garages for 80 Fawcett Street and 90 Fawcett Street

Figures 2.c.1 and 2.c.2 show existing vehicle volumes for the AM and PM peak hours, respectively. Figures 2.c.3 and 2.c.4 show existing pedestrian volumes for the AM and PM peak hours, respectively. Figures 2.c.5 and 2.c.6 show existing bicycle volumes for the AM and PM peak hours, respectively.

d. Traffic Crashes

Crash data from MassDOT for years 2011 through 2013 was reviewed for crashes that occurred at the project site. The MassDOT crash records offered the following information:

- Crash Location (General or Specific) / Direction of vehicle(s)
- Date / Time
- Roadway surface conditions / Light conditions / Weather conditions
- Crash Severity / Manner of Collision

While it may be assumed that all relevant crash attributes should be reported and provided in recordkeeping, the fact of the matter is that a portion of the individual crash records have only partial information available. Information may be missing for a variety of data fields in any given crash report. Among various reasons for this, missing crash information might be attributed to the type of police reports filled out and provided to MassDOT.

The locations of crashes in the area of the study intersections were general and approximated in a relatively large number of cases. This lack of specificity can hinder the engineer's ability to identify statistically significant trends and diagnose potential safety problems.

With that said, the synthesized data, in conjunction with engineering judgment, has yielded a summary of crashes that may be used to speculate on a variety of general crash patterns.

The results of the safety analysis carried out using MassDOT data are shown in Tables 2.d.1 and 2.d.2. The crash rates calculated using these data are compared to average District 6 and statewide

crash rates are shown in Table 2.d.3. Detailed crash analysis worksheets for each intersection for years 2010-2012 are contained in Appendix B.

Table 2.d.1: MassDOT Intersection Crash Conditions

	<i>Moulton Street & Concord Ave</i>	<i>Fawcett Street & Smith Place</i>	<i>Fawcett Street & Concord Avenue</i>
Year			
2011	8	0	2
2012	3	2	4
2013	1	0	2
<i>Total</i>	12	2	8
Crash Hour			
06:00AM to 10:00AM	1	0	3
10:00AM to 02:00PM	4	0	2
2:00PM to 06:00PM	2	1	2
06:00PM to 10:00PM	4	0	1
10:00PM to 02:00AM	1	1	0
02:00AM to 06:00AM	0	0	0
<i>Total</i>	12	2	8
Light Conditions			
Daylight	8	1	6
Dawn	0	0	0
Dusk	0	0	0
Dark - lighted roadway	4	1	1
Dark - roadway not lighted	0	0	0
Dark	0	0	0
Other, unknown	0	0	1
<i>Total</i>	12	2	8
Road Surface			
Dry	10	1	6
Wet	2	1	1
Snow	0	0	0
Ice	0	0	0
Sand, mud etc.	0	0	0
Water	0	0	0
Slush	0	0	0
Other, known	0	0	1
<i>Total</i>	12	2	8
Weather			
Clear	8	1	5
Cloudy	2	0	1
Rain	1	1	1
Snow	1	0	0
Sleet, hail, freezing rain	0	0	0
Fog, smog, smoke	0	0	0
Severe crosswinds	0	0	0
Blowing sand, snow	0	0	0
Other, unknown	0	0	1
<i>Total</i>	12	2	8

Table 2.d.2: MassDOT Intersection Crash Types

	<i>Moulton Street & Concord Ave</i>	<i>Fawcett Street & Smith Place</i>	<i>Fawcett Street & Concord Avenue</i>
Crash Severity			
Property Damage Only	5	1	4
Non-fatal Injury	5	0	2
Fatal Injury	0	0	0
Not Reported, Unknown	2	1	2
<i>Total</i>	12	2	8
Manner of Collision			
Sideswipe, Same Direction	2	1	2
Sideswipe, Opposite Direction	0	0	0
Angle	0	0	0
Rear-end	7	0	2
Head-on	0	0	1
Single Vehicle	3	0	2
Other, not reported	0	1	1
<i>Total</i>	12	2	8

Table 2.d.3: MassDOT Intersection Crash Rates

	<i>Avg. Crashes per Year</i>	<i>Avg. Crash Rate (Crashes per MEV)</i>	<i>MassDOT D6 Avg. Crash Rate (Crashes per MEV)</i>	<i>Statewide Avg. Crash Rate (Crashes per MEV)</i>
<i>Moulton Street & Concord Ave</i>	4.00	0.61	0.76	0.80
<i>Fawcett Street & Smith Place</i>	0.67	0.80	0.58	0.60
<i>Fawcett Street & Concord Avenue</i>	2.67	0.34	0.58	0.60

The intersection of **Moulton Street and Concord Avenue** had 12 crashes between 2011 and 2013 according to MassDOT crash records. Approximately 42% of the known crashes resulted in property damage only, while 42% resulted in non-fatal injury. 58% of the crashes at this intersection were rear-end collisions. Two of the crashes at this intersection involved a pedestrian, one of which resulted in a non-fatal injury. Over the three year period analyzed, the intersection of Moulton Street and Concord Avenue had an average of four crashes per year, and 0.61 crashes per million entering vehicles (MEV). This is below the District 6 and statewide average crash rates for signalized intersections.

The intersection of **Fawcett Street and Smith Place** had 2 crashes between 2011 and 2013 according to MassDOT crash records. There were no recorded crashes at this intersection involving pedestrians or cyclists. These crashes result in an average of 0.67 crashes per year, and an average crash rate of 0.80 crashes per MEV, which is above the statewide and District 6 averages for unsignalized intersections. While this crash rate is higher than average, it should be

noted that this rate is somewhat skewed by extremely low traffic volumes (less than 50 vehicles per hour during the peak hour). Moreover, the intersection experienced no reported injury crashes.

The intersection of **Fawcett Street and Concord Avenue** had 8 crashes between 2011 and 2013 according to MassDOT crash records. Records show that 50% of the known crashes at this intersection resulted in property damage only, while 25% resulted in non-fatal injury. There were no recorded crashes at this intersection involving pedestrians or cyclists. The eight crashes at the intersection of Fawcett Street and Concord Avenue resulted in an average of 2.67 crashes per year, and 0.34 crashes per MEV, which is below both the statewide and District 6 averages for unsignalized intersections.

Based on the safety analysis carried out based on MassDOT crash data from 2011 to 2013, it was determined one of the study intersections, Fawcett Street and Smith Place, has a crash rate above the statewide and District 6 averages. However, the crash rate for this intersection is skewed by very low volumes. Given this, it can be said that existing conditions and roadway geometries within the project area do not show any significant safety issues that need to be addressed as part of this traffic study.

e. Public Transit

The MBTA services the study area with the Red Line at Alewife Station, as well as bus routes 74, 75, and 78. See Tables 2.e.1 to 2.e.3 for summaries of these bus and subway schedules.

The details of transit schedules and headways for each of these services are included in Appendix C. The most recent boarding and alighting information was obtained from the MBTA for the Red Line service, and bus route 74 and 78. The two bus routes provide service along Concord Avenue near the site with a combined peak hour headway of 10 minutes. Table 2.e.1 summarizes the schedules and headways for bus routes 74 and 78, and the Red Line.

Table 2.e.1: Existing Bus and Subway Service Schedules and Headways

	Origin/Destination	Hours of Operation(weekday)	Hours of Operation (Saturday)	Headway (rush hour)	Headway (off peak hour)
Route 74	Belmont Center/Harvard Station	5:20AM – 1:10 AM	5:35AM – 1:20 AM	20 minutes	40 minutes
Route 78	Arlmont Village/Harvard Station	5:42AM – 12:30 AM	6:32AM – 12:40 AM	25 minutes	35 minutes
Red Line	Alewife/Ashmont-Braintree	5:16AM – 12:30 AM	5:15AM – 1:49AM	9 minutes	12-14 minutes

Bus boarding and alighting volumes were obtained for all bus stops on Concord Avenue from the MBTA. The data for the bus stops at Fawcett Street and Moulton Street are summarized in Table 2.e.2. The data for the Red Line service was more limited in nature, and only available for daily

entries at Alewife Station. The data indicated that 11,221 entries are made at Alewife Station over the course of a typical weekday.

Table 2.e.2: Existing Route 74 and 78 Bus Route Data

Inbound	Route	# of Buses	Moulton St	Fawcett St
Boarding	74	37	23	4
	78	47	17	2
	Total	84	40	6
Alighting	74	37	1	1
	78	47	1	1
	Total	84	2	2
Outbound	Route	# of Buses	Fawcett St	Moulton St
Boarding	74	32	0	0
	78	44	0	0
	Total	76	0	0
Alighting	74	32	1	15
	78	44	9	25
	Total	76	10	40

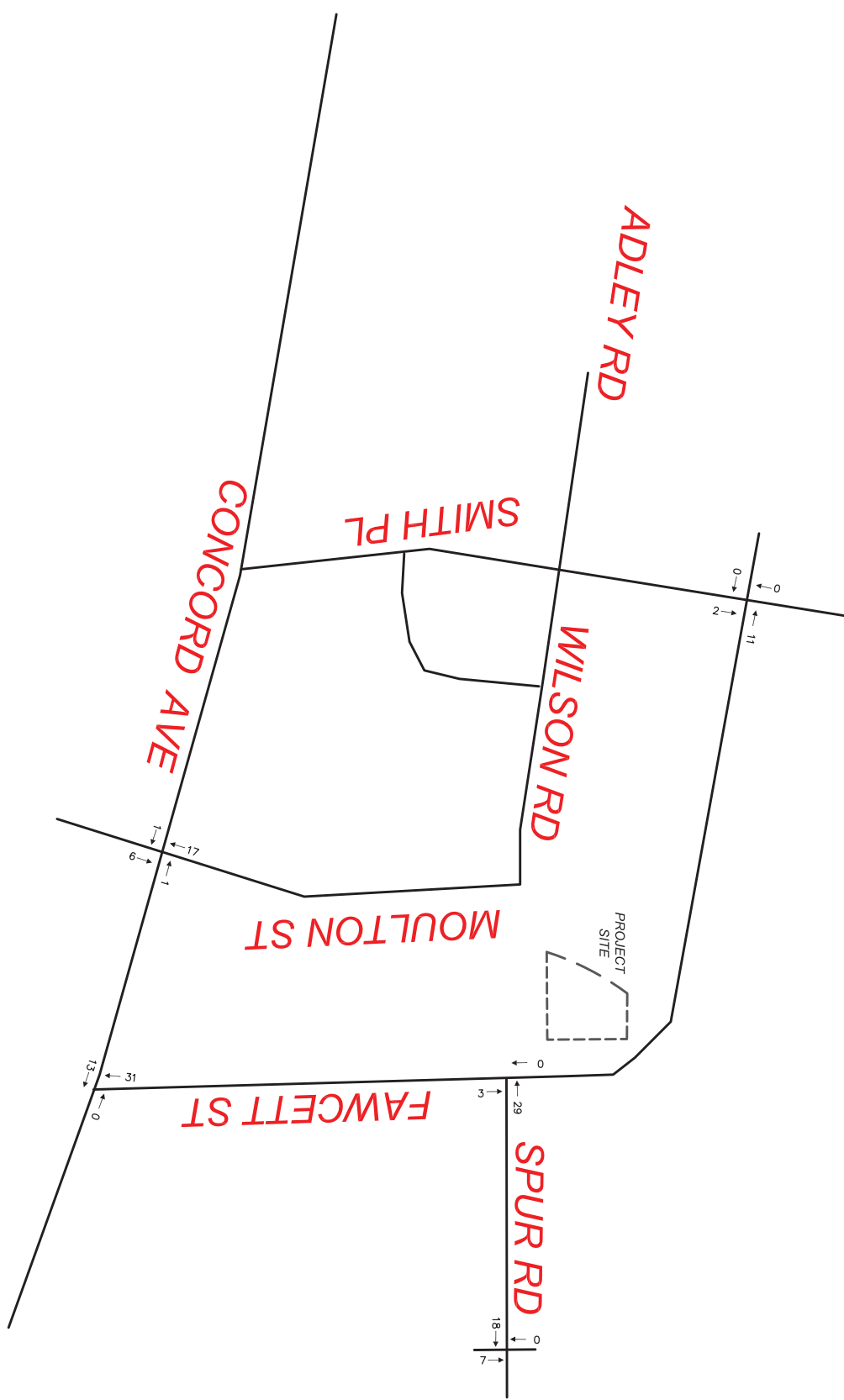
Source: MBTA Ridership

f. Parking

A parking utilization study was carried out along Fawcett Street from Concord Avenue to Smith Place. The study was done on a typical weekday from 1:00PM to 3:00PM and from 10:00PM to 11:00PM. It was observed that during the afternoon period, an average of 58 out of 68 available parking spots were occupied. This represents an average of 85% of parking spaces being occupied during the afternoon period. At the observed peak accumulation of vehicles during the afternoon period, 89% of available street parking spaces were occupied. During the evening period of 10:00PM to 11:00PM, an average of 47 out of 68 available parking spaces were occupied. This represents an average of 68% occupation for the on-street parking. At the observed peak accumulation of vehicles during the evening period, 68% of available street parking spaces were occupied. Complete parking utilization study data is included in Table 2.f.1.

Table 2.f.1: Parking Utilization Study Data

Street	Section		Subsection	Available	30	1:00PM to	1:30PM to	2:00PM to	2:30PM to	10:00PM to	10:30PM to
	From	to				1:30PM	2:00PM	2:30PM	3:00PM	10:30PM	11:00PM
Fawcett Street	Concord Ave	Spur Rd	East side	Occupied		27	25	27	24	27	27
				Unoccupied		3	5	3	6	3	3
				Available	9						
Fawcett Street	Spur Rd	Curve	East side	Occupied		9	9	5	8	9	9
				Unoccupied		0	0	4	1	0	0
				Available	5						
Fawcett Street	Curve	Smith Pl	North side	Occupied		4	5	4	4	0	1
				Unoccupied		1	0	1	1	5	4
				Available	25						
			South side	Occupied		18	23	19	20	10	10
				Unoccupied		7	2	6	5	15	15



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95 FAWCETT STREET
 CAMBRIDGE, MA

Existing AM
 Pedestrian Volumes

PROJECT NO.
 2015-009
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 Figure 2.c.3

3. Project Traffic

a. Preliminary Trip Generation

The base trip generation rates used were taken from The Trip Generation Manual, 9th Edition published by ITE in 2012. Land Use Code (LUC) 220 Apartment was used for this project, for 50 units. Table 3.a.1 summarizes the initial preliminary trip generation calculations.

Table 3.a.1: Preliminary Trip Generation Calculations

95 Fawcett Street, Cambridge, Massachusetts	AM	PM	Weekday Daily
Size (Dwelling Units)	50	50	50
multiply by	0.55	0.67	6.65
Total Trips	28	34	333
Entering%	29%	61%	50%
Exiting%	71%	39%	50%
Entering Trips	8	21	166
Exiting Trips	20	13	167

These trip rates are unadjusted, as they only account for motorized traffic trips. Non-vehicle trips were deducted from the base trips in the following steps.

b. Mode Share and Average Vehicle Occupancy

ITE's Trip Generation methods are typically based on data from suburban developments with no nearby transit service and no appreciable share of people walking or bicycling to or from the site. Commuting characteristics were analyzed from the 2009-2013 American Community Survey 5-Year Estimates. Census Tract 3546, which covers the Project Site, was analyzed and used to estimate mode splits for journeys to work in the project area. Table 3.b.1 displays estimated mode splits for non-vehicle trips.

Table 3.b.1 Mode Split Data for Residents of Census Tract 3546

Census Tract 3546 Mode Split	
Drive Alone + motorcycle =	35.4%
2 person carpool	3.5%
3 person carpool	0.0%
4+ person carpool	0.9%
Public Transit -	30.8%
Bike =	5.5%
Walk =	10.5%
Other Modes =	0.5%
Work at home =	13.5%

Based on the modal split data above and discussions with the City of Cambridge, an Average Vehicle Occupancy (AVO) rate of 1.2 persons per vehicle was utilized. The AVO of 1.2 persons per vehicle was applied to the preliminary trip generation calculations to determine the total number of Person-Trips that are expected to be generated by the project. Then the number of non-vehicle trips was determined by multiplying the person-trips by the percentage expected to utilize transit, bicycling and walking to access the project site. The US Census Tract 3546 was attached in Appendix D.

c. ITE Trip Rates Verification

The ITE trip rates for LUC 220 Apartment are based on sample sizes from variety of units with different sizes, price ranges, and locations. As requested by TP&T, DCI performed peak hour traffic counts at the Atmark Residential Project across the street which has a similar size and in close property to the project site. DCI collected AM and PM peak hour vehicle trips (enter/exit) at the 80/90 Fawcett Street garages. The total number of units at 80-90 Fawcett Street is 428 and DCI coordinated with TP&T and determined that the occupancy for both buildings is 96%. Therefore, a total number of 411 units was used to calculate the observed trip rates coming in and out of the Atmark Residential garage. Table 3.c.1 summarizes the resulting trip generation comparison associated with these observations compared to the ITE-based trip generation with adjusted mode split.

Table 3.c.1 80/90 Fawcett Street Vehicle Trip Generation Comparison with ITE Trip Rates

	80/90 Fawcett Street			ITE Trip Generator
	Counts	Trip Rates	use observed Trip Rate	use ITE Trip Rate w/ auto mode
AM Peak			50 units	50 units
Enter	3	0.01	0.5	0
Exit	66	0.16	8	10
Total	69	0.17	9	10
PM Peak				
Enter	46	0.11	6	9
Exit	15	0.04	2	3
Total	61	0.15	8	12

The observed trip rates are 0.17 vehicle per unit for AM peak period, and 0.15 vehicle per unit for PM peak period. The results are consistent with the city’s average trip rates. However, to be conservative, DCI used the ITE trip rates for trip generation and mode splits. The adjusted vehicle-trips and non-vehicle trips are summarized in Table 3.c.2. The detailed trip generation verification is attached in Appendix D.

Table 3.c.2 Trip Generation Summary

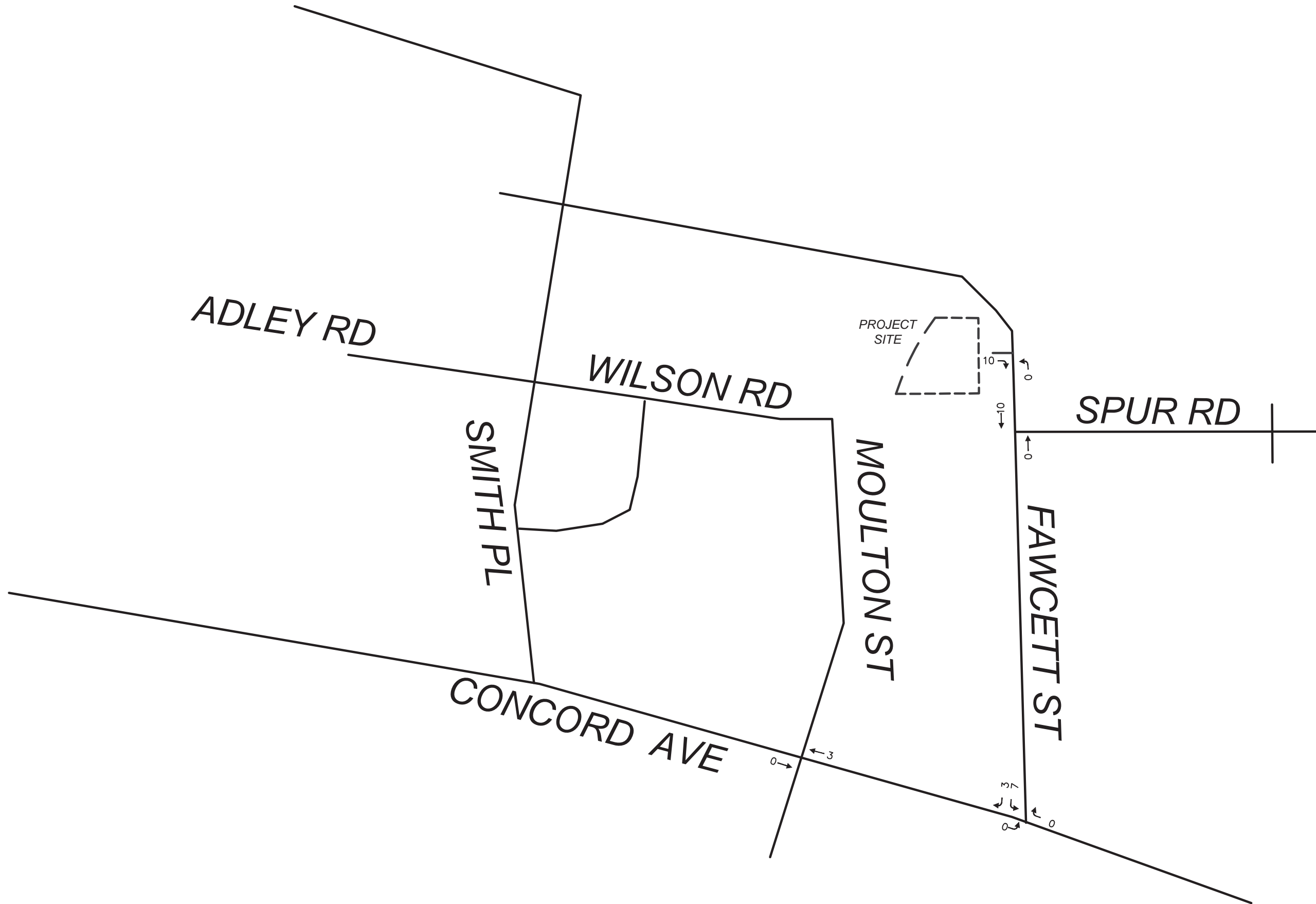
	AM	PM	Daily
Total Person Trips	31	37	400
Total Auto Trips	10	12	131
Entering Trips	0	9	65
Exiting Trips	10	3	66
Total Public Transportation Trips	9	11	123
Total Bicycle Trips	2	2	22
Total Walking Trips	3	4	42
Total Work at Home	4	5	54

As indicated in Table 3.c.2, the project will generate 10 vehicle trips during the weekday AM peak period, 12 vehicle-trips during the weekday PM peak period. Transit trips are expected to be 9 trips and 11 trips during the weekday AM and weekday PM peak hours, respectively. Bicycle trips are expected to be 2 trips during both the weekday AM and weekday PM peak hours. Pedestrian trips are expected to be 3 person-trips during the weekday AM and 4 person-trips during the weekday PM peak hours. It is estimated that 4 and 5 people work at home during morning and evening peak hours, respectively. See Figures 3.a.1 and 3.a.2 for AM and PM project generated traffic, respectively.

d. Trip Distribution and Trip Assignment

DCI estimated the trip distribution of project generated traffic from the site into the study area for the year 2020. The estimation is based on Journey-to-Work (JTW) data obtained from the American Community Survey 2006 Census Transportation Planning Package (CTPP). The directional distribution of this project generated traffic is based on existing travel patterns, which were measured over a specific period of time.

Moreover, DCI’s experience shows that the standard practice is to employ the same trip distribution and assignment percentages for both inbound and outbound movements, acknowledging that the trip counts are estimates at this time. This technique accounts for nuances in estimating the future numbers. These nuances can include proximity to the transportation and roadway network intricacies. The trip distribution for this project is shown graphically in Figure 3.d.1, and site specific trip assignment is shown in Figure 3.d.2.



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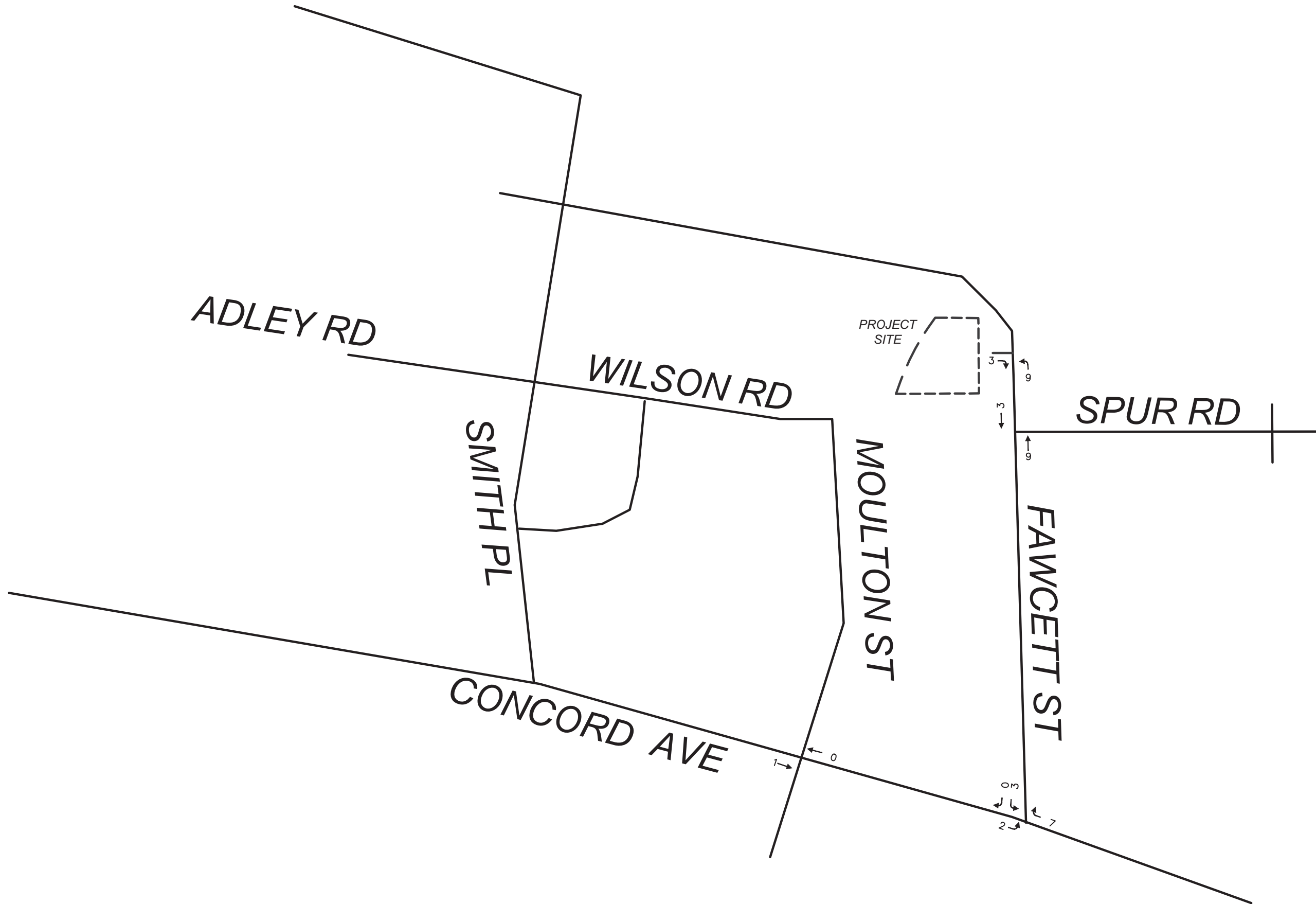
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95 FAWCETT STREET
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AM Peak Hour
 Project Trips

PROJECT NO.
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 DATE: OCTOBER 2015
 Figure 3.a.1



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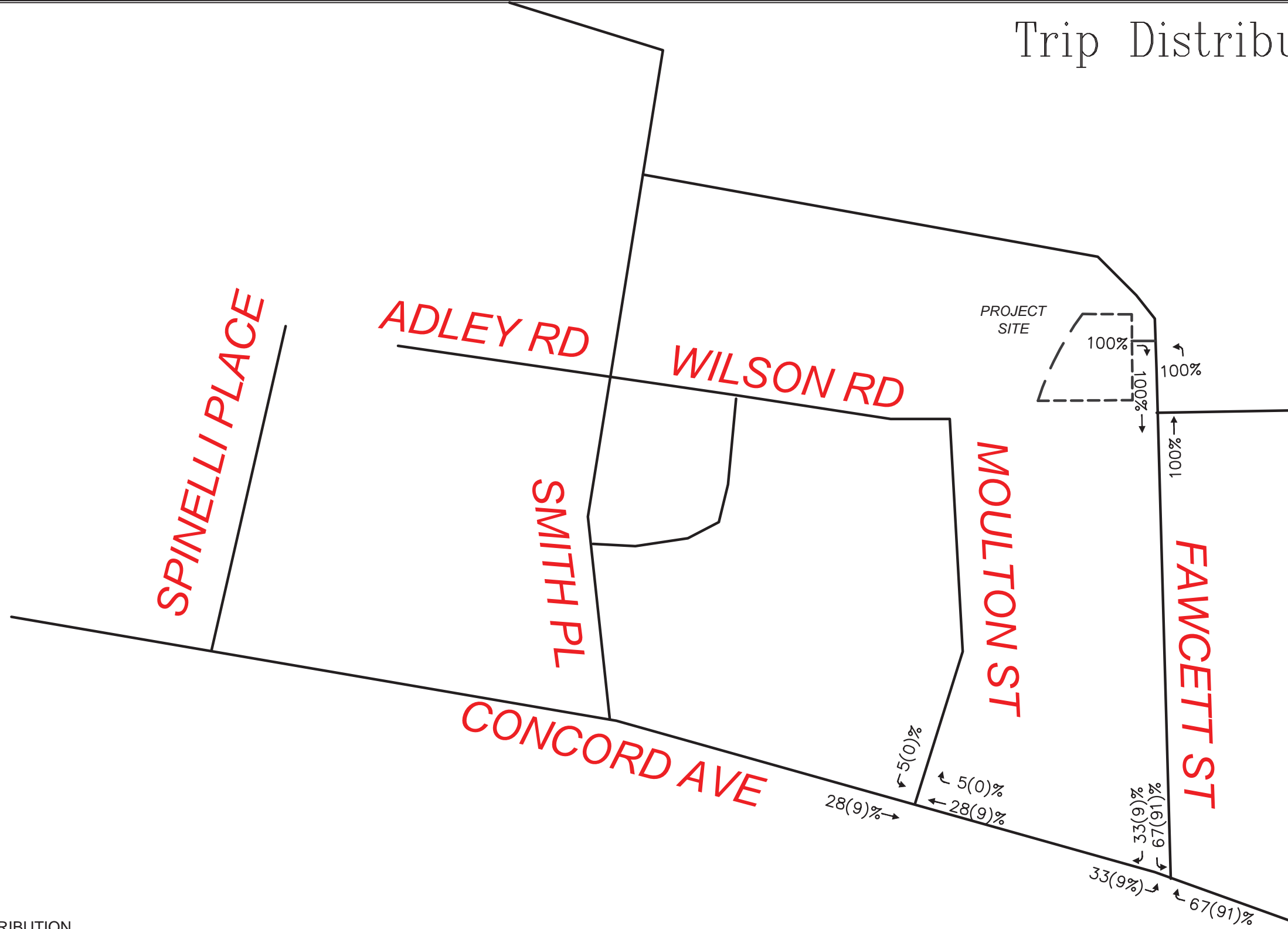
PM Peak Hour
 Project Trips

PROJECT NO.
 2015-009

DATE: OCTOBER 2015

Figure 3.a.2

Trip Distribution



Legend

xx% AM PEAK TRIP DISTRIBUTION

(xx%) PM PEAK TRIP DISTRIBUTION

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Trip Distribution

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2015-009

DATE: OCTOBER 2015

Figure 3.d.1

4. Background Traffic

DCI reviewed upcoming projects in the area that will have an impact on the surrounding traffic network. The following six projects were included in the development of background traffic volumes.

Location	Developer	Type	Size	Status
Concord Avenue/ Wheeler Street	AbodeZ Development	Mixed-Use	56 residential rental units and 7,000 square feet retail	Under Construction. Project trips have been added to future traffic volume networks.
165 Cambridgepark Drive	Hines, Inc.	Residential	230 units	Under Construction. Project trips have been added to future traffic volume networks.
130 Cambridgepark Drive	BRE/CPD, LLC	Residential	220 units	Under Construction. Project trips have been added to future traffic volume networks.
88 Cambridgepark Drive	BRE/CPD, LLC	Residential	378 units	Under Construction. Project trips have been added to future traffic volume networks.
75 New Street	AbodeZ Development	Residential	93 units	Under Construction. Project trips have been added to future traffic volume networks.
Tyler Green Project	Nordblom Company	Mixed-Use	66 units	Under Construction, previous traffic study does not show specific trips in the 95 Fawcett Street project study area. Assumed that additional traffic is accounted for in the 0.5% annual background growth rate.

The predicted trip volumes associated with each of the six projects were applied to the Future Conditions analysis.



5. Traffic Analysis

Traffic analyses were conducted for the weekday morning peak hour and afternoon peak hour periods for three scenarios: 2015 Existing Conditions, and the 2015 Build Conditions, and 2020 Future Conditions. Each of these scenarios are explained below.

a. Existing Condition

The study intersections were analyzed for 2015 existing traffic conditions during the weekday AM, and weekday PM peak hours. The Existing (2015) Condition analysis is based on existing vehicle and pedestrian counts at the study area intersections as previously presented in Section 2.

b. Build Condition

To develop year 2015 Build traffic volumes, the project-generated traffic is added to the existing volumes in the study area. To be conservative, this scenario assumes full occupancy of the 50 unit residential building. The resulting volumes for the 2015 Build Conditions are shown in Figures 5.b.1 and 5.b.2.

c. Future Condition

To develop year 2020 Future traffic volumes, the Build volumes were increased with a growth rate of one-half percent annually for five years. The additional volumes from nearby developments identified in Section 4 were also added into this scenario. The resulting volumes are shown in Figures 5.c.1 and 5.c.2. These volumes were used to carry out the traffic analysis for the 2020 Future Build Condition.

6. Vehicle Capacity Analysis

In this study, intersection performance measures were calculated in the form of volume to capacity (v/c) ratio, average intersection delay, 95th percentile queue lengths, level-of-service (LOS) of overall intersection LOS and the LOS of each approach. *Synchro 8.0 was the software used to execute the intersection analysis.* *Synchro 8.0*, a software program from Trafficware, uses the methodologies and thresholds outlined within the Highway Capacity Manual (HCM). This is the preferred and recommended software of MassDOT. Traffic volume represents the travel demand observed and capacity represents the amount of traffic the intersection can accommodate under prevailing conditions. Volume to capacity ratios that approach or exceed 1.0 indicates traffic congestion or poor operating conditions.

Level of Service (LOS) is a term used to denote different operating conditions that occur under various traffic volume loads. It is a qualitative measure of the effect of a number of factors including geometrics, speed, travel delay, freedom to maneuver, and safety. LOS is divided into a range of six letter grades, ranging from A to F, with A being the best and F the worst. LOS F is generally considered inadequate traffic operations in suburban and urban areas. The delay ranges differ slightly between unsignalized and signalized intersections due to driver expectations and behavior for each LOS. Table 6.1 summarizes the LOS criteria.

Table 6.1, Level-Of-Service Criteria for Intersections

LOS	Signalized	Unsignalized
	Control Delay (sec/veh)	Control Delay (sec/veh)
A	0-10	0-10
B	>10-20	> 10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Source: 2000 Highway Capacity Manual

Results for the Existing (2015), Build (2015), and Future (2020) conditions are presented in Tables 6.2 (AM peak hour) and 6.3 (PM peak hour) for signalized and unsignalized intersections. A summary of the analysis results follows. The detailed Synchro reports are attached in Appendix E.

Table 6.2: Intersection Capacity Analysis Summary – AM Peak Hour

Weekday AM peak hour												
				Existing Conditions (2015)			Build Conditions (2015)			Future Conditions (2020)		
				v/c	Avg. delay / veh (s)	LOS	v/c	Avg. delay / veh (s)	LOS	v/c	Avg. delay / veh (s)	LOS
1	Concord Avenue	Moulton Road/Neville Pl	EB LTR	0.42	3.6	A	0.42	3.6	A	0.43	3.8	A
			WB LTR	0.62	7.0	A	0.62	7.1	A	0.66	8.4	A
			NB LTR	0.12	17.7	B	0.12	17.7	B	0.12	17.7	B
			SB LTR	0.31	13.2	B	0.31	13.2	B	0.31	13.4	B
			Overall		5.6	A		5.6	A		6.3	A
2	Concord Avenue	Fawcett Street	EB LT	0.07	2.0	A	0.07	2.0	A	0.08	2.2	A
			EB T	0.43	0.0	A	0.43	0.0	A	0.45	0.0	A
			WB LTR	0.65	0.0	A	0.65	0.0	A	0.69	0.0	A
			SB LR	1.27	248.8	F	1.40	296.0	F	1.61	393.8	F
			Overall		13.9	B		18.4	C		23.8	C
3	Spur Road	Fawcett Street	WB LR	0.10	9.9	A	0.10	10.0	A	0.10	10.0	B
			NB TR	0.06	0.0	A	0.06	0.0	A	0.07	0.0	A
			SB LT	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A
			Overall		3.0	A		2.8	A		2.8	A

Table 6.3: Intersection Capacity Analysis Summary – PM Peak Hour

Weekday PM peak hour												
				Existing Conditions (2015)			Build Conditions (2015)			Future Conditions (2020)		
				v/c	Avg. delay / veh (s)	LOS	v/c	Avg. delay / veh (s)	LOS	v/c	Avg. delay / veh (s)	LOS
1	Concord Avenue	Moulton Road/Neville Pl	EB LTR	0.35	7.4	A	0.35	7.4	A	0.36	7.7	A
			WB LTR	0.71	14.4	B	0.71	14.4	B	0.75	16.3	B
			NB LTR	0.12	11.4	B	0.12	11.4	B	0.12	11.4	B
			SB LTR	0.71	28.1	C	0.71	28.1	C	0.71	28.3	C
			Overall		13.9	B		13.9	B		14.8	B
2	Concord Avenue	Fawcett Street	EB LT	0.07	2.2	A	0.07	2.3	A	0.07	2.4	A
			EB T	0.32	0.0	A	0.32	0.0	A	0.33	0.0	A
			WB LTR	0.55	0.0	A	0.56	0.0	A	0.58	0.0	A
			SB LR	1.20	191.4	F	1.25	209.2	F	1.39	269.4	F
			Overall		17.6	C		19.5	C		25.6	D
3	Spur Road	Fawcett Street	WB LR	0.05	9.7	A	0.05	9.8	A	0.05	9.9	A
			NB TR	0.10	0.0	A	0.10	0.0	A	0.11	0.0	A
			SB LT	0.01	0.0	A	0.01	0.9	A	0.01	0.8	A
			Overall		1.5	A		1.5	A		1.4	A

As indicated in Tables 6.2 and 6.3, the majority of movements at study intersections in the surrounding traffic network operate below capacity and at acceptable levels. Any operational concerns are noted following.

In the Existing Condition, the southbound approach on Fawcett Street to its intersection with Concord Avenue operates with an LOS of F during the AM and PM peak hours. During the AM peak hour, the approach has an average delay of 248.8 seconds per vehicle, and an average delay of 191.4 seconds per vehicle during the PM peak hour. While this approach operates at a low level of service, the intersection as a whole operates at an LOS of B during the AM peak and LOS of C during the PM peak periods.

In the 2015 Build Conditions, the southbound approach on Fawcett Street to its intersection with Concord Avenue continues to operate at an LOS of F during the AM and PM peak hours. The movement experiences an increase in delay of 47.2 seconds per vehicle in the AM peak, and 17.8 seconds per vehicle in the PM peak. The intersection overall drops to an LOS of C during the AM peak hour, and continues to operate at an LOS of C during the PM peak hour.

As shown in the Future Conditions (2020) column, the addition of the project-generated vehicle-trips to the study area results in negligible impacts to the flow of traffic.

7. Queue Analysis

A vehicle queue analysis was conducted at each study intersection in conjunction with the intersection capacity analysis discussed in the previous section. The 50th and 95th percentile queues were used in the analysis. The 50th-percentile queue is defined to be the queue length (in vehicles) that has a 50-percent chance of being exceeded during the analysis time period. The 95th-percentile queue is defined to be the queue length (in vehicles) that has only a 5-percent probability of being exceeded during the analysis time period. It should be noted that the software used for this analysis, Synchro 8, does not generate 50th percentile queues for unsignalized intersections, therefore they are not shown in the results. Tables 7.1 and 7.2 summarize the results of this queue analysis. The maximum field observed queues are shown in the first column.

Table 7.1: Queue Analysis Summary – AM peak

Weekday AM peak hour										
				Maximum Field Observed Queues (veh)	Existing Conditions (2015)		Build Conditions (2015)		Future Conditions (2020)	
					95th % Queue (veh)	50th % Queue (veh)	95th % Queue (veh)	50th % Queue (veh)	95th % Queue (veh)	50th % Queue (veh)
1	Concord Avenue	Moulton Street/Neville Place Driveway	EB LTR	10	4	3	4	3	4	3
			WB LTR	15	11	5	11	5	14	6
			NB LTR	2	0	0	0	0	0	0
			SB LTR	4	0	0	0	0	0	0
2	Concord Avenue	Fawcett Street	EB LT	-	0	-	0	-	0	-
			EB T	-	0	-	0	-	0	-
			WB LTR	-	0	-	0	-	0	-
			SB LR	-	9	-	10	-	12	-
3	70 Fawcett Street Driveway	Fawcett Street	WB LR	-	0	-	0	-	0	-
			NB TR	-	0	-	0	-	0	-
			SB LT	-	0	-	0	-	0	-

Table 7.2: Queue Analysis Summary – PM peak

Weekday PM peak hour				Maximum Field Observed Queues	Existing Conditions (2015)		Build Conditions (2015)		Future Conditions (2020)	
					95th % Queue (veh)	50th % Queue (veh)	95th % Queue (veh)	50th % Queue (veh)	95th % Queue (veh)	50th % Queue (veh)
1	Concord Avenue	Moulton Street/Neville Place Driveway	EB LTR	8	4	3	4	3	4	3
			WB LTR	14	14	7	14	7	17	8
			NB LTR	3	0	0	0	0	0	0
			SB LTR	7	1	3	1	3	1	4
2	Concord Avenue	Fawcett Street	EB LT	-	0	-	0	-	0	-
			EB T	-	0	-	0	-	0	-
			WB LTR	-	0	-	0	-	0	-
			SB LR	-	11	-	11	-	13	-
3	70 Fawcett Street Driveway	Fawcett Street	WB LR	-	0	-	0	-	0	-
			NB TR	-	0	-	0	-	0	-
			SB LT	-	0	-	0	-	0	-

As indicated in Table 7.1 and 7.2, the addition of project-generated vehicle traffic to the study intersections is expected to result in negligible increases in vehicular queuing.

8. Parking Analysis

As a baseline, parking demand was analyzed based on the ITE Parking Generation manual. For Land Use Code (LUC) 222, High-Rise Apartments (five floors or more), the average peak period parking demand is 1.37 spaces per dwelling unit. The mode split for this area of Cambridge, as shown in Table 3.a.2, indicates that 39.3% of trips would be made by personal motor vehicles (including single-occupancy vehicle trips, carpoolers, and motorcycles). Applying this mode split to the average peak period parking demand yields a rate of 0.54 vehicles per dwelling unit. This is well below the parking demand of one parking space per dwelling units from the City of Cambridge Zoning Ordinance.

Additional research was done to determine average vehicle ownership rates in census tract 3546 (in which the project is located). The most recent vehicle ownership data for residents of census tract 3546 is from the 2011-2013 American Community Survey (ACS) 5-Year Estimates, and are summarized in Table 8.1. The data summarized in Table 9 indicates that 85.3% of all households in census tract 3546 have at least one vehicle.

Table 8.1: Summary of Vehicle Ownership in Census Tract 3546

VEHICLES AVAILABLE	Percent
No Vehicle available	14.70%
1 vehicle available	54.60%
2 vehicles available	20.80%
3 or more vehicles available	10.00%

As indicated in Table 8.2 below, the actual parking demand is expected to be 27 parking spaces and the proposed project will provide 48 parking spaces in a secured ground level and basement level garage. In addition, based on the parking utilization study in section 2.f, there were between 25% to 32% parking spaces available during the weekday period. Consequently, the proposed parking supply is expected to be sufficient to meet the needs of the proposed project.

Table 8.2: Summary of Parking Analysis

Use	Size	ITE Parking Ratio	*Automobile Mode Splits	Parking Demand	Parking Supply
Residential (Apartments)	50 Units	1.37	39.30%	27	48

* Source: 2009-2013 American Community Survey for Census Tract 3546

Moreover, the project site is within walk distance to the Alewife MBTA subway station, which will attract a higher than average number of car-free commuters. Visitor parking is expected to be accommodated with on-street parking, given the results of the on-street parking analysis.

9. Transit Analysis

As indicated in Table 3.a.3, the project is expected to generate 10 new transit trips during the AM peak period and 13 new transit trips during the PM peak period. It is assumed that all transit trips generated by the project will be distributed among the MBTA Red Line, and the MBTA bus route 74 and 78. Table 9 summarize the capacity and usage of bus routes 74 and 78.

Table 9: Transit Analysis

			Max Load		Existing v/c ratio		Additional Build Trips		Build v/c ratio	
Route		Capacity	AM	PM	AM	PM	AM	PM	AM	PM
Route 74	Inbound	53	35	26	0.65	0.49	4	4	0.74	0.56
	Outbound	53	24	40	0.45	0.76	2	4	0.49	0.84
Route 78	Inbound	53	35	26	0.65	0.49	4	4	0.74	0.56
	Outbound	53	24	40	0.45	0.76	2	4	0.49	0.84
Average	Inbound	53	43	22	0.80	0.41	5	3	0.89	0.47
	Outbound	53	23	39	0.43	0.73	2	5	0.47	0.82

As shown in Table 9, the project generated transit trips will not bring bus routes 74 or 78 to, or near capacity during the peak periods. Therefore, it can be stated that the development at 95 Fawcett Street will not have a significant impact on bus route operations or bring existing routes near capacity.

10. Pedestrian Analysis

Pedestrian Yielding Study

The crosswalk to cross Concord Avenue at Fawcett Street has a flashing beacon that is actuated by pushbuttons on either side of the roadway. Given this facility's proximity to the project site, it was deemed necessary to carry out studies to learn more about motorist behavior in the area and how they interact with pedestrians at this intersection. On September 2, 2015 a pedestrian yielding study was carried out at this crosswalk.

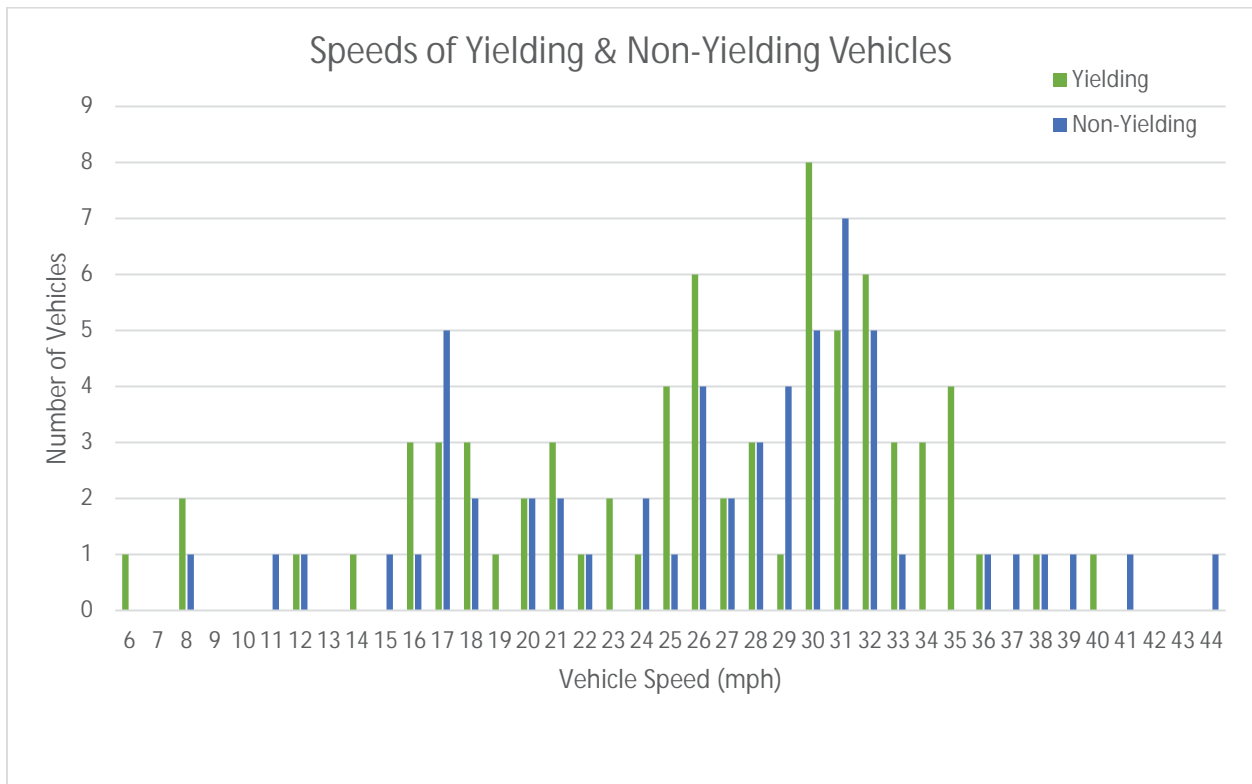
The first step of this study was to determine the dilemma point (D) for each approach. The dilemma point is the maximum distance from the crosswalk from which a driver can comfortably decelerate at a standard rate. The formula for D is shown below,

$$D = Vt + \frac{V^2}{2a}$$

where V is the 50th percentile speed (measured in the field on August 25, 2015), t is the perception/reaction time of 1 second, and a is the AASHTO standard deceleration rate of 11.2 feet/second². Using this formula, dilemma points for each approach were calculated. For the eastbound approach, the dilemma point was 130 feet from the crosswalk. For the westbound approach it was 116 feet from the crosswalk.

As a vehicle approached the dilemma point, the test pedestrian started stepping into the crosswalk. It was noted whether or not the vehicle yielded for the pedestrian, and the vehicles speed was taken. It should be noted that the pedestrian flashing beacon was not actuated during the test crossings for this study. See Figure 10.a below for results of the study.

Figure 10.a: Yielding Analysis Summary



Overall, 56% of vehicles yielded to pedestrians attempting to cross Concord Avenue. The average speed of vehicles that yielded prior to the dilemma point was 29.7 mph, and the average speed of non-yielding vehicles was 31.4 mph. No significant conflicts were observed between pedestrians

attempting to cross Concord Avenue and cyclists. Between 5 and 10 cyclists were observed during the yielding tests and all of them were riding in the cycle track.

Multiple threat behavior at the crosswalk was also studied. “Multiple threat” describes the situation in which a pedestrian is attempting to cross multiple lanes traveling in the same direction, and a vehicle in the lane nearest the curb yields, but adjacent lanes do not. Vehicles in the lane near the curb that yield block sight lines of vehicles in the adjacent lane, causing a “multiple threat” potential safety issue. This situation is only applicable in the westbound direction, as Concord Avenue carries two lanes westbound but only one lane eastbound. Of the 62 crossing attempts for westbound traffic, there were 18 crossings during which the multiple threat was present.

See Table 10.b below for a summary of the yielding study data. See Appendix F complete yielding data.

Table 10.b: Pedestrian Yielding Analysis Summary

		%	Avg. Speed (mph)	Multiple Threat
Eastbound	Yielding	58%	29.7	29%
	Non-Yielding	42%	31.6	
Westbound	Yielding	53%	22.6	N/A
	Non-Yielding	47%	27.7	

Based on this analysis, it is shown that 58% of eastbound vehicles and 53% of westbound vehicles yielded to pedestrians attempted to cross Concord Avenue at Fawcett Street. These numbers are assumed to increase with the use of the existing actuated pedestrian flashing beacon. In the eastbound direction, non-yielding vehicles were traveling about two (2) miles per hour faster than vehicles that yielded. In the westbound direction, non-yielding vehicles were travelling about five (5) miles per hour faster than vehicles that yielded.

11. Bicycle Analysis

Currently, there are no existing bicycle facilities installed on Fawcett Street. Fawcett Street is 30 to 35 feet wide curb-to curb, therefore advisory bike lanes should be considered on Fawcett Street.

According to the City of Cambridge TIS guidelines, intersections with more than 10 bicycles per hour should be analyzed for conflicting bicycle/vehicle movements. The intersection of Concord Avenue with Fawcett Street meets this criteria. Table 11.a. identifies the number of conflicting vehicle movements with these bicyclists. These volumes are summarized for Existing 2015, Build 2015, and Future 2020 conditions.

Table 11.a: Conflicting Bicycle/Vehicle Movements

Location	Bicycle Direction	Existing Peak Hour Bicycle Volume	Conflict Vehicle Movements					
			2015 Existing		2015 Build		2020 Future	
			EBL	WBR	EBL	WBR	EBL	WBR
AM Peak Hour	Eastbound	38	-	140	-	140	-	148
	Westbound	37	32	-	32	-	33	-
PM Peak Hour	Eastbound	31	-	104	-	111	-	116
	Westbound	47	25	-	27	-	28	-

*EBL=Eastbound left, WBR=westbound right

Currently, there are no bicycle parking accommodations on the project site. As shown previously on the project site plan and bicycle parking layout plan, 30 bicycle racks providing 60 long-term bicycle parking spaces will be located in the building. This will be high quality and secure parking versus racks on the sidewalk. As shown in Figure C, the most direct route for bicyclists would be the dedicated exterior door to the outside from the bike storage room and down the ramp to Fawcett Street. Although two other exits from that room go through either the main or side entry lobbies then down to Fawcett Street, only adding one extra vestibule door to pass through before getting to Fawcett Street. Additionally, there is an accessible sloping pedestrian and bicycle pathway as part of the landscape design for the main and secondary building entries. The project will provide both sloping accessible access for ease to both entries, and plaza stairs for quicker access for those wishing to bypass the sloping path. Six short-term bicycle racks will be provided at the south end of the building up against the exterior wall, two short-term bicycle racks will be provided at the exterior wall of the main entry. The eight short-term parking spaces are dedicated for short-term bike users such as visitors.

The Cambridge zoning requires 1 bicycle space per dwelling unit for the first 20 units in a building and 1.05 spaces per unit for additional units. This results in a total of 52 bicycle parking spaces required for the project. The zoning requires 0.1 short-term bike parking space per unit on a lot. This results in a total of 5 short-term bike parking spaces required for the project. In any case, the long term and short-term bicycle parking supply is consistent with the zoning requirements.

12. Signal Warrant Analysis

As requested by the City of Cambridge, a signal warrant analysis was carried out for the intersection of Concord Avenue and Fawcett Street as part of this traffic study. The traffic signal warrant analysis carried out is based on the 2009 Manual on Uniform Traffic Control Devices. The results of this analysis show that a traffic signal should not be considered for this intersection. A summary of the warrants and whether or not they are satisfied is shown below in Table 12.

Table 12: Traffic Signal Analysis Summary

Warrant 1	Eight-hour Vehicular Volume	Yes
Warrant 2	Four-hour Vehicular Volume	No
Warrant 3	Peak Hour	No
Warrant 4	Pedestrian Volume	No
Warrant 5	School Crossing	No
Warrant 6	Coordinated Signal System	No
Warrant 7	Crash Experience	No
Warrant 8	Roadway Network	No
Warrant 9	Intersection Near a Grade Crossing	No

A complete write-up and analysis of each warrant is included in Appendix G. Note that although Warrant 1 is met for traffic signals, it is just barely met. The 85 vehicles just barely pass the threshold of 75 vehicles required to meet the signal warrant. This is close enough where the installation of a signal could be a judgment call by an engineer, though it should be noted that satisfying one of these warrants does not alone necessitate the installation of a traffic signal. It should also be noted that the pedestrian signal at Fawcett Street and Concord Avenue facilitates not only pedestrians but also motor vehicles turning onto Concord Avenue, which may diminish the need for a traffic signal at that intersection.

13. Transportation Demand Management

As part of the development process, the proponent will implement several TDM measures to further minimize vehicular traffic and encourage alternative transportation modes such as walking, biking, or taking public transit. DCI has made the following TDM recommendations:

- Post MBTA bus and subway schedules and maps in common areas of the proposed building to inform tenants about nearby public transit
- Provide tenants with information and maps for nearby bicycle and pedestrian facilities in the area to promote pedestrian and bicycle travel
- To encourage residents to use public transportation, the project proponent could provide a single month's MBTA Charlie Card to each residential unit upon initial occupancy
- Graduated parking rates for multiple cars/spaces to discourage multiple vehicle ownership
- Shuttle service to nearby transit resources (Alewife, commuter rail stations)
- Priority parking spaces for carpools / rideshares
- Assist with the construction of a bike-ped bridge over the railroad tracks to Alewife.
- Consider constructing advisory bike lanes on Fawcett Street.

Planning Board Special Permit Criteria

According to the City of Cambridge TIS Guidelines, Section IV, Guidelines for Presenting Information to the Planning Board, the City of Cambridge uses five criteria for determining certain thresholds of potential adverse impacts. Exceeding one or more of the criteria shall be indicative of a potentially adverse impact on City’s transportation network. However, the Planning Board shall consider the mitigation efforts proposed, their anticipated effectiveness, and other supplemental information that identifies a possible reduction in adverse traffic impacts.

Criterion A – Project Vehicle Trip Generation

Criterion A evaluates the number of vehicle-trips generated by proposed projects. Table A-1 below shows the thresholds and anticipated volumes for this project, and determines whether or not this threshold will be met.

Table A-1: Project Vehicle Trip Generation

Time Period	Threshold	Generated Vehicle-Trips	Threshold Exceeded?
Weekday Daily	2,000	131	No
Weekday AM Peak Hour	240	10	No
Weekday PM Peak Hour	240	12	No

As indicated in Table A-1 above, the project is not expected to exceed the criteria for project generated vehicle trips during weekday AM peak hour, weekday PM peak hour, or on a weekday daily basis.

Criterion B – Change in Level of Service at Identified Signalized Intersections

Criterion B evaluates changes in Vehicle Level of Service (VLOS), and limits the project-induced VLOS at signalized intersections. As indicated in the table below, the VLOS at the only signalized study intersection is expected to remain unchanged relative to the existing conditions.

Table B-1: Vehicle Level of Service

East-West Road	North-South Road	Lane	Existing (2015)		Build (2015)		Future (2020)	
			AM	PM	AM	PM	AM	PM
Concord Avenue	Moulton Street/ Neville Place	EB LTR	A	A	A	A	A	A
		WB LTR	A	B	A	B	A	B
		NB LTR	B	B	B	B	B	B
		SB LTR	B	C	B	C	B	C
		Overall	A	B	A	B	A	B

Criterion C – Increased volume of trips on Residential Streets

Criterion C evaluated the traffic impact on residential streets based on two parameters:

1. Amount of Residential, 2. Additional project vehicle trip generation in vehicles per lane for both directions. Table C-1 below illustrates the details of the criterion parameters.

Table C-1: Criterion C parameters

Parameter 1: Amount of Residential	Parameter 2:		
	Current Peak Hour Street Volume (two-way vehicles)		
	<150 Vehicles per Hour (VPH)	150-400 VPH	>400 VPH
1/2 or more	20 VPH	30 VPH	40 VPH
>1/3 but <1/2	30 VPH	45 VPH	60 VPH
1/3 or less	(No max.)	(No max.)	(No max.)

It is noted that Fawcett Street between Concord Avenue and Smith Place is less than 1/3 residential, therefore it falls in the third tier and there is no maximum limit for the increase of peak hour street volume. Consequently, no traffic on Fawcett Street will exceed the criteria.

Criterion D – Increase of length of vehicle queues at identified intersections

This criterion analyzes the change in vehicular queue lengths at study intersections due to project generated traffic. At locations where the existing vehicle queue is under 15 vehicles (which includes all study intersections), the increase in vehicle queuing must remain under 15 vehicles, otherwise not increase by more than 6 vehicles. As indicated in Table D-1 below, this threshold is not exceeded.

Table D-1: Increase in Length of Vehicle Queues

Weekday AM peak hour							
				Existing Conditions (2015)	Build Conditions (2015)	Future Conditions (2020)	Criteria Exceeded?
				95th % Q (veh)	95th % Q (veh)	95th % Q (veh)	
1	Concord Avenue	Moulton Street/Neville Place Driveway	EB LTR	4	4	4	No
			WB LTR	11	11	14	No
			NB LTR	0	0	0	No
			SB LTR	0	0	0	No
2	Concord Avenue	Fawcett Street	EB LT	0	0	0	No
			EB T	0	0	0	No
			WB LTR	0	0	0	No
			SB LR	9	10	12	No
3	70 Fawcett Street Driveway	Fawcett Street	WB LR	0	0	0	No
			NB TR	0	0	0	No
			SB LT	0	0	0	No
Weekday PM peak hour							
				Existing Conditions (2015)	Build Conditions (2015)	Future Conditions (2020)	Criteria Exceeded?
				95th % Q (veh)	95th % Q (veh)	95th % Q (veh)	
1	Concord Avenue	Moulton Street/Neville Place Driveway	EB LTR	4	4	4	No
			WB LTR	14	14	17	No
			NB LTR	0	0	0	No
			SB LTR	1	1	1	No
2	Concord Avenue	Fawcett Street	EB LT	0	0	0	No
			EB T	0	0	0	No
			WB LTR	0	0	0	No
			SB LR	11	11	13	No
3	70 Fawcett Street Driveway	Fawcett Street	WB LR	0	0	0	No
			NB TR	0	0	0	No
			SB LT	0	0	0	No

Criterion E – Pedestrian & Bicycle Facilities

Criterion E evaluates pedestrian and bicycle facilities to determine if they are sufficient. The first threshold is that pedestrian Level of Service (PLOS) must not change at crosswalks. The second part of criteria evaluates the adequacy of safe pedestrian and bicycle facilities. Table E-1 below summarizes the PLOS according to Criterion E.

a. Pedestrian Level of Service (PLOS)

Table E-1: Pedestrian Level of Service

Weekday AM Peak Hour	Existing Conditions (2015)	Build Conditions (2015)	Future Conditions (2020)	Criteria Exceeded ?
Concord Avenue/Moulton Street	C	C	C	No
Concord Avenue/Fawcett Street west-leg	F	F	F	Yes
Fawcett Street/Spur Road south-leg	A	A	A	No
Weekday PM Peak Hour				
Concord Avenue/Moulton Street	C	C	C	No
Concord Avenue/Fawcett Street west-leg	F	F	F	Yes
Fawcett Street/Spur Road south-leg	A	A	A	No

Based on the methodology from Highway Capacity Manual 2000 Edition, the Pedestrian Level of Service at Concord Avenue and Fawcett Street west leg crossing operates at a LOS F during peak periods, thus triggering the review criteria threshold. The detailed calculation sheet is attached in the Appendix F. However, this is an existing condition that continues into the future condition. Moreover, there is a pedestrian-actuated flashing beacon that facilitates pedestrian movements across Concord Street, which is not reflected in the PLOS. So although in theory the PLOS is F, the reality is that PLOS is effectively much higher due to the beacon facilitating pedestrian movements across Concord Street.

b. Safe Pedestrian Facilities

The project site is well connected to existing pedestrian sidewalks along surrounding streets. Six foot wide concrete sidewalks are provided on the east side of Fawcett Street and 7.7 wide concrete sidewalks are provided on the west side of Fawcett Street. . The crosswalk to cross Concord Avenue at Fawcett Street has a flashing beacon that is actuated by pushbuttons on both sides of the roadway.

c. Safe Bicycle Facilities

Fawcett Street doesn't have bicycle lanes facilities. Advisory bike lanes should be considered for Fawcett Street. It does, however, have low speeds which create a pleasant biking environment. Concord Avenue has a sidewalk-level cycle track on both sides of the street. This cycle track provides connections to mixed use paths in the area. Currently there are no bicycle parking accommodations at the project site. The proposed residential development will include 31 bicycle racks for a total of 62 bicycle parking spaces.

Conclusions

This transportation impact study was prepared to analyze the traffic impact of the 95 Fawcett Street project in Cambridge, Massachusetts. Currently at the site, there is a 20,522 square foot storage warehouse. The project proposes tearing down the existing warehouse and constructing a new five-floor residential building. The new residential building accommodates 50 residential units. On the ground level, the project will provide a secured parking garage with 25 parking spaces and 31 bicycle racks, for a total of 62 bicycle parking spots, as well as a bike repair area. On the basement level, the project will provide a parking garage with 23 parking spaces accessed via a parking elevator.

From a safety perspective, two of the three study intersections experience a crash rate below the MassDOT and District 6 average. While one intersection has a notably high crash rate, it can be shown that this represents only two crashes over three years, and is skewed by extremely low volumes at the intersection. There were no reported injury crashes at that location. The proposed project is not expected to exacerbate any existing safety conditions.

The intersection capacity analyses indicate that the additional vehicle-trips that are expected to be generated by the project site can easily be accommodated by the existing transportation infrastructure, with minimal impacts on traffic operations. This finding is consistent for each analysis period, including the weekday morning peak hour and the weekday afternoon peak hour. Although the signal warrant analysis shows that Warrant 1 is met for traffic signals, it is just barely met. The 85 vehicles just barely pass the threshold of 75 vehicles required to meet the signal warrant. This is close enough where the installation of a signal could be a judgment call by a traffic signal engineer. It should be noted that the pedestrian signal at Fawcett Street and Concord Avenue facilitates not only pedestrians but also motor vehicles turning onto Concord Avenue, which may diminish the need for a traffic signal and that intersection.

None of the 5 special permit criteria laid out by the Planning Board were exceeded with one exception. The Pedestrian Level-of-Service at Concord Avenue and Fawcett Street operates at F during Existing and Build conditions. However, this is an existing condition that continues into the future condition. Moreover, there is a pedestrian-actuated flashing beacon that facilitates pedestrian movements across Concord Street, which is not reflected in the PLOS. So although in theory the PLOS is F, the reality is that PLOS is effectively much higher due to the beacon facilitating pedestrian movements across Concord Street. Also, the project proponent is committed to working with the City of Cambridge to implement appropriate measures to mitigate any adverse impacts that project may generate. Another notable aspect of this section of the study is that there are no bicycle facilities along Fawcett Street. However, there is not enough width curb-to-curb at this time to accommodate standard bike lanes. Advisory bike lanes should be considered for Fawcett Street. A comprehensive Transportation Demand Management (TDM) plan is being proposed to limit the number of vehicle-trips that will be generated by the proposed project. These measures are expected to reduce the already minimal impacts on traffic operations at all study intersections.



APPENDIX A – TRAFFIC COUNTS

Accurate Counts

978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA

15009VOL2

Start Time	09-Sep-15 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	34			1	25				
12:15		2	22			0	23				
12:30		0	41			0	22				
12:45		1	32	5	129	0	20	1	90	6	219
01:00		1	35			1	26				
01:15		3	23			1	10				
01:30		1	33			1	22				
01:45		2	15	7	106	0	28	3	86	10	192
02:00		4	14			0	19				
02:15		12	15			3	17				
02:30		1	26			1	21				
02:45		2	19	19	74	2	20	6	77	25	151
03:00		1	20			2	16				
03:15		3	24			6	17				
03:30		2	20			4	9				
03:45		5	27	11	91	3	12	15	54	26	145
04:00		5	29			1	11				
04:15		2	18			3	15				
04:30		0	17			3	12				
04:45		3	16	10	80	3	16	10	54	20	134
05:00		10	27			2	10				
05:15		4	26			2	18				
05:30		6	25			5	14				
05:45		6	40	26	118	2	21	11	63	37	181
06:00		16	19			6	9				
06:15		9	16			8	9				
06:30		12	14			12	14				
06:45		20	22	57	71	10	11	36	43	93	114
07:00		28	21			20	6				
07:15		27	26			24	11				
07:30		28	24			26	9				
07:45		17	22	100	93	28	7	98	33	198	126
08:00		22	26			25	12				
08:15		17	11			22	11				
08:30		23	19			25	7				
08:45		27	10	89	66	17	12	89	42	178	108
09:00		19	8			13	8				
09:15		28	5			20	6				
09:30		21	4			22	5				
09:45		27	8	95	25	18	6	73	25	168	50
10:00		20	7			24	7				
10:15		23	9			21	5				
10:30		35	6			17	1				
10:45		35	4	113	26	23	4	85	17	198	43
11:00		19	3			19	1				
11:15		25	6			21	5				
11:30		33	7			20	1				
11:45		26	4	103	20	25	2	85	9	188	29
Total		635	899			512	593			1147	1492
Percent		41.4%	58.6%			46.3%	53.7%			43.5%	56.5%

Accurate Counts 978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA

15009VOL2

Start Time	10-Sep-15 Thu	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	25			0	23				
12:15		5	40			1	19				
12:30		4	35			3	33				
12:45		3	29	15	129	5	26	9	101	24	230
01:00		1	45			1	20				
01:15		3	26			2	16				
01:30		2	20			1	24				
01:45		4	24	10	115	2	18	6	78	16	193
02:00		2	17			1	23				
02:15		11	24			0	22				
02:30		2	23			1	18				
02:45		3	21	18	85	2	24	4	87	22	172
03:00		1	27			6	26				
03:15		1	30			7	25				
03:30		4	29			3	19				
03:45		5	31	11	117	1	11	17	81	28	198
04:00		2	27			0	15				
04:15		1	22			0	14				
04:30		2	25			1	9				
04:45		2	11	7	85	4	17	5	55	12	140
05:00		5	23			2	10				
05:15		8	22			3	25				
05:30		7	19			1	17				
05:45		6	32	26	96	8	12	14	64	40	160
06:00		14	25			5	17				
06:15		12	19			7	15				
06:30		7	20			7	9				
06:45		15	26	48	90	13	12	32	53	80	143
07:00		18	32			6	12				
07:15		38	24			37	7				
07:30		30	18			26	7				
07:45		18	22	104	96	24	12	93	38	197	134
08:00		19	19			26	10				
08:15		22	16			28	15				
08:30		13	21			21	5				
08:45		31	5	85	61	22	7	97	37	182	98
09:00		24	9			16	6				
09:15		35	7			18	11				
09:30		26	3			22	9				
09:45		25	13	110	32	22	5	78	31	188	63
10:00		33	8			28	10				
10:15		40	6			20	4				
10:30		36	3			36	6				
10:45		24	7	133	24	31	3	115	23	248	47
11:00		28	5			19	4				
11:15		25	5			28	1				
11:30		24	4			13	3				
11:45		14	9	91	23	22	4	82	12	173	35
Total		658	953			552	660			1210	1613
Percent		40.8%	59.2%			45.5%	54.5%			42.9%	57.1%
Grand Total		1293	1852			1064	1253			2357	3105
Percent		41.1%	58.9%			45.9%	54.1%			43.2%	56.8%
ADT		ADT 2,731									
				AADT 2,731							

Accurate Counts

978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA

15009VOL2

Start Time	07-Sep-15		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	*	*	5	1	15	9	*	*	*	*	*	*	10	5
01:00	*	*	*	*	7	3	10	6	*	*	*	*	*	*	8	4
02:00	*	*	*	*	19	6	18	4	*	*	*	*	*	*	18	5
03:00	*	*	*	*	11	15	11	17	*	*	*	*	*	*	11	16
04:00	*	*	*	*	10	10	7	5	*	*	*	*	*	*	8	8
05:00	*	*	*	*	26	11	26	14	*	*	*	*	*	*	26	12
06:00	*	*	*	*	57	36	48	32	*	*	*	*	*	*	52	34
07:00	*	*	*	*	100	98	104	93	*	*	*	*	*	*	102	96
08:00	*	*	*	*	89	89	85	97	*	*	*	*	*	*	87	93
09:00	*	*	*	*	95	73	110	78	*	*	*	*	*	*	102	76
10:00	*	*	*	*	113	85	133	115	*	*	*	*	*	*	123	100
11:00	*	*	*	*	103	85	91	82	*	*	*	*	*	*	97	84
12:00 PM	*	*	*	*	129	90	129	101	*	*	*	*	*	*	129	96
01:00	*	*	*	*	106	86	115	78	*	*	*	*	*	*	110	82
02:00	*	*	*	*	74	77	85	87	*	*	*	*	*	*	80	82
03:00	*	*	*	*	91	54	117	81	*	*	*	*	*	*	104	68
04:00	*	*	*	*	80	54	85	55	*	*	*	*	*	*	82	54
05:00	*	*	*	*	118	63	96	64	*	*	*	*	*	*	107	64
06:00	*	*	*	*	71	43	90	53	*	*	*	*	*	*	80	48
07:00	*	*	*	*	93	33	96	38	*	*	*	*	*	*	94	36
08:00	*	*	*	*	66	42	61	37	*	*	*	*	*	*	64	40
09:00	*	*	*	*	25	25	32	31	*	*	*	*	*	*	28	28
10:00	*	*	*	*	26	17	24	23	*	*	*	*	*	*	25	20
11:00	*	*	*	*	20	9	23	12	*	*	*	*	*	*	22	10
Lane Day	0	0	0	0	1534	1105	1611	1212	0	0	0	0	0	0	1569	1161
AM Peak	-	-	-	-	10:00	07:00	10:00	10:00	-	-	-	-	-	-	10:00	10:00
Vol.	-	-	-	-	113	98	133	115	-	-	-	-	-	-	123	100
PM Peak	-	-	-	-	12:00	12:00	12:00	12:00	-	-	-	-	-	-	12:00	12:00
Vol.	-	-	-	-	129	90	129	101	-	-	-	-	-	-	129	96

Comb. Total	0	0	2639	2823	0	0	0	2730
ADT	ADT 2,731	AADT 2,731						

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

NB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/09/15	0	4	0	0	1	0	0	0	0	0	0	0	0	5
01:00	0	6	0	0	1	0	0	0	0	0	0	0	0	7
02:00	0	15	4	0	0	0	0	0	0	0	0	0	0	19
03:00	1	6	3	0	1	0	0	0	0	0	0	0	0	11
04:00	0	5	3	1	1	0	0	0	0	0	0	0	0	10
05:00	1	16	4	1	4	0	0	0	0	0	0	0	0	26
06:00	1	41	9	1	5	0	0	0	0	0	0	0	0	57
07:00	3	68	25	0	4	0	0	0	0	0	0	0	0	100
08:00	3	43	26	1	10	3	0	3	0	0	0	0	0	89
09:00	3	61	15	2	11	1	0	2	0	0	0	0	0	95
10:00	0	63	26	3	18	2	0	1	0	0	0	0	0	113
11:00	1	62	30	2	6	1	0	1	0	0	0	0	0	103
12 PM	3	93	17	1	12	3	0	0	0	0	0	0	0	129
13:00	0	69	24	2	11	0	0	0	0	0	0	0	0	106
14:00	0	48	20	0	6	0	0	0	0	0	0	0	0	74
15:00	2	53	27	3	3	2	0	1	0	0	0	0	0	91
16:00	2	61	11	1	4	1	0	0	0	0	0	0	0	80
17:00	3	98	11	1	4	1	0	0	0	0	0	0	0	118
18:00	3	60	6	0	2	0	0	0	0	0	0	0	0	71
19:00	5	80	7	0	1	0	0	0	0	0	0	0	0	93
20:00	3	56	3	0	3	1	0	0	0	0	0	0	0	66
21:00	1	23	1	0	0	0	0	0	0	0	0	0	0	25
22:00	0	25	0	0	1	0	0	0	0	0	0	0	0	26
23:00	1	17	1	0	1	0	0	0	0	0	0	0	0	20
Day Total	36	1073	273	19	110	15	0	8	0	0	0	0	0	1534
Percent	2.3%	69.9%	17.8%	1.2%	7.2%	1.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	11:00	10:00	10:00	08:00		08:00						10:00
Vol.	3	68	30	3	18	3		3						113
PM Peak	19:00	17:00	15:00	15:00	12:00	12:00		15:00						12:00
Vol.	5	98	27	3	12	3		1						129

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

NB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/10/15	0	11	4	0	0	0	0	0	0	0	0	0	0	15
01:00	0	8	1	0	1	0	0	0	0	0	0	0	0	10
02:00	0	13	4	0	1	0	0	0	0	0	0	0	0	18
03:00	1	5	3	1	1	0	0	0	0	0	0	0	0	11
04:00	0	4	3	0	0	0	0	0	0	0	0	0	0	7
05:00	0	14	7	0	5	0	0	0	0	0	0	0	0	26
06:00	2	32	10	0	4	0	0	0	0	0	0	0	0	48
07:00	2	74	21	2	4	1	0	0	0	0	0	0	0	104
08:00	2	56	17	0	6	1	0	3	0	0	0	0	0	85
09:00	1	72	25	1	6	2	0	3	0	0	0	0	0	110
10:00	3	67	33	3	20	4	0	3	0	0	0	0	0	133
11:00	1	55	16	2	13	1	0	3	0	0	0	0	0	91
12 PM	2	86	29	1	10	1	0	0	0	0	0	0	0	129
13:00	0	76	30	0	7	2	0	0	0	0	0	0	0	115
14:00	3	53	15	0	12	1	0	1	0	0	0	0	0	85
15:00	3	82	23	5	2	1	0	1	0	0	0	0	0	117
16:00	1	58	13	2	10	0	0	1	0	0	0	0	0	85
17:00	3	85	4	0	4	0	0	0	0	0	0	0	0	96
18:00	1	79	7	1	1	1	0	0	0	0	0	0	0	90
19:00	1	88	5	0	2	0	0	0	0	0	0	0	0	96
20:00	0	56	3	0	2	0	0	0	0	0	0	0	0	61
21:00	0	27	5	0	0	0	0	0	0	0	0	0	0	32
22:00	0	20	3	0	1	0	0	0	0	0	0	0	0	24
23:00	0	21	1	0	1	0	0	0	0	0	0	0	0	23
Day Total	26	1142	282	18	113	15	0	15	0	0	0	0	0	1611
Percent	1.6%	70.9%	17.5%	1.1%	7.0%	0.9%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	10:00	10:00	10:00	10:00		08:00						10:00
Vol.	3	74	33	3	20	4		3						133
PM Peak	14:00	19:00	13:00	15:00	14:00	13:00		14:00						12:00
Vol.	3	88	30	5	12	2		1						129
Grand Total	62	2215	555	37	223	30	0	23	0	0	0	0	0	3145
Percent	2.0%	70.4%	17.6%	1.2%	7.1%	1.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

SB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/09/15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
02:00	0	4	0	0	2	0	0	0	0	0	0	0	0	6
03:00	0	1	4	0	9	1	0	0	0	0	0	0	0	15
04:00	1	6	1	0	2	0	0	0	0	0	0	0	0	10
05:00	0	8	1	1	1	0	0	0	0	0	0	0	0	11
06:00	0	27	2	1	5	1	0	0	0	0	0	0	0	36
07:00	0	71	15	1	10	0	0	1	0	0	0	0	0	98
08:00	1	66	16	1	5	0	0	0	0	0	0	0	0	89
09:00	3	44	14	3	9	0	0	0	0	0	0	0	0	73
10:00	1	49	27	3	4	1	0	0	0	0	0	0	0	85
11:00	0	53	23	1	6	1	0	1	0	0	0	0	0	85
12 PM	0	69	18	1	2	0	0	0	0	0	0	0	0	90
13:00	2	54	15	3	12	0	0	0	0	0	0	0	0	86
14:00	3	48	18	1	6	0	0	1	0	0	0	0	0	77
15:00	3	37	11	0	3	0	0	0	0	0	0	0	0	54
16:00	0	38	13	1	2	0	0	0	0	0	0	0	0	54
17:00	0	57	5	0	1	0	0	0	0	0	0	0	0	63
18:00	1	37	5	0	0	0	0	0	0	0	0	0	0	43
19:00	0	25	8	0	0	0	0	0	0	0	0	0	0	33
20:00	1	34	5	0	2	0	0	0	0	0	0	0	0	42
21:00	1	21	3	0	0	0	0	0	0	0	0	0	0	25
22:00	0	14	3	0	0	0	0	0	0	0	0	0	0	17
23:00	0	7	1	0	1	0	0	0	0	0	0	0	0	9
Day Total	17	773	208	17	83	4	0	3	0	0	0	0	0	1105
Percent	1.5%	70.0%	18.8%	1.5%	7.5%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	07:00	10:00	09:00	07:00	03:00		07:00						07:00
Vol.	3	71	27	3	10	1		1						98
PM Peak	14:00	12:00	12:00	13:00	13:00			14:00						12:00
Vol.	3	69	18	3	12			1						90

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

SB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/10/15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
01:00	0	4	1	0	1	0	0	0	0	0	0	0	0	6
02:00	0	2	0	0	2	0	0	0	0	0	0	0	0	4
03:00	0	4	1	0	12	0	0	0	0	0	0	0	0	17
04:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
05:00	0	10	3	0	1	0	0	0	0	0	0	0	0	14
06:00	0	25	1	1	5	0	0	0	0	0	0	0	0	32
07:00	0	74	10	0	8	0	0	1	0	0	0	0	0	93
08:00	1	72	19	0	4	1	0	0	0	0	0	0	0	97
09:00	0	47	18	2	9	1	0	1	0	0	0	0	0	78
10:00	2	72	28	0	10	3	0	0	0	0	0	0	0	115
11:00	1	57	15	0	9	0	0	0	0	0	0	0	0	82
12 PM	0	70	17	2	11	1	0	0	0	0	0	0	0	101
13:00	1	48	21	1	6	1	0	0	0	0	0	0	0	78
14:00	2	56	25	0	3	1	0	0	0	0	0	0	0	87
15:00	3	59	13	1	4	1	0	0	0	0	0	0	0	81
16:00	1	41	11	0	2	0	0	0	0	0	0	0	0	55
17:00	0	55	7	0	2	0	0	0	0	0	0	0	0	64
18:00	1	47	3	0	2	0	0	0	0	0	0	0	0	53
19:00	0	34	3	0	1	0	0	0	0	0	0	0	0	38
20:00	0	31	4	0	2	0	0	0	0	0	0	0	0	37
21:00	0	25	5	0	1	0	0	0	0	0	0	0	0	31
22:00	0	16	6	0	1	0	0	0	0	0	0	0	0	23
23:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
Day Total	12	873	213	7	96	9	0	2	0	0	0	0	0	1212
Percent	1.0%	72.0%	17.6%	0.6%	7.9%	0.7%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	10:00	09:00	03:00	10:00		07:00						10:00
Vol.	2	74	28	2	12	3		1						115
PM Peak	15:00	12:00	14:00	12:00	12:00	12:00								12:00
Vol.	3	70	25	2	11	1								101
Grand Total	29	1646	421	24	179	13	0	5	0	0	0	0	0	2317
Percent	1.3%	71.0%	18.2%	1.0%	7.7%	0.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

NB, SB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/09/15	0	5	0	0	1	0	0	0	0	0	0	0	0	6
01:00	0	8	0	0	2	0	0	0	0	0	0	0	0	10
02:00	0	19	4	0	2	0	0	0	0	0	0	0	0	25
03:00	1	7	7	0	10	1	0	0	0	0	0	0	0	26
04:00	1	11	4	1	3	0	0	0	0	0	0	0	0	20
05:00	1	24	5	2	5	0	0	0	0	0	0	0	0	37
06:00	1	68	11	2	10	1	0	0	0	0	0	0	0	93
07:00	3	139	40	1	14	0	0	1	0	0	0	0	0	198
08:00	4	109	42	2	15	3	0	3	0	0	0	0	0	178
09:00	6	105	29	5	20	1	0	2	0	0	0	0	0	168
10:00	1	112	53	6	22	3	0	1	0	0	0	0	0	198
11:00	1	115	53	3	12	2	0	2	0	0	0	0	0	188
12 PM	3	162	35	2	14	3	0	0	0	0	0	0	0	219
13:00	2	123	39	5	23	0	0	0	0	0	0	0	0	192
14:00	3	96	38	1	12	0	0	1	0	0	0	0	0	151
15:00	5	90	38	3	6	2	0	1	0	0	0	0	0	145
16:00	2	99	24	2	6	1	0	0	0	0	0	0	0	134
17:00	3	155	16	1	5	1	0	0	0	0	0	0	0	181
18:00	4	97	11	0	2	0	0	0	0	0	0	0	0	114
19:00	5	105	15	0	1	0	0	0	0	0	0	0	0	126
20:00	4	90	8	0	5	1	0	0	0	0	0	0	0	108
21:00	2	44	4	0	0	0	0	0	0	0	0	0	0	50
22:00	0	39	3	0	1	0	0	0	0	0	0	0	0	43
23:00	1	24	2	0	2	0	0	0	0	0	0	0	0	29
Day Total	53	1846	481	36	193	19	0	11	0	0	0	0	0	2639
Percent	2.0%	70.0%	18.2%	1.4%	7.3%	0.7%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	07:00	10:00	10:00	10:00	08:00		08:00						07:00
Vol.	6	139	53	6	22	3		3						198
PM Peak	15:00	12:00	13:00	13:00	13:00	12:00		14:00						12:00
Vol.	5	162	39	5	23	3		1						219

Accurate Counts
978-664-2565

Location : Fawcett Street
Location : South of 95 Fawcett Street
City/State: Cambridge, MA

15009CLS2

NB, SB

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/10/15	0	19	5	0	0	0	0	0	0	0	0	0	0	24
01:00	0	12	2	0	2	0	0	0	0	0	0	0	0	16
02:00	0	15	4	0	3	0	0	0	0	0	0	0	0	22
03:00	1	9	4	1	13	0	0	0	0	0	0	0	0	28
04:00	0	8	4	0	0	0	0	0	0	0	0	0	0	12
05:00	0	24	10	0	6	0	0	0	0	0	0	0	0	40
06:00	2	57	11	1	9	0	0	0	0	0	0	0	0	80
07:00	2	148	31	2	12	1	0	1	0	0	0	0	0	197
08:00	3	128	36	0	10	2	0	3	0	0	0	0	0	182
09:00	1	119	43	3	15	3	0	4	0	0	0	0	0	188
10:00	5	139	61	3	30	7	0	3	0	0	0	0	0	248
11:00	2	112	31	2	22	1	0	3	0	0	0	0	0	173
12 PM	2	156	46	3	21	2	0	0	0	0	0	0	0	230
13:00	1	124	51	1	13	3	0	0	0	0	0	0	0	193
14:00	5	109	40	0	15	2	0	1	0	0	0	0	0	172
15:00	6	141	36	6	6	2	0	1	0	0	0	0	0	198
16:00	2	99	24	2	12	0	0	1	0	0	0	0	0	140
17:00	3	140	11	0	6	0	0	0	0	0	0	0	0	160
18:00	2	126	10	1	3	1	0	0	0	0	0	0	0	143
19:00	1	122	8	0	3	0	0	0	0	0	0	0	0	134
20:00	0	87	7	0	4	0	0	0	0	0	0	0	0	98
21:00	0	52	10	0	1	0	0	0	0	0	0	0	0	63
22:00	0	36	9	0	2	0	0	0	0	0	0	0	0	47
23:00	0	33	1	0	1	0	0	0	0	0	0	0	0	35
Day Total	38	2015	495	25	209	24	0	17	0	0	0	0	0	2823
Percent	1.3%	71.4%	17.5%	0.9%	7.4%	0.9%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	07:00	10:00	09:00	10:00	10:00		09:00						10:00
Vol.	5	148	61	3	30	7		4						248
PM Peak	15:00	12:00	13:00	15:00	12:00	13:00		14:00						12:00
Vol.	6	156	51	6	21	3		1						230
Grand Total	91	3861	976	61	402	43	0	28	0	0	0	0	0	5462
Percent	1.7%	70.7%	17.9%	1.1%	7.4%	0.8%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

Accurate Counts

978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 NB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/09/15	0	0	0	0	0	1	1	1	0	1	1	0	0	0	5	30	32
01:00	0	0	0	0	0	0	2	1	1	0	1	1	1	0	7	35	37
02:00	0	0	0	2	0	2	1	3	1	2	3	3	1	1	19	34	36
03:00	0	0	0	1	0	1	3	2	2	1	1	0	0	0	11	28	31
04:00	0	0	0	0	0	1	1	0	2	5	0	0	0	1	10	29	29
05:00	0	1	0	0	0	0	0	0	7	7	5	4	0	2	26	33	35
06:00	0	0	0	2	0	0	6	6	10	17	7	6	2	1	57	32	35
07:00	0	0	0	0	2	2	7	14	20	33	7	8	7	0	100	33	36
08:00	0	0	1	0	1	5	12	22	30	10	4	4	0	0	89	28	32
09:00	0	1	3	2	3	5	16	24	23	11	5	1	0	1	95	27	30
10:00	0	0	0	3	4	10	16	27	28	16	4	4	1	0	113	28	32
11:00	0	0	0	2	2	9	7	21	30	24	6	2	0	0	103	29	31
12 PM	0	0	0	5	0	11	22	26	35	19	8	2	1	0	129	28	31
13:00	0	0	0	1	3	5	15	17	30	21	10	4	0	0	106	29	32
14:00	0	0	1	2	2	4	7	16	21	13	4	3	1	0	74	29	33
15:00	0	0	1	0	1	0	15	22	26	17	5	3	0	1	91	29	32
16:00	0	0	0	0	1	5	14	16	16	15	9	2	1	1	80	30	32
17:00	0	0	0	1	2	7	17	35	26	14	11	4	0	1	118	29	32
18:00	0	0	0	0	0	12	9	25	11	8	2	3	1	0	71	28	33
19:00	0	0	4	4	6	19	20	23	10	5	1	1	0	0	93	24	28
20:00	0	0	0	1	1	10	23	12	10	5	2	2	0	0	66	26	31
21:00	0	0	0	0	2	7	5	7	2	2	0	0	0	0	25	24	28
22:00	0	0	0	0	3	3	9	8	2	1	0	0	0	0	26	23	26
23:00	0	0	0	1	2	0	7	7	2	1	0	0	0	0	20	24	27
Total	0	2	10	27	35	119	235	335	345	248	96	57	16	9	1534		
Percent	0.0%	0.1%	0.7%	1.8%	2.3%	7.8%	15.3%	21.8%	22.5%	16.2%	6.3%	3.7%	1.0%	0.6%			
AM Peak		05:00	09:00	10:00	10:00	10:00	09:00	10:00	08:00	07:00	06:00	07:00	07:00	05:00	10:00		
Vol.		1	3	3	4	10	16	27	30	33	7	8	7	2	113		
PM Peak			19:00	12:00	19:00	19:00	20:00	17:00	12:00	13:00	17:00	13:00	12:00	15:00	12:00		
Vol.			4	5	6	19	23	35	35	21	11	4	1	1	129		

Accurate Counts

978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 NB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/10/15	0	0	0	0	2	2	4	3	2	0	0	1	1	0	15	26	36
01:00	0	0	0	0	1	1	1	2	2	0	2	1	0	0	10	32	34
02:00	0	0	0	1	0	0	0	2	5	1	4	3	2	0	18	35	37
03:00	0	0	0	0	0	2	1	2	1	3	1	1	0	0	11	31	34
04:00	0	0	0	0	0	1	1	1	0	0	2	1	0	1	7	33	35
05:00	0	0	0	0	0	2	0	0	5	7	6	2	1	3	26	32	35
06:00	0	0	0	0	0	1	0	5	11	12	9	5	1	4	48	32	35
07:00	0	0	0	0	3	7	7	25	17	30	11	3	1	0	104	29	32
08:00	0	0	0	0	1	7	14	17	15	17	9	4	0	1	85	30	32
09:00	0	1	2	1	3	8	18	29	20	14	7	7	0	0	110	29	33
10:00	0	0	3	3	6	25	28	35	8	16	8	1	0	0	133	27	30
11:00	0	0	0	2	4	13	19	25	19	7	2	0	0	0	91	26	28
12 PM	0	0	1	2	6	14	24	29	28	15	9	1	0	0	129	28	31
13:00	0	1	0	4	3	12	28	25	26	14	2	0	0	0	115	26	29
14:00	0	0	0	2	4	12	25	17	8	12	1	1	1	2	85	27	29
15:00	0	0	2	1	4	12	24	30	22	14	7	0	0	1	117	27	30
16:00	0	0	0	0	2	9	27	18	17	5	5	1	1	0	85	26	31
17:00	0	0	0	3	5	13	28	26	6	10	4	1	0	0	96	27	30
18:00	0	0	0	2	6	13	24	27	11	4	3	0	0	0	90	25	28
19:00	0	0	1	2	9	10	29	22	11	6	3	2	1	0	96	26	31
20:00	0	0	0	3	1	9	23	11	8	3	1	2	0	0	61	25	29
21:00	0	0	0	1	3	9	12	5	2	0	0	0	0	0	32	22	24
22:00	0	0	0	0	1	8	7	8	0	0	0	0	0	0	24	22	23
23:00	0	0	0	1	4	4	5	6	2	0	1	0	0	0	23	23	26
Total	0	2	9	28	68	194	349	370	246	190	97	37	9	12	1611		
Percent	0.0%	0.1%	0.6%	1.7%	4.2%	12.0%	21.7%	23.0%	15.3%	11.8%	6.0%	2.3%	0.6%	0.7%			
AM Peak		09:00	10:00	10:00	10:00	10:00	10:00	10:00	09:00	07:00	07:00	09:00	02:00	06:00	10:00		
Vol.		1	3	3	6	25	28	35	20	30	11	7	2	4	133		
PM Peak		13:00	15:00	13:00	19:00	12:00	19:00	15:00	12:00	12:00	12:00	19:00	14:00	14:00	12:00		
Vol.		1	2	4	9	14	29	30	28	15	9	2	1	2	129		
Grand Total	0	4	19	55	103	313	584	705	591	438	193	94	25	21	3145		
Percent	0.0%	0.1%	0.6%	1.7%	3.3%	10.0%	18.6%	22.4%	18.8%	13.9%	6.1%	3.0%	0.8%	0.7%			

15th Percentile : 17 MPH
 50th Percentile : 23 MPH
 85th Percentile : 28 MPH
 95th Percentile : 32 MPH

Statistics
 10 MPH Pace Speed : 19-28 MPH
 Number in Pace : 2026
 Percent in Pace : 64.4%
 Number of Vehicles > 25 MPH : 1165
 Percent of Vehicles > 25 MPH : 37.0%
 Mean Speed(Average) : 24 MPH

Accurate Counts

978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 SB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/09/15	3	6	9	12	15	18	21	24	27	30	33	36	39	999	1	26	26
01:00	0	0	1	0	0	0	0	0	1	1	0	0	0	0	3	28	29
02:00	0	0	0	1	0	1	1	1	0	1	1	0	0	0	6	30	32
03:00	0	0	0	0	1	1	0	3	3	5	2	0	0	0	15	29	31
04:00	0	0	0	0	0	1	1	1	4	2	0	1	0	0	10	29	34
05:00	0	0	0	0	0	1	1	4	2	0	3	0	0	0	11	31	32
06:00	0	0	0	1	0	0	14	10	6	1	2	1	1	0	36	26	33
07:00	0	0	0	0	3	9	27	32	12	6	7	1	1	0	98	27	31
08:00	0	0	0	0	1	9	22	34	12	9	1	1	0	0	89	26	29
09:00	0	0	1	0	2	9	16	15	17	7	5	0	0	1	73	27	30
10:00	0	0	1	1	3	7	16	20	14	10	9	4	0	0	85	30	32
11:00	0	1	0	0	1	3	10	19	24	14	11	2	0	0	85	30	32
12 PM	0	0	2	0	0	6	12	22	17	18	10	2	1	0	90	29	32
13:00	0	0	1	0	0	1	12	10	21	21	11	8	0	1	86	31	34
14:00	0	0	0	2	2	8	12	9	18	13	8	2	2	1	77	30	33
15:00	0	0	0	1	0	1	10	9	5	14	8	5	1	0	54	32	34
16:00	0	0	0	0	0	5	3	9	8	17	4	5	2	1	54	32	35
17:00	0	0	0	2	1	5	8	15	11	11	7	2	0	1	63	29	32
18:00	0	0	0	0	1	1	7	9	10	7	3	4	1	0	43	31	35
19:00	0	0	1	1	3	3	8	7	2	4	1	2	1	0	33	29	35
20:00	0	0	0	0	0	3	8	7	9	9	5	1	0	0	42	29	32
21:00	0	0	0	0	1	4	3	3	7	2	3	2	0	0	25	31	34
22:00	0	0	0	0	1	6	0	5	3	0	2	0	0	0	17	26	31
23:00	0	0	0	0	0	0	3	3	1	2	0	0	0	0	9	27	29
Total	0	1	7	9	20	84	194	247	208	174	103	43	10	5	1105		
Percent	0.0%	0.1%	0.6%	0.8%	1.8%	7.6%	17.6%	22.4%	18.8%	15.7%	9.3%	3.9%	0.9%	0.5%			
AM Peak		11:00	01:00	02:00	07:00	07:00	07:00	08:00	11:00	11:00	11:00	10:00	06:00	09:00	07:00		
Vol.		1	1	1	3	9	27	34	24	14	11	4	1	1	98		
PM Peak			12:00	14:00	19:00	14:00	12:00	12:00	13:00	13:00	13:00	13:00	14:00	13:00	12:00		
Vol.			2	2	3	8	12	22	21	21	11	8	2	1	90		

Accurate Counts 978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 SB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/10/15	0	0	0	1	0	2	2	3	1	0	0	0	0	0	9	23	25
01:00	0	0	0	0	0	0	2	2	1	0	0	1	0	0	6	33	35
02:00	0	1	0	0	0	0	1	0	0	0	0	2	0	0	4	35	35
03:00	0	0	0	0	1	1	0	1	1	6	2	3	2	0	17	35	37
04:00	0	0	0	0	0	0	0	1	1	0	1	2	0	0	5	34	35
05:00	0	0	0	0	0	2	3	4	0	0	2	3	0	0	14	33	35
06:00	0	0	0	0	0	2	8	10	7	2	1	2	0	0	32	27	33
07:00	0	0	0	1	1	5	22	32	13	16	3	0	0	0	93	27	29
08:00	0	0	0	0	2	9	21	31	15	13	2	3	1	0	97	28	31
09:00	0	0	1	2	3	5	16	16	14	10	9	1	1	0	78	29	32
10:00	0	1	1	1	5	12	20	31	21	16	5	0	2	0	115	28	30
11:00	0	0	1	0	2	11	13	21	18	9	6	1	0	0	82	28	31
12 PM	0	0	0	1	6	4	22	26	18	16	6	2	0	0	101	28	31
13:00	0	0	1	4	5	9	12	13	17	13	2	1	1	0	78	28	30
14:00	0	0	1	2	2	8	5	25	17	16	7	4	0	0	87	29	32
15:00	0	0	0	0	5	11	16	18	19	10	2	0	0	0	81	26	29
16:00	0	0	0	0	1	2	6	16	13	5	5	4	2	1	55	31	35
17:00	0	0	0	1	3	6	11	21	10	6	4	2	0	0	64	28	32
18:00	0	0	0	1	2	7	13	16	3	7	3	0	1	0	53	28	31
19:00	0	0	0	1	1	3	9	13	5	5	1	0	0	0	38	27	29
20:00	0	0	0	1	2	2	9	8	6	5	2	1	1	0	37	29	33
21:00	0	0	0	1	1	1	9	3	10	4	1	0	1	0	31	28	31
22:00	0	0	0	0	0	2	6	3	4	2	2	3	1	0	23	33	35
23:00	0	0	1	0	1	2	1	1	4	1	1	0	0	0	12	27	31
Total	0	2	6	17	43	106	227	315	218	162	67	35	13	1	1212		
Percent	0.0%	0.2%	0.5%	1.4%	3.5%	8.7%	18.7%	26.0%	18.0%	13.4%	5.5%	2.9%	1.1%	0.1%			
AM Peak		02:00	09:00	09:00	10:00	10:00	07:00	07:00	10:00	07:00	09:00	03:00	03:00		10:00		
Vol.		1	1	2	5	12	22	32	21	16	9	3	2		115		
PM Peak			13:00	13:00	12:00	15:00	12:00	12:00	15:00	12:00	14:00	14:00	16:00	16:00	12:00		
Vol.			1	4	6	11	22	26	19	16	7	4	2	1	101		
Grand Total	0	3	13	26	63	190	421	562	426	336	170	78	23	6	2317		
Percent	0.0%	0.1%	0.6%	1.1%	2.7%	8.2%	18.2%	24.3%	18.4%	14.5%	7.3%	3.4%	1.0%	0.3%			

15th Percentile : 18 MPH
 50th Percentile : 23 MPH
 85th Percentile : 29 MPH
 95th Percentile : 32 MPH

Statistics
 10 MPH Pace Speed : 19-28 MPH
 Number in Pace : 1521
 Percent in Pace : 65.6%
 Number of Vehicles > 25 MPH : 897
 Percent of Vehicles > 25 MPH : 38.7%
 Mean Speed(Average) : 24 MPH

Accurate Counts 978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 NB, SB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/09/15	0	0	0	0	0	1	1	1	1	1	1	0	0	0	6	30	32
01:00	0	0	1	0	0	0	2	1	2	1	1	1	1	0	10	34	37
02:00	0	0	0	3	0	3	2	4	1	3	4	3	1	1	25	33	35
03:00	0	0	0	1	1	2	3	5	5	6	3	0	0	0	26	29	31
04:00	0	0	0	0	0	2	2	1	6	7	0	1	0	1	20	29	33
05:00	0	1	0	0	0	1	1	4	9	7	8	4	0	2	37	32	34
06:00	0	0	0	3	0	0	20	16	16	18	9	7	3	1	93	31	35
07:00	0	0	0	0	5	11	34	46	32	39	14	9	8	0	198	30	35
08:00	0	0	1	0	2	14	34	56	42	19	5	5	0	0	178	27	30
09:00	0	1	4	2	5	14	32	39	40	18	10	1	0	2	168	27	30
10:00	0	0	1	4	7	17	32	47	42	26	13	8	1	0	198	29	32
11:00	0	1	0	2	3	12	17	40	54	38	17	4	0	0	188	29	32
12 PM	0	0	2	5	0	17	34	48	52	37	18	4	2	0	219	29	32
13:00	0	0	1	1	3	6	27	27	51	42	21	12	0	1	192	30	33
14:00	0	0	1	4	4	12	19	25	39	26	12	5	3	1	151	29	33
15:00	0	0	1	1	1	1	25	31	31	31	13	8	1	1	145	30	33
16:00	0	0	0	0	1	10	17	25	24	32	13	7	3	2	134	30	34
17:00	0	0	0	3	3	12	25	50	37	25	18	6	0	2	181	29	32
18:00	0	0	0	0	1	13	16	34	21	15	5	7	2	0	114	29	34
19:00	0	0	5	5	9	22	28	30	12	9	2	3	1	0	126	26	29
20:00	0	0	0	1	1	13	31	19	19	14	7	3	0	0	108	28	31
21:00	0	0	0	0	3	11	8	10	9	4	3	2	0	0	50	28	32
22:00	0	0	0	0	4	9	9	13	5	1	2	0	0	0	43	24	29
23:00	0	0	0	1	2	0	10	10	3	3	0	0	0	0	29	25	28
Total	0	3	17	36	55	203	429	582	553	422	199	100	26	14	2639		
Percent	0.0%	0.1%	0.6%	1.4%	2.1%	7.7%	16.3%	22.1%	21.0%	16.0%	7.5%	3.8%	1.0%	0.5%			
AM Peak		05:00	09:00	10:00	10:00	10:00	07:00	08:00	11:00	07:00	11:00	07:00	07:00	05:00	07:00		
Vol.		1	4	4	7	17	34	56	54	39	17	9	8	2	198		
PM Peak			19:00	12:00	19:00	19:00	12:00	17:00	12:00	13:00	13:00	13:00	14:00	16:00	12:00		
Vol.			5	5	9	22	34	50	52	42	21	12	3	2	219		

Accurate Counts 978-664-2565

Location : Fawcett Street
 Location : South of 95 Fawcett Street
 City/State: Cambridge, MA
 NB, SB

15009SPD2

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/10/15	0	0	0	1	2	4	6	6	3	0	0	1	1	0	24	25	35
01:00	0	0	0	0	1	1	3	4	3	0	2	2	0	0	16	32	34
02:00	0	1	0	1	0	0	1	2	5	1	4	5	2	0	22	35	37
03:00	0	0	0	0	1	3	1	3	2	9	3	4	2	0	28	34	36
04:00	0	0	0	0	0	1	1	2	1	0	3	3	0	1	12	34	35
05:00	0	0	0	0	0	4	3	4	5	7	8	5	1	3	40	33	35
06:00	0	0	0	0	0	3	8	15	18	14	10	7	1	4	80	31	34
07:00	0	0	0	1	4	12	29	57	30	46	14	3	1	0	197	29	31
08:00	0	0	0	0	3	16	35	48	30	30	11	7	1	1	182	29	32
09:00	0	1	3	3	6	13	34	45	34	24	16	8	1	0	188	29	32
10:00	0	1	4	4	11	37	48	66	29	32	13	1	2	0	248	28	30
11:00	0	0	1	2	6	24	32	46	37	16	8	1	0	0	173	26	30
12 PM	0	0	1	3	12	18	46	55	46	31	15	3	0	0	230	28	31
13:00	0	1	1	8	8	21	40	38	43	27	4	1	1	0	193	27	29
14:00	0	0	1	4	6	20	30	42	25	28	8	5	1	2	172	28	32
15:00	0	0	2	1	9	23	40	48	41	24	9	0	0	1	198	27	29
16:00	0	0	0	0	3	11	33	34	30	10	10	5	3	1	140	29	33
17:00	0	0	0	4	8	19	39	47	16	16	8	3	0	0	160	27	31
18:00	0	0	0	3	8	20	37	43	14	11	6	0	1	0	143	26	29
19:00	0	0	1	3	10	13	38	35	16	11	4	2	1	0	134	26	30
20:00	0	0	0	4	3	11	32	19	14	8	3	3	1	0	98	27	32
21:00	0	0	0	2	4	10	21	8	12	4	1	0	1	0	63	26	29
22:00	0	0	0	0	1	10	13	11	4	2	2	3	1	0	47	28	34
23:00	0	0	1	1	5	6	6	7	6	1	2	0	0	0	35	25	30
Total	0	4	15	45	111	300	576	685	464	352	164	72	22	13	2823		
Percent	0.0%	0.1%	0.5%	1.6%	3.9%	10.6%	20.4%	24.3%	16.4%	12.5%	5.8%	2.6%	0.8%	0.5%			
AM Peak		02:00	10:00	10:00	10:00	10:00	10:00	10:00	11:00	07:00	09:00	09:00	02:00	06:00	10:00		
Vol.		1	4	4	11	37	48	66	37	46	16	8	2	4	248		
PM Peak		13:00	15:00	13:00	12:00	15:00	12:00	12:00	12:00	12:00	12:00	14:00	16:00	14:00	12:00		
Vol.		1	2	8	12	23	46	55	46	31	15	5	3	2	230		
Grand Total	0	7	32	81	166	503	1005	1267	1017	774	363	172	48	27	5462		
Percent	0.0%	0.1%	0.6%	1.5%	3.0%	9.2%	18.4%	23.2%	18.6%	14.2%	6.6%	3.1%	0.9%	0.5%			

15th Percentile : 18 MPH
 50th Percentile : 23 MPH
 85th Percentile : 29 MPH
 95th Percentile : 32 MPH

Statistics
 10 MPH Pace Speed : 19-28 MPH
 Number in Pace : 3547
 Percent in Pace : 64.9%
 Number of Vehicles > 25 MPH : 2062
 Percent of Vehicles > 25 MPH : 37.8%
 Mean Speed(Average) : 24 MPH

Accurate Counts

978-664-2565

Location : Concord Avenue EB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLEB1

Start Time	09-Sep-15 Wed	EB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		18	198		
12:15		16	217		
12:30		9	189		
12:45		8	177	51	781
01:00		14	158		
01:15		7	154		
01:30		5	167		
01:45		5	176	31	655
02:00		7	163		
02:15		7	183		
02:30		2	152		
02:45		7	150	23	648
03:00		4	166		
03:15		7	201		
03:30		7	177		
03:45		4	175	22	719
04:00		6	184		
04:15		10	183		
04:30		13	159		
04:45		9	193	38	719
05:00		15	167		
05:15		26	161		
05:30		29	146		
05:45		35	130	105	604
06:00		56	151		
06:15		55	175		
06:30		83	175		
06:45		102	189	296	690
07:00		147	165		
07:15		172	127		
07:30		147	111		
07:45		147	90	613	493
08:00		133	114		
08:15		103	118		
08:30		165	90		
08:45		193	86	594	408
09:00		181	63		
09:15		151	70		
09:30		163	70		
09:45		172	49	667	252
10:00		151	43		
10:15		160	38		
10:30		180	32		
10:45		164	40	655	153
11:00		151	25		
11:15		180	35		
11:30		176	33		
11:45		190	25	697	118
Total		3792	6240		
Percent		37.8%	62.2%		

Accurate Counts

978-664-2565

Location : Concord Avenue EB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLEB1

Start Time	10-Sep-15 Thu	EB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		15	199		
12:15		17	200		
12:30		14	192		
12:45		10	183	56	774
01:00		9	151		
01:15		10	149		
01:30		13	174		
01:45		3	163	35	637
02:00		4	173		
02:15		4	175		
02:30		1	170		
02:45		2	165	11	683
03:00		8	176		
03:15		9	183		
03:30		12	215		
03:45		7	202	36	776
04:00		6	188		
04:15		4	211		
04:30		10	174		
04:45		8	168	28	741
05:00		18	198		
05:15		26	164		
05:30		26	180		
05:45		42	199	112	741
06:00		52	156		
06:15		58	195		
06:30		82	177		
06:45		114	155	306	683
07:00		128	154		
07:15		163	149		
07:30		155	110		
07:45		162	107	608	520
08:00		218	98		
08:15		209	93		
08:30		150	71		
08:45		162	76	739	338
09:00		145	58		
09:15		135	79		
09:30		169	54		
09:45		169	44	618	235
10:00		169	47		
10:15		167	38		
10:30		184	27		
10:45		181	33	701	145
11:00		187	34		
11:15		168	28		
11:30		175	30		
11:45		180	34	710	126
Total		3960	6399		
Percent		38.2%	61.8%		
Grand Total		7752	12639		
Percent		38.0%	62.0%		

ADT

ADT 10,196

AADT 10,196

Accurate Counts

978-664-2565

Location : Concord Avenue EB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLEB1

Start Time	Mon 07-Sep-15	Tue 08-Sep-15	Wed 09-Sep-15	Thu 10-Sep-15	Fri 11-Sep-15	Average Day	Sat 12-Sep-15	Sun 13-Sep-15	Week Average				
12:00 AM	*	*	51	56	*	54	*	*	54				
01:00	*	*	31	35	*	33	*	*	33				
02:00	*	*	23	11	*	17	*	*	17				
03:00	*	*	22	36	*	29	*	*	29				
04:00	*	*	38	28	*	33	*	*	33				
05:00	*	*	105	112	*	108	*	*	108				
06:00	*	*	296	306	*	301	*	*	301				
07:00	*	*	613	608	*	610	*	*	610				
08:00	*	*	594	739	*	666	*	*	666				
09:00	*	*	667	618	*	642	*	*	642				
10:00	*	*	655	701	*	678	*	*	678				
11:00	*	*	697	710	*	704	*	*	704				
12:00 PM	*	*	781	774	*	778	*	*	778				
01:00	*	*	655	637	*	646	*	*	646				
02:00	*	*	648	683	*	666	*	*	666				
03:00	*	*	719	776	*	748	*	*	748				
04:00	*	*	719	741	*	730	*	*	730				
05:00	*	*	604	741	*	672	*	*	672				
06:00	*	*	690	683	*	686	*	*	686				
07:00	*	*	493	520	*	506	*	*	506				
08:00	*	*	408	338	*	373	*	*	373				
09:00	*	*	252	235	*	244	*	*	244				
10:00	*	*	153	145	*	149	*	*	149				
11:00	*	*	118	126	*	122	*	*	122				
Day Total	0	0	10032	10359	0	10195	0	0	10195				
% Avg. WkDay	0.0%	0.0%	98.4%	101.6%	0.0%								
% Avg. Week	0.0%	0.0%	98.4%	101.6%	0.0%	100.0%	0.0%	0.0%					
AM Peak	-	-	11:00	08:00	-	-	11:00	-	-	-	11:00	-	-
Vol.	-	-	697	739	-	-	704	-	-	-	704	-	-
PM Peak	-	-	12:00	15:00	-	-	12:00	-	-	-	12:00	-	-
Vol.	-	-	781	776	-	-	778	-	-	-	778	-	-
Grand Total	0	0	10032	10359	0	10195	0	0	10195				
ADT		ADT 10,196		AADT 10,196									

Accurate Counts
978-664-2565

Location : Concord Avenue EB
Location : East of Fawcett Street
City/State: Cambridge, MA

15009CLSEB1

Eastbound

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/09/15	0	42	6	2	1	0	0	0	0	0	0	0	0	51
01:00	0	25	2	1	3	0	0	0	0	0	0	0	0	31
02:00	0	20	1	0	2	0	0	0	0	0	0	0	0	23
03:00	0	10	2	0	9	1	0	0	0	0	0	0	0	22
04:00	1	29	5	1	2	0	0	0	0	0	0	0	0	38
05:00	2	83	12	2	3	3	0	0	0	0	0	0	0	105
06:00	9	223	37	10	10	6	0	0	0	0	0	0	1	296
07:00	19	473	83	7	21	5	0	5	0	0	0	0	0	613
08:00	34	491	41	7	17	1	1	2	0	0	0	0	0	594
09:00	34	522	74	5	19	11	0	2	0	0	0	0	0	667
10:00	11	507	88	13	19	11	1	5	0	0	0	0	0	655
11:00	11	536	96	12	28	5	1	7	0	0	1	0	0	697
12 PM	15	620	97	14	18	5	0	10	1	1	0	0	0	781
13:00	7	523	81	12	20	5	1	5	0	0	1	0	0	655
14:00	11	508	79	7	26	4	1	11	0	0	0	0	1	648
15:00	7	596	84	8	15	1	1	6	1	0	0	0	0	719
16:00	10	620	56	6	12	5	0	9	0	0	1	0	0	719
17:00	20	530	40	3	5	2	0	4	0	0	0	0	0	604
18:00	11	618	38	7	8	1	1	5	0	1	0	0	0	690
19:00	5	443	30	5	4	1	0	5	0	0	0	0	0	493
20:00	5	365	27	2	4	1	1	3	0	0	0	0	0	408
21:00	2	237	10	2	1	0	0	0	0	0	0	0	0	252
22:00	0	138	11	2	2	0	0	0	0	0	0	0	0	153
23:00	0	101	13	3	1	0	0	0	0	0	0	0	0	118
Day Total	214	8260	1013	131	250	68	8	79	2	2	3	0	2	10032
Percent	2.1%	82.3%	10.1%	1.3%	2.5%	0.7%	0.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	11:00	10:00	11:00	09:00	08:00	11:00			11:00		06:00	11:00
Vol.	34	536	96	13	28	11	1	7			1		1	697
PM Peak	17:00	12:00	12:00	12:00	14:00	12:00	13:00	14:00	12:00	12:00	13:00		14:00	12:00
Vol.	20	620	97	14	26	5	1	11	1	1	1		1	781

Accurate Counts
978-664-2565

Location : Concord Avenue EB
Location : East of Fawcett Street
City/State: Cambridge, MA

15009CLSEB1

Eastbound

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/10/15	1	45	6	2	1	1	0	0	0	0	0	0	0	56
01:00	0	27	3	2	3	0	0	0	0	0	0	0	0	35
02:00	0	8	1	0	2	0	0	0	0	0	0	0	0	11
03:00	0	20	3	0	13	0	0	0	0	0	0	0	0	36
04:00	0	22	3	1	0	2	0	0	0	0	0	0	0	28
05:00	2	88	10	3	6	3	0	0	0	0	0	0	0	112
06:00	8	231	32	5	19	6	0	5	0	0	0	0	0	306
07:00	16	480	71	8	23	8	1	1	0	0	0	0	0	608
08:00	33	621	54	7	13	4	1	5	0	0	0	1	0	739
09:00	25	499	58	5	25	2	0	3	1	0	0	0	0	618
10:00	14	531	101	10	27	11	1	6	0	0	0	0	0	701
11:00	19	529	106	12	31	7	0	6	0	0	0	0	0	710
12 PM	11	607	96	11	27	11	0	9	1	0	1	0	0	774
13:00	11	497	87	10	23	5	0	3	0	0	0	1	0	637
14:00	8	540	89	15	18	4	0	9	0	0	0	0	0	683
15:00	16	657	69	8	12	6	0	8	0	0	0	0	0	776
16:00	9	640	60	7	16	2	1	3	2	0	0	0	1	741
17:00	9	674	33	8	6	1	2	8	0	0	0	0	0	741
18:00	4	636	25	9	5	0	0	3	0	0	1	0	0	683
19:00	8	457	33	8	7	1	0	6	0	0	0	0	0	520
20:00	0	305	24	3	3	1	0	2	0	0	0	0	0	338
21:00	0	211	13	2	3	1	0	4	1	0	0	0	0	235
22:00	1	126	11	2	2	0	1	1	1	0	0	0	0	145
23:00	0	117	5	3	1	0	0	0	0	0	0	0	0	126
Day Total	195	8568	993	141	286	76	7	82	6	0	2	2	1	10359
Percent	1.9%	82.7%	9.6%	1.4%	2.8%	0.7%	0.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	11:00	11:00	10:00	07:00	10:00	09:00			08:00		08:00
Vol.	33	621	106	12	31	11	1	6	1			1		739
PM Peak	15:00	17:00	12:00	14:00	12:00	12:00	17:00	12:00	16:00		12:00	13:00	16:00	15:00
Vol.	16	674	96	15	27	11	2	9	2		1	1	1	776
Grand Total	409	16828	2006	272	536	144	15	161	8	2	5	2	3	20391
Percent	2.0%	82.5%	9.8%	1.3%	2.6%	0.7%	0.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	

Accurate Counts

978-664-2565

Location : Concord Avenue EB
 Location : East of Fawcett Street
 City/State: Cambridge, MA
 Eastbound

15009SPDEB1

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/09/15	0	0	0	0	0	1	0	0	6	5	13	14	7	5	51	36	38
01:00	0	0	0	0	0	1	0	1	3	9	7	2	4	4	31	35	37
02:00	0	0	0	0	0	0	2	2	6	4	4	2	2	1	23	34	37
03:00	0	0	0	0	0	2	5	3	5	2	2	2	1	0	22	32	35
04:00	0	0	0	0	0	1	4	6	3	5	7	5	4	3	38	35	37
05:00	0	0	0	0	1	1	4	4	9	8	22	28	13	15	105	35	37
06:00	0	1	0	0	0	0	15	17	21	33	66	60	50	33	296	36	38
07:00	1	25	24	9	10	18	84	61	94	98	89	56	35	9	613	33	36
08:00	8	82	65	47	30	24	150	48	39	47	34	11	6	3	594	27	31
09:00	5	79	86	78	47	37	162	58	41	47	19	5	2	1	667	25	29
10:00	0	4	1	2	7	13	66	111	118	133	102	70	24	4	655	32	35
11:00	0	1	0	0	10	17	59	147	147	149	88	54	23	2	697	32	35
12 PM	0	0	1	5	6	17	59	112	201	171	126	57	20	6	781	32	35
13:00	0	0	0	2	5	6	36	80	141	158	118	75	26	8	655	33	35
14:00	0	0	0	1	1	10	35	80	111	141	140	83	39	7	648	33	36
15:00	0	1	3	3	7	19	47	94	124	167	124	87	28	15	719	33	35
16:00	0	7	7	8	13	21	59	79	116	168	135	69	26	11	719	32	35
17:00	2	71	53	57	68	57	175	62	34	10	14	1	0	0	604	22	26
18:00	2	17	9	14	12	49	101	118	101	118	86	44	11	8	690	31	34
19:00	0	1	2	2	3	11	34	56	91	111	91	62	23	6	493	33	35
20:00	0	0	0	0	2	2	13	38	52	111	98	54	32	6	408	34	37
21:00	0	0	0	0	0	2	7	25	31	53	63	39	20	12	252	34	37
22:00	0	0	0	0	0	1	6	10	14	29	37	37	12	7	153	35	37
23:00	0	0	0	0	1	0	5	6	5	20	30	25	21	5	118	36	38
Total	18	289	251	228	223	310	1128	1218	1513	1797	1515	942	429	171	10032		
Percent	0.2%	2.9%	2.5%	2.3%	2.2%	3.1%	11.2%	12.1%	15.1%	17.9%	15.1%	9.4%	4.3%	1.7%			
AM Peak	08:00	08:00	09:00	09:00	09:00	09:00	09:00	11:00	11:00	11:00	10:00	10:00	06:00	06:00	11:00		
Vol.	8	82	86	78	47	37	162	147	147	149	102	70	50	33	697		
PM Peak	17:00	17:00	17:00	17:00	17:00	17:00	17:00	18:00	12:00	12:00	14:00	15:00	14:00	15:00	12:00		
Vol.	2	71	53	57	68	57	175	118	201	171	140	87	39	15	781		

Accurate Counts 978-664-2565

Location : Concord Avenue EB
 Location : East of Fawcett Street
 City/State: Cambridge, MA
 Eastbound

15009SPDEB1

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total	85th Percent	95th Percent
09/10/15	0	0	0	0	0	0	2	6	6	2	9	16	9	6	56	36	38	
01:00	0	0	0	0	1	1	0	6	4	6	5	7	2	3	35	34	36	
02:00	0	0	0	0	0	0	2	1	1	2	2	1	2	0	11	36	38	
03:00	0	0	0	0	1	1	4	8	3	4	1	10	1	3	36	34	35	
04:00	0	0	0	0	0	0	2	5	2	2	3	5	7	2	28	37	38	
05:00	0	0	0	0	0	1	3	10	10	8	20	21	23	16	112	37	38	
06:00	0	0	0	0	0	2	9	30	23	43	60	66	49	24	306	36	38	
07:00	0	17	18	23	23	42	92	85	96	91	73	31	8	9	608	30	33	
08:00	2	61	51	42	46	36	150	75	87	87	56	31	13	2	739	29	33	
09:00	5	63	64	34	11	11	112	45	62	77	73	33	18	10	618	31	34	
10:00	0	0	5	4	10	32	67	142	167	148	78	36	9	3	701	30	33	
11:00	0	0	3	3	11	26	72	128	149	142	90	55	23	8	710	32	35	
12 PM	0	1	4	8	12	41	99	118	168	166	101	45	7	4	774	31	33	
13:00	0	6	12	12	10	26	62	89	109	145	80	55	20	11	637	32	35	
14:00	0	0	0	2	7	17	60	88	151	141	122	59	24	12	683	32	35	
15:00	1	11	12	16	14	38	96	103	162	149	100	52	17	5	776	31	34	
16:00	0	7	16	12	11	36	78	118	145	127	112	50	20	9	741	31	35	
17:00	1	24	30	16	15	39	114	134	162	107	60	25	14	0	741	29	33	
18:00	0	6	5	7	14	27	56	104	145	164	99	41	9	6	683	31	34	
19:00	0	0	0	1	1	7	32	80	104	127	106	44	13	5	520	32	35	
20:00	0	0	0	1	0	0	10	35	48	75	91	47	20	11	338	34	36	
21:00	0	0	0	0	1	1	7	21	39	37	60	42	12	15	235	34	36	
22:00	0	0	0	0	0	0	6	11	14	24	32	24	26	8	145	36	38	
23:00	0	0	0	0	0	0	4	5	8	17	27	40	13	12	126	35	37	
Total	9	196	220	181	188	384	1139	1447	1865	1891	1460	836	359	184	10359			
Percent	0.1%	1.9%	2.1%	1.7%	1.8%	3.7%	11.0%	14.0%	18.0%	18.3%	14.1%	8.1%	3.5%	1.8%				
AM Peak	09:00	09:00	09:00	08:00	08:00	07:00	08:00	10:00	10:00	10:00	11:00	06:00	06:00	06:00	08:00			
Vol.	5	63	64	42	46	42	150	142	167	148	90	66	49	24	739			
PM Peak	15:00	17:00	17:00	15:00	17:00	12:00	17:00	17:00	12:00	12:00	14:00	14:00	22:00	21:00	15:00			
Vol.	1	24	30	16	15	41	114	134	168	166	122	59	26	15	776			
Grand Total	27	485	471	409	411	694	2267	2665	3378	3688	2975	1778	788	355	20391			
Percent	0.1%	2.4%	2.3%	2.0%	2.0%	3.4%	11.1%	13.1%	16.6%	18.1%	14.6%	8.7%	3.9%	1.7%				

15th Percentile : 18 MPH
 50th Percentile : 26 MPH
 85th Percentile : 32 MPH
 95th Percentile : 35 MPH

Statistics
 10 MPH Pace Speed : 24-33 MPH
 Number in Pace : 10929
 Percent in Pace : 53.6%
 Number of Vehicles > 25 MPH : 11836
 Percent of Vehicles > 25 MPH : 58.0%
 Mean Speed(Average) : 26 MPH

Accurate Counts

978-664-2565

Location : Concord Avenue WB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLWB1

Start Time	09-Sep-15 Wed	WB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		19	208		
12:15		23	210		
12:30		18	205		
12:45		14	208	74	831
01:00		9	213		
01:15		10	210		
01:30		6	182		
01:45		10	180	35	785
02:00		9	143		
02:15		12	178		
02:30		3	145		
02:45		5	174	29	640
03:00		8	194		
03:15		4	153		
03:30		7	175		
03:45		7	191	26	713
04:00		5	181		
04:15		10	165		
04:30		7	171		
04:45		20	167	42	684
05:00		27	162		
05:15		21	171		
05:30		29	207		
05:45		47	192	124	732
06:00		89	176		
06:15		56	168		
06:30		103	163		
06:45		131	169	379	676
07:00		173	203		
07:15		166	191		
07:30		164	203		
07:45		174	219	677	816
08:00		204	161		
08:15		207	132		
08:30		243	140		
08:45		198	134	852	567
09:00		207	85		
09:15		184	84		
09:30		171	93		
09:45		196	86	758	348
10:00		177	66		
10:15		160	71		
10:30		181	57		
10:45		175	57	693	251
11:00		183	49		
11:15		185	41		
11:30		197	40		
11:45		183	29	748	159
Total		4437	7202		
Percent		38.1%	61.9%		

Accurate Counts

978-664-2565

Location : Concord Avenue WB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLWB1

Start Time	10-Sep-15 Thu	WB		Hour Totals	
		Morning	Afternoon	Morning	Afternoon
12:00		32	200		
12:15		20	200		
12:30		14	212		
12:45		13	214	79	826
01:00		8	182		
01:15		11	221		
01:30		10	185		
01:45		5	186	34	774
02:00		10	165		
02:15		16	190		
02:30		8	180		
02:45		6	180	40	715
03:00		1	219		
03:15		5	198		
03:30		7	185		
03:45		7	159	20	761
04:00		12	173		
04:15		6	169		
04:30		6	167		
04:45		14	158	38	667
05:00		30	164		
05:15		31	160		
05:30		41	148		
05:45		42	190	144	662
06:00		79	166		
06:15		80	138		
06:30		89	148		
06:45		136	170	384	622
07:00		173	216		
07:15		169	162		
07:30		162	190		
07:45		186	188	690	756
08:00		228	209		
08:15		191	196		
08:30		190	112		
08:45		217	81	826	598
09:00		208	81		
09:15		196	67		
09:30		196	78		
09:45		168	82	768	308
10:00		195	63		
10:15		191	54		
10:30		161	47		
10:45		162	51	709	215
11:00		197	49		
11:15		163	39		
11:30		179	38		
11:45		181	28	720	154
Total		4452	7058		
Percent		38.7%	61.3%		
Grand Total		8889	14260		
Percent		38.4%	61.6%		

ADT

ADT 11,574

AADT 11,574

Accurate Counts

978-664-2565

Location : Concord Avenue WB
 Location : East of Fawcett Street
 City/State: Cambridge, MA

15009VOLWB1

Start Time	Mon 07-Sep-15	Tue 08-Sep-15	Wed 09-Sep-15	Thu 10-Sep-15	Fri 11-Sep-15	Average Day	Sat 12-Sep-15	Sun 13-Sep-15	Week Average
12:00 AM	*	*	74	79	*	76	*	*	76
01:00	*	*	35	34	*	34	*	*	34
02:00	*	*	29	40	*	34	*	*	34
03:00	*	*	26	20	*	23	*	*	23
04:00	*	*	42	38	*	40	*	*	40
05:00	*	*	124	144	*	134	*	*	134
06:00	*	*	379	384	*	382	*	*	382
07:00	*	*	677	690	*	684	*	*	684
08:00	*	*	852	826	*	839	*	*	839
09:00	*	*	758	768	*	763	*	*	763
10:00	*	*	693	709	*	701	*	*	701
11:00	*	*	748	720	*	734	*	*	734
12:00 PM	*	*	831	826	*	828	*	*	828
01:00	*	*	785	774	*	780	*	*	780
02:00	*	*	640	715	*	678	*	*	678
03:00	*	*	713	761	*	737	*	*	737
04:00	*	*	684	667	*	676	*	*	676
05:00	*	*	732	662	*	697	*	*	697
06:00	*	*	676	622	*	649	*	*	649
07:00	*	*	816	756	*	786	*	*	786
08:00	*	*	567	598	*	582	*	*	582
09:00	*	*	348	308	*	328	*	*	328
10:00	*	*	251	215	*	233	*	*	233
11:00	*	*	159	154	*	156	*	*	156
Day Total	0	0	11639	11510	0	11574	0	0	11574
% Avg. WkDay	0.0%	0.0%	100.6%	99.4%	0.0%				
% Avg. Week	0.0%	0.0%	100.6%	99.4%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	08:00	08:00	-	08:00	-	-	08:00
Vol.	-	-	852	826	-	839	-	-	839
PM Peak	-	-	12:00	12:00	-	12:00	-	-	12:00
Vol.	-	-	831	826	-	828	-	-	828
Grand Total	0	0	11639	11510	0	11574	0	0	11574
ADT		ADT 11,574		AADT 11,574					

Accurate Counts
978-664-2565

Location : Concord Avenue WB
Location : East of Fawcett Street
City/State: Cambridge, MA

15009CLSWB1

Westbound

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/09/15	1	49	20	3	1	0	0	0	0	0	0	0	0	74
01:00	0	24	7	1	3	0	0	0	0	0	0	0	0	35
02:00	0	19	10	0	0	0	0	0	0	0	0	0	0	29
03:00	1	15	7	1	2	0	0	0	0	0	0	0	0	26
04:00	2	25	9	2	3	1	0	0	0	0	0	0	0	42
05:00	0	85	24	3	10	1	0	0	1	0	0	0	0	124
06:00	6	273	69	6	18	5	0	2	0	0	0	0	0	379
07:00	9	520	93	12	35	4	0	4	0	0	0	0	0	677
08:00	11	684	96	11	23	8	0	19	0	0	0	0	0	852
09:00	10	598	88	12	35	6	0	9	0	0	0	0	0	758
10:00	10	489	135	10	36	3	0	9	0	0	0	0	1	693
11:00	6	552	122	11	38	7	0	12	0	0	0	0	0	748
12 PM	12	650	111	9	31	7	0	11	0	0	0	0	0	831
13:00	9	593	128	9	33	5	0	8	0	0	0	0	0	785
14:00	5	484	109	8	28	1	0	5	0	0	0	0	0	640
15:00	7	548	120	11	20	1	0	6	0	0	0	0	0	713
16:00	7	539	104	5	24	0	0	5	0	0	0	0	0	684
17:00	11	635	66	4	5	1	0	10	0	0	0	0	0	732
18:00	9	591	57	2	15	1	0	1	0	0	0	0	0	676
19:00	7	741	52	1	7	0	0	6	1	0	0	0	1	816
20:00	6	499	48	3	7	2	0	2	0	0	0	0	0	567
21:00	4	311	26	0	7	0	0	0	0	0	0	0	0	348
22:00	2	210	35	1	3	0	0	0	0	0	0	0	0	251
23:00	1	123	29	0	6	0	0	0	0	0	0	0	0	159
Day Total	136	9257	1565	125	390	53	0	109	2	0	0	0	2	11639
Percent	1.2%	79.5%	13.4%	1.1%	3.4%	0.5%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	10:00	07:00	11:00	08:00		08:00	05:00				10:00	08:00
Vol.	11	684	135	12	38	8		19	1				1	852
PM Peak	12:00	19:00	13:00	15:00	13:00	12:00		12:00	19:00				19:00	12:00
Vol.	12	741	128	11	33	7		11	1				1	831

Accurate Counts
978-664-2565

Location : Concord Avenue WB
Location : East of Fawcett Street
City/State: Cambridge, MA

15009CLSWB1

Westbound

Start Time	MtrCyc	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
09/10/15	2	60	14	2	0	1	0	0	0	0	0	0	0	79
01:00	2	22	5	0	4	1	0	0	0	0	0	0	0	34
02:00	0	29	9	0	2	0	0	0	0	0	0	0	0	40
03:00	1	9	7	1	2	0	0	0	0	0	0	0	0	20
04:00	3	20	11	1	1	2	0	0	0	0	0	0	0	38
05:00	2	97	25	3	12	4	0	0	1	0	0	0	0	144
06:00	9	267	72	4	23	7	0	2	0	0	0	0	0	384
07:00	8	540	95	14	25	2	0	6	0	0	0	0	0	690
08:00	5	674	99	11	24	1	0	12	0	0	0	0	0	826
09:00	4	601	106	10	35	3	0	9	0	0	0	0	0	768
10:00	8	514	115	9	43	9	0	11	0	0	0	0	0	709
11:00	10	530	109	10	43	9	0	9	0	0	0	0	0	720
12 PM	9	617	149	5	28	10	0	8	0	0	0	0	0	826
13:00	7	598	114	10	36	4	0	5	0	0	0	0	0	774
14:00	6	547	107	11	34	3	0	6	1	0	0	0	0	715
15:00	11	618	98	8	20	3	0	3	0	0	0	0	0	761
16:00	1	567	69	7	15	1	0	7	0	0	0	0	0	667
17:00	3	580	59	6	10	0	0	4	0	0	0	0	0	662
18:00	2	562	44	4	3	2	0	5	0	0	0	0	0	622
19:00	3	674	59	4	8	0	0	8	0	0	0	0	0	756
20:00	2	539	51	1	5	0	0	0	0	0	0	0	0	598
21:00	0	264	38	2	4	0	0	0	0	0	0	0	0	308
22:00	2	189	21	0	3	0	0	0	0	0	0	0	0	215
23:00	1	133	14	3	3	0	0	0	0	0	0	0	0	154
Day Total	101	9251	1490	126	383	62	0	95	2	0	0	0	0	11510
Percent	0.9%	80.4%	12.9%	1.1%	3.3%	0.5%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	10:00	07:00	10:00	10:00		08:00	05:00					08:00
Vol.	10	674	115	14	43	9		12	1					826
PM Peak	15:00	19:00	12:00	14:00	13:00	12:00		12:00	14:00					12:00
Vol.	11	674	149	11	36	10		8	1					826
Grand Total	237	18508	3055	251	773	115	0	204	4	0	0	0	2	23149
Percent	1.0%	80.0%	13.2%	1.1%	3.3%	0.5%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	

Accurate Counts 978-664-2565

Location : Concord Avenue WB
 Location : East of Fawcett Street
 City/State: Cambridge, MA
 Westbound

15009SPDWB1

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/09/15	0	0	1	0	0	0	1	5	6	11	15	16	8	11	74	35	37
01:00	0	0	0	0	0	0	0	1	3	10	6	6	5	4	35	36	38
02:00	0	0	0	0	0	0	2	2	5	1	5	5	5	4	29	36	38
03:00	0	0	0	1	1	0	0	5	5	1	4	6	1	2	26	34	35
04:00	0	0	0	0	0	0	1	1	5	7	8	8	5	7	42	35	37
05:00	0	0	0	0	0	0	1	6	8	24	37	18	19	11	124	36	38
06:00	0	0	0	0	1	3	4	29	69	105	94	38	26	10	379	33	36
07:00	0	0	2	5	18	40	70	140	174	126	68	26	8	0	677	30	33
08:00	1	8	21	27	67	122	190	181	125	67	31	8	4	0	852	26	30
09:00	2	4	21	53	52	104	164	145	111	69	24	7	1	1	758	26	29
10:00	0	3	3	6	33	62	118	134	137	110	50	25	7	5	693	29	32
11:00	0	5	6	26	25	65	134	170	155	99	39	17	5	2	748	28	31
12 PM	1	10	17	18	37	85	153	182	155	116	36	17	4	0	831	28	31
13:00	0	1	5	18	45	67	121	140	173	127	63	20	2	3	785	29	32
14:00	0	0	9	10	15	30	55	138	141	134	75	27	3	3	640	30	32
15:00	0	2	4	11	10	41	85	192	180	111	52	20	2	3	713	29	32
16:00	0	2	1	5	8	22	69	149	184	148	65	18	10	3	684	29	32
17:00	0	5	14	42	80	94	159	178	86	41	19	7	2	5	732	25	29
18:00	0	1	2	4	13	47	92	167	93	40	14	14	5	1	676	28	31
19:00	0	2	2	10	23	49	122	208	207	125	54	11	2	1	816	28	31
20:00	0	0	3	3	7	13	34	103	126	136	90	44	2	6	567	31	34
21:00	0	1	1	0	4	7	5	32	58	94	83	42	13	8	348	33	35
22:00	0	0	0	0	0	2	4	16	32	70	50	52	13	12	251	34	36
23:00	0	0	0	0	2	0	0	8	13	28	38	40	16	14	159	35	37
Total	4	44	112	239	441	853	1584	2332	2355	1853	1046	492	168	116	11639		
Percent	0.0%	0.4%	1.0%	2.1%	3.8%	7.3%	13.6%	20.0%	20.2%	15.9%	9.0%	4.2%	1.4%	1.0%			
AM Peak	09:00	08:00	08:00	09:00	08:00	08:00	08:00	08:00	07:00	07:00	06:00	06:00	06:00	00:00	08:00		
Vol.	2	8	21	53	67	122	190	181	174	126	94	38	26	11	852		
PM Peak	12:00	12:00	12:00	17:00	17:00	17:00	17:00	19:00	19:00	16:00	20:00	22:00	23:00	23:00	12:00		
Vol.	1	10	17	42	80	94	159	208	207	148	90	52	16	14	831		

Accurate Counts 978-664-2565

Location : Concord Avenue WB
 Location : East of Fawcett Street
 City/State: Cambridge, MA
 Westbound

15009SPDWB1

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total	85th Percent	95th Percent
09/10/15	0	0	0	1	0	0	1	4	10	11	22	12	9	9	79	35	37
01:00	0	0	0	0	0	0	2	3	1	9	5	7	4	3	34	35	37
02:00	0	0	0	0	0	0	0	0	7	10	6	10	4	3	40	35	37
03:00	0	0	0	0	0	1	1	2	1	7	3	3	0	2	20	33	35
04:00	0	0	0	1	1	0	2	1	2	7	4	5	7	8	38	37	38
05:00	0	0	0	0	0	0	1	5	21	27	32	26	16	16	144	35	37
06:00	0	0	0	0	3	6	9	35	80	87	81	53	21	9	384	34	36
07:00	0	0	3	3	2	27	88	142	182	142	60	30	8	3	690	29	33
08:00	2	8	16	37	68	116	183	185	117	54	28	6	3	3	826	26	29
09:00	3	2	14	33	45	82	163	157	141	82	33	10	3	0	768	27	30
10:00	1	0	2	30	33	82	132	136	135	99	40	15	3	1	709	28	31
11:00	0	2	10	28	36	68	93	163	172	92	35	15	4	2	720	28	31
12 PM	2	6	16	38	50	109	155	180	136	96	25	8	5	0	826	27	29
13:00	0	6	7	12	53	103	135	177	155	79	33	11	1	2	774	27	30
14:00	0	4	15	23	35	55	83	151	150	121	60	10	6	2	715	29	32
15:00	3	21	30	38	67	65	124	124	145	88	43	11	2	0	761	28	31
16:00	0	4	6	16	29	42	98	128	139	129	54	15	3	4	667	29	32
17:00	0	2	8	10	18	40	78	156	165	111	48	16	7	3	662	29	32
18:00	0	1	1	4	8	38	90	142	163	108	42	19	5	1	622	29	32
19:00	0	2	4	16	25	41	113	132	185	138	64	29	7	0	756	29	32
20:00	0	0	0	0	1	9	41	87	163	148	102	31	11	5	598	31	34
21:00	0	0	0	1	3	2	4	21	62	84	74	36	14	7	308	33	35
22:00	0	0	1	0	1	1	7	15	32	58	48	37	11	4	215	34	36
23:00	0	0	0	0	0	1	2	8	20	29	41	33	14	6	154	35	37
Total	11	58	133	291	478	888	1605	2154	2384	1816	983	448	168	93	11510		
Percent	0.1%	0.5%	1.2%	2.5%	4.2%	7.7%	13.9%	18.7%	20.7%	15.8%	8.5%	3.9%	1.5%	0.8%			
AM Peak	09:00	08:00	08:00	08:00	08:00	08:00	08:00	08:00	07:00	07:00	06:00	06:00	06:00	05:00	08:00		
Vol.	3	8	16	37	68	116	183	185	182	142	81	53	21	16	826		
PM Peak	15:00	15:00	15:00	12:00	15:00	12:00	12:00	12:00	19:00	20:00	20:00	22:00	21:00	21:00	12:00		
Vol.	3	21	30	38	67	109	155	180	185	148	102	37	14	7	826		
Grand Total	15	102	245	530	919	1741	3189	4486	4739	3669	2029	940	336	209	23149		
Percent	0.1%	0.4%	1.1%	2.3%	4.0%	7.5%	13.8%	19.4%	20.5%	15.8%	8.8%	4.1%	1.5%	0.9%			

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

Statistics
 10 MPH Pace Speed : 21-30 MPH
 Number in Pace : 13957
 Percent in Pace : 60.3%
 Number of Vehicles > 25 MPH : 10342
 Percent of Vehicles > 25 MPH : 44.7%
 Mean Speed(Average) : 24 MPH

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	17	5	132	32	7	138	331
07:15 AM	24	5	139	36	3	131	338
07:30 AM	27	9	148	27	4	155	370
07:45 AM	21	11	220	30	7	207	496
Total	89	30	639	125	21	631	1535
08:00 AM	17	10	190	31	10	168	426
08:15 AM	12	15	204	40	6	182	459
08:30 AM	20	4	206	36	5	182	453
08:45 AM	15	2	239	33	11	277	577
Total	64	31	839	140	32	809	1915
Grand Total	153	61	1478	265	53	1440	3450
Apprch %	71.5	28.5	84.8	15.2	3.5	96.5	
Total %	4.4	1.8	42.8	7.7	1.5	41.7	
Cars	142	61	1440	250	53	1388	3334
% Cars	92.8	100	97.4	94.3	100	96.4	96.6
Trucks	11	0	38	15	0	52	116
% Trucks	7.2	0	2.6	5.7	0	3.6	3.4

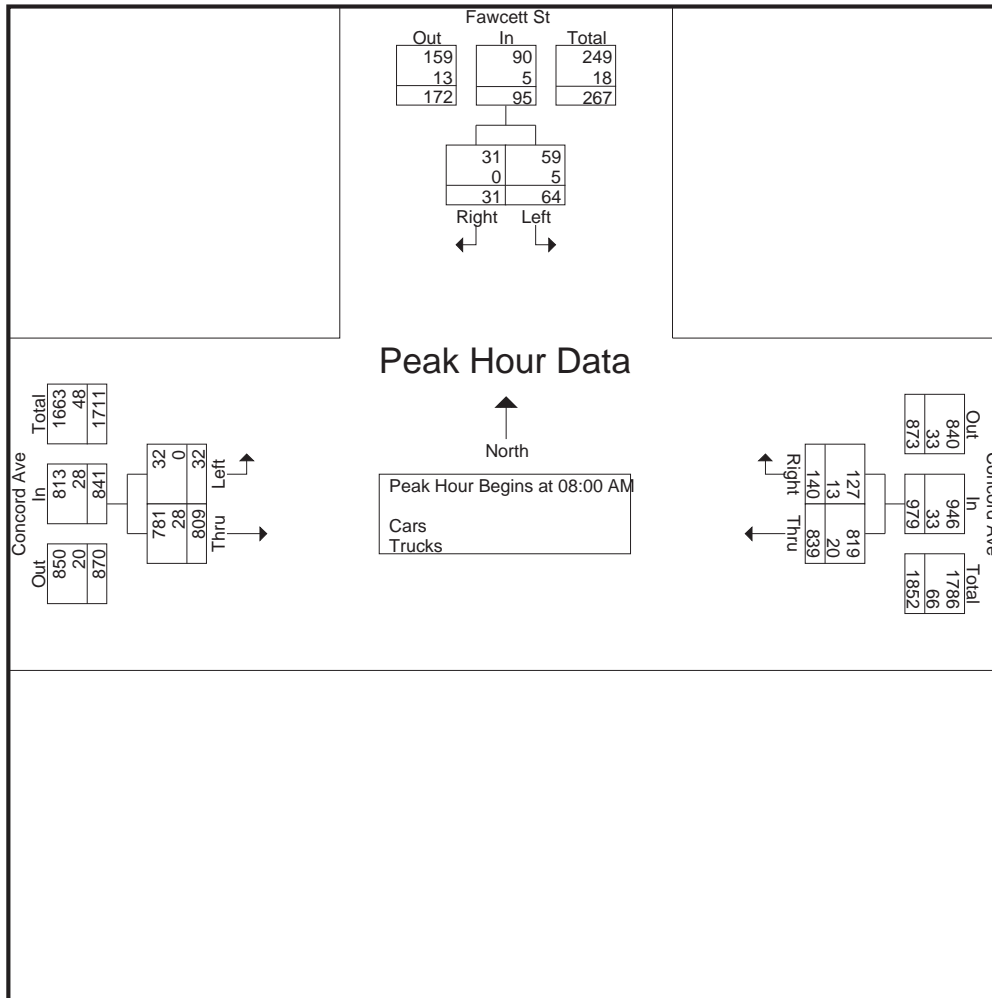
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 2

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	17	10	27	190	31	221	10	168	178	426
08:15 AM	12	15	27	204	40	244	6	182	188	459
08:30 AM	20	4	24	206	36	242	5	182	187	453
08:45 AM	15	2	17	239	33	272	11	277	288	577
Total Volume	64	31	95	839	140	979	32	809	841	1915
% App. Total	67.4	32.6		85.7	14.3		3.8	96.2		
PHF	.800	.517	.880	.878	.875	.900	.727	.730	.730	.830
Cars	59	31	90	819	127	946	32	781	813	1849
% Cars	92.2	100	94.7	97.6	90.7	96.6	100	96.5	96.7	96.6
Trucks	5	0	5	20	13	33	0	28	28	66
% Trucks	7.8	0	5.3	2.4	9.3	3.4	0	3.5	3.3	3.4



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

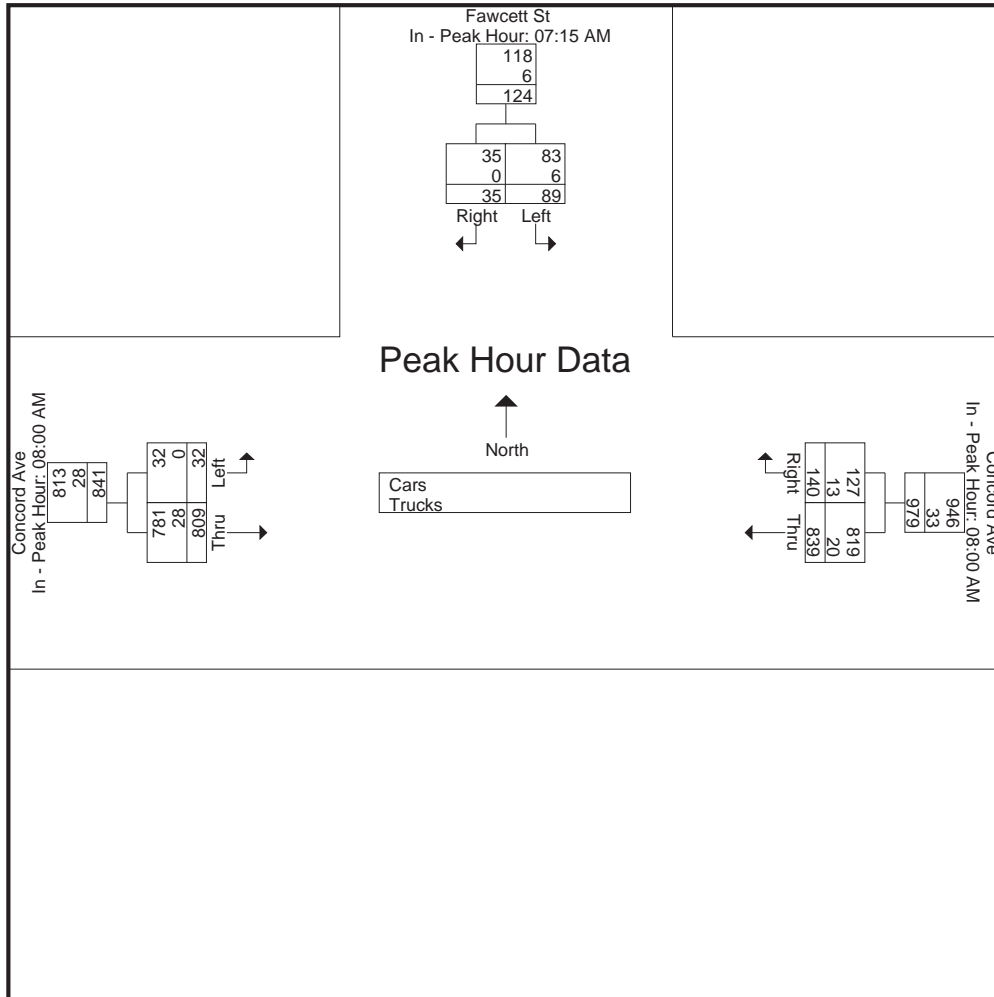
File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			08:00 AM			08:00 AM		
+0 mins.	24	5	29	190	31	221	10	168	178
+15 mins.	27	9	36	204	40	244	6	182	188
+30 mins.	21	11	32	206	36	242	5	182	187
+45 mins.	17	10	27	239	33	272	11	277	288
Total Volume	89	35	124	839	140	979	32	809	841
% App. Total	71.8	28.2		85.7	14.3		3.8	96.2	
PHF	.824	.795	.861	.878	.875	.900	.727	.730	.730
Cars	83	35	118	819	127	946	32	781	813
% Cars	93.3	100	95.2	97.6	90.7	96.6	100	96.5	96.7
Trucks	6	0	6	20	13	33	0	28	28
% Trucks	6.7	0	4.8	2.4	9.3	3.4	0	3.5	3.3



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	16	5	126	32	7	131	317
07:15 AM	22	5	136	36	3	127	329
07:30 AM	25	9	142	25	4	150	355
07:45 AM	20	11	217	30	7	199	484
Total	83	30	621	123	21	607	1485
08:00 AM	16	10	182	31	10	157	406
08:15 AM	12	15	203	38	6	178	452
08:30 AM	20	4	201	31	5	176	437
08:45 AM	11	2	233	27	11	270	554
Total	59	31	819	127	32	781	1849
Grand Total	142	61	1440	250	53	1388	3334
Apprch %	70	30	85.2	14.8	3.7	96.3	
Total %	4.3	1.8	43.2	7.5	1.6	41.6	

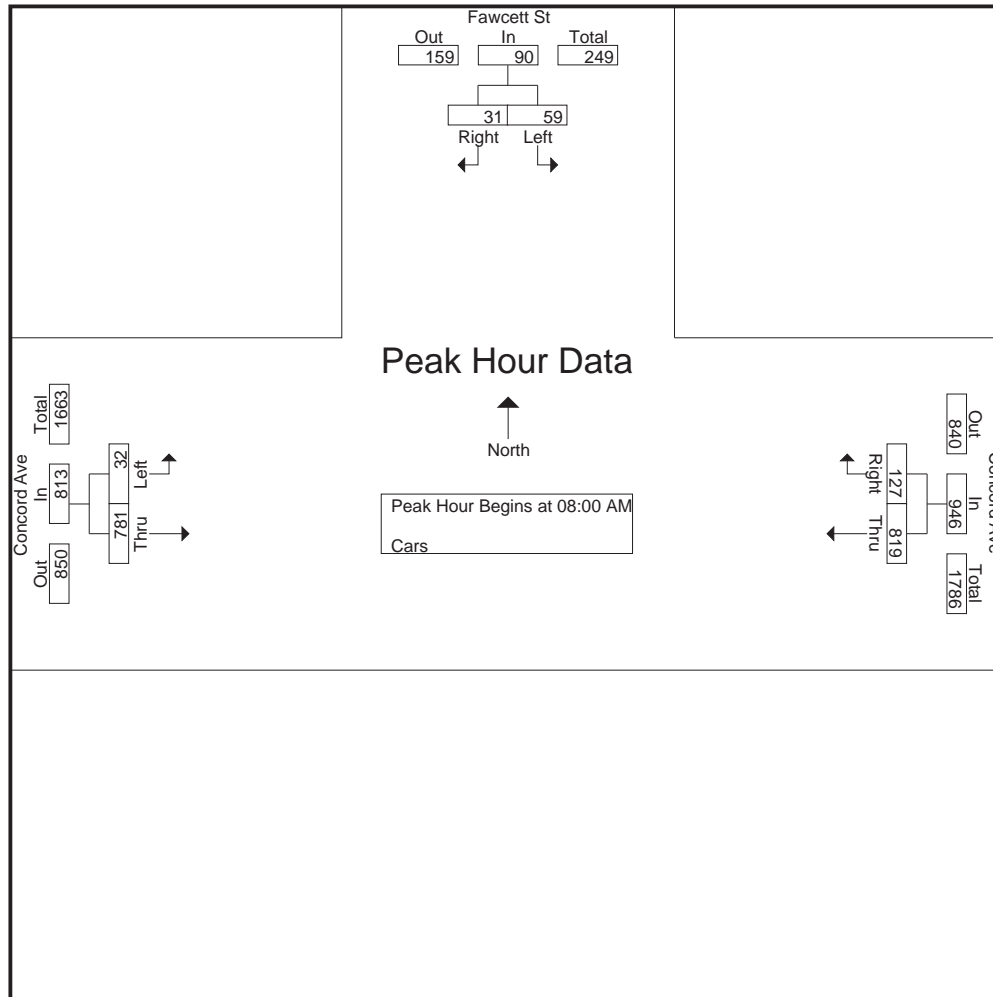
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	16	10	26	182	31	213	10	157	167	406
08:15 AM	12	15	27	203	38	241	6	178	184	452
08:30 AM	20	4	24	201	31	232	5	176	181	437
08:45 AM	11	2	13	233	27	260	11	270	281	554
Total Volume	59	31	90	819	127	946	32	781	813	1849
% App. Total	65.6	34.4		86.6	13.4		3.9	96.1		
PHF	.738	.517	.833	.879	.836	.910	.727	.723	.723	.834



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

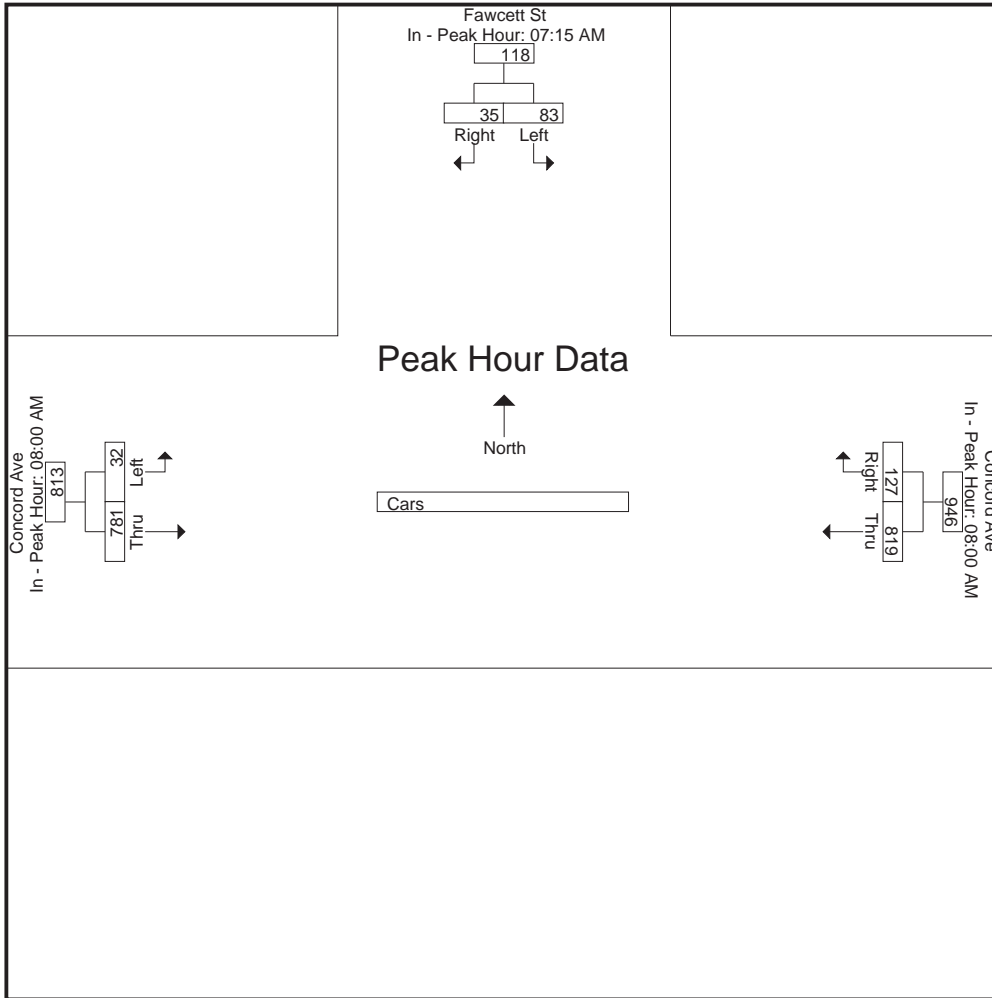
	07:15 AM			08:00 AM			08:00 AM		
+0 mins.	22	5	27	182	31	213	10	157	167
+15 mins.	25	9	34	203	38	241	6	178	184
+30 mins.	20	11	31	201	31	232	5	176	181
+45 mins.	16	10	26	233	27	260	11	270	281
Total Volume	83	35	118	819	127	946	32	781	813
% App. Total	70.3	29.7		86.6	13.4		3.9	96.1	
PHF	.830	.795	.868	.879	.836	.910	.727	.723	.723

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009001
Site Code : 15009001
Start Date : 9/9/2015
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	1	0	6	0	0	7	14
07:15 AM	2	0	3	0	0	4	9
07:30 AM	2	0	6	2	0	5	15
07:45 AM	1	0	3	0	0	8	12
Total	6	0	18	2	0	24	50
08:00 AM	1	0	8	0	0	11	20
08:15 AM	0	0	1	2	0	4	7
08:30 AM	0	0	5	5	0	6	16
08:45 AM	4	0	6	6	0	7	23
Total	5	0	20	13	0	28	66
Grand Total	11	0	38	15	0	52	116
Apprch %	100	0	71.7	28.3	0	100	
Total %	9.5	0	32.8	12.9	0	44.8	

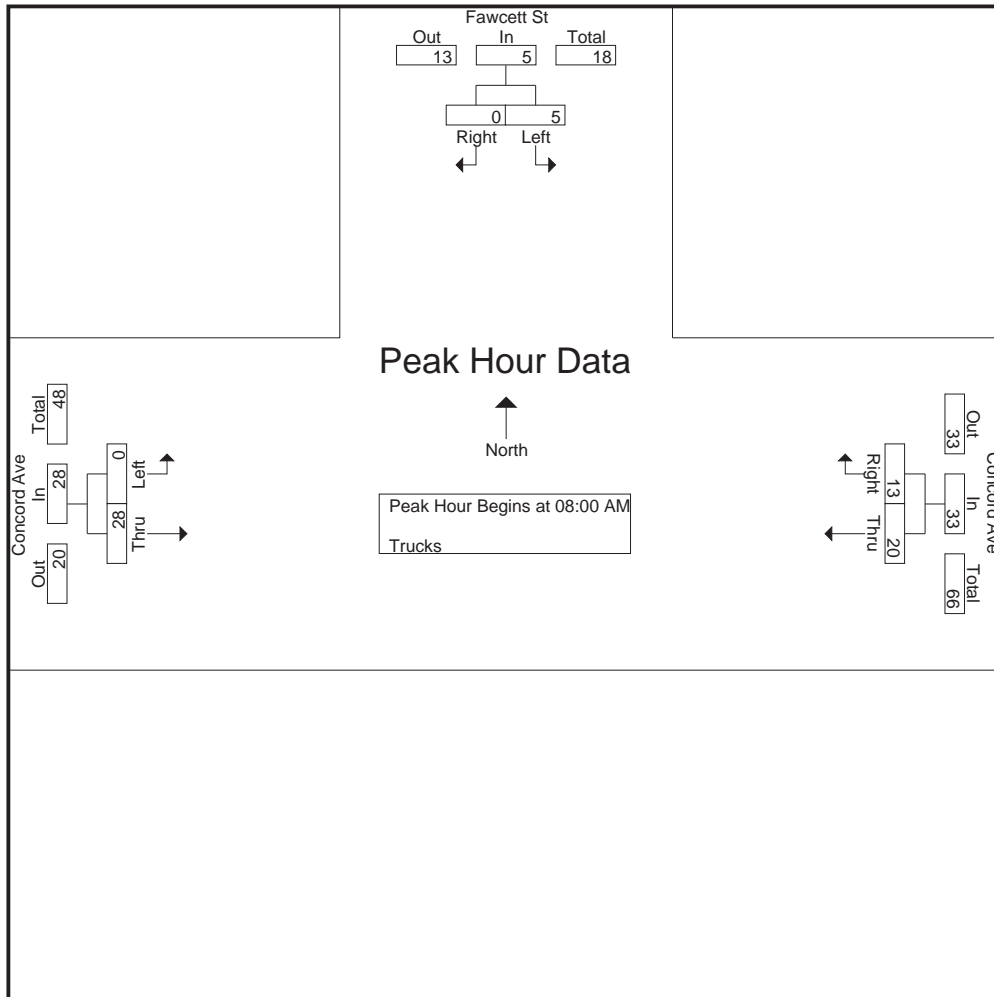
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 8

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	1	0	1	8	0	8	0	11	11	20
08:15 AM	0	0	0	1	2	3	0	4	4	7
08:30 AM	0	0	0	5	5	10	0	6	6	16
08:45 AM	4	0	4	6	6	12	0	7	7	23
Total Volume	5	0	5	20	13	33	0	28	28	66
% App. Total	100	0		60.6	39.4		0	100		
PHF	.313	.000	.313	.625	.542	.688	.000	.636	.636	.717



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

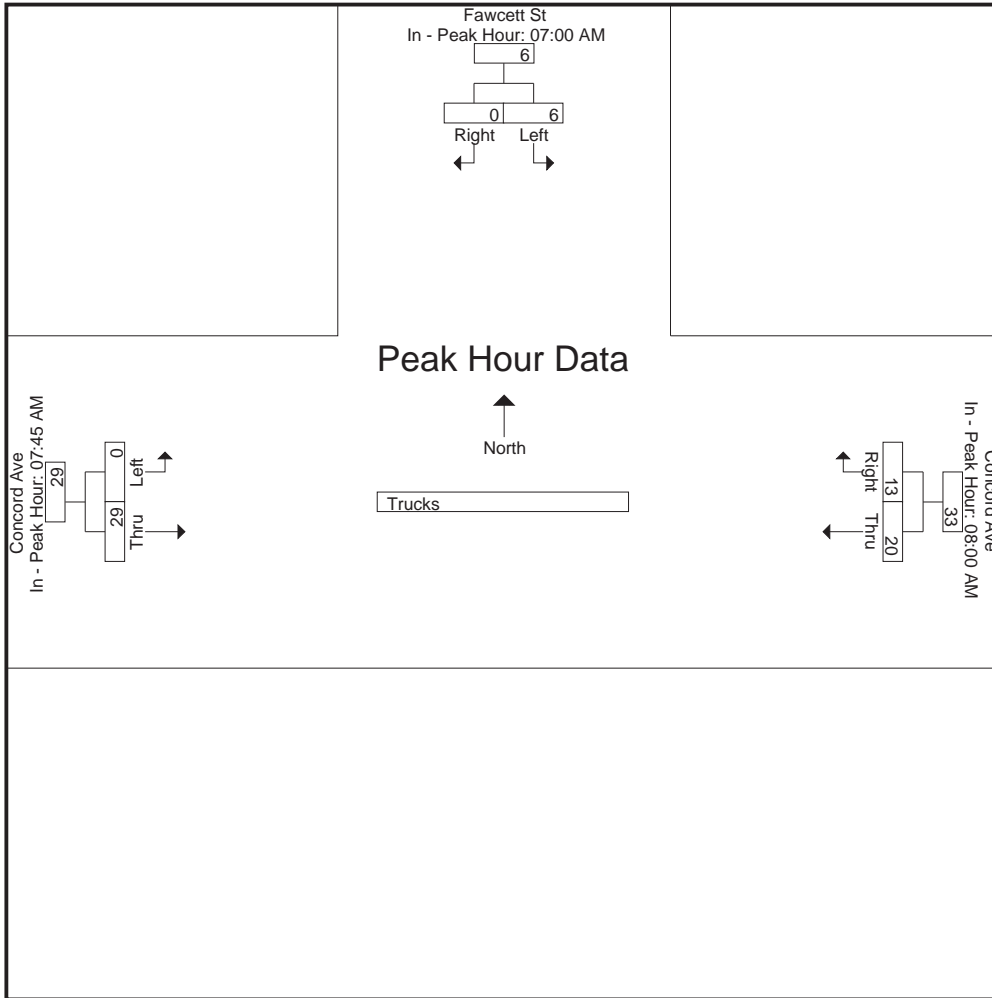
	07:00 AM			08:00 AM			07:45 AM		
+0 mins.	1	0	1	8	0	8	0	8	8
+15 mins.	2	0	2	1	2	3	0	11	11
+30 mins.	2	0	2	5	5	10	0	4	4
+45 mins.	1	0	1	6	6	12	0	6	6
Total Volume	6	0	6	20	13	33	0	29	29
% App. Total	100	0		60.6	39.4		0	100	
PHF	.750	.000	.750	.625	.542	.688	.000	.659	.659

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009001
Site Code : 15009001
Start Date : 9/9/2015
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
07:00 AM	0	0	7	4	0	0	0	8	6	13	12	25
07:15 AM	2	0	9	0	0	0	0	12	3	12	14	26
07:30 AM	2	0	5	3	0	0	0	15	6	11	20	31
07:45 AM	0	0	8	6	1	0	0	8	4	12	15	27
Total	4	0	29	13	1	0	0	43	19	48	61	109
08:00 AM	2	0	12	6	0	0	0	11	7	19	19	38
08:15 AM	0	0	11	5	1	0	0	5	2	13	11	24
08:30 AM	1	0	5	8	0	0	0	9	1	6	18	24
08:45 AM	0	0	1	5	0	0	0	4	3	4	9	13
Total	3	0	29	24	1	0	0	29	13	42	57	99
Grand Total	7	0	58	37	2	0	0	72	32	90	118	208
Apprch %	100	0		94.9	5.1		0	100				
Total %	5.9	0		31.4	1.7		0	61		43.3	56.7	

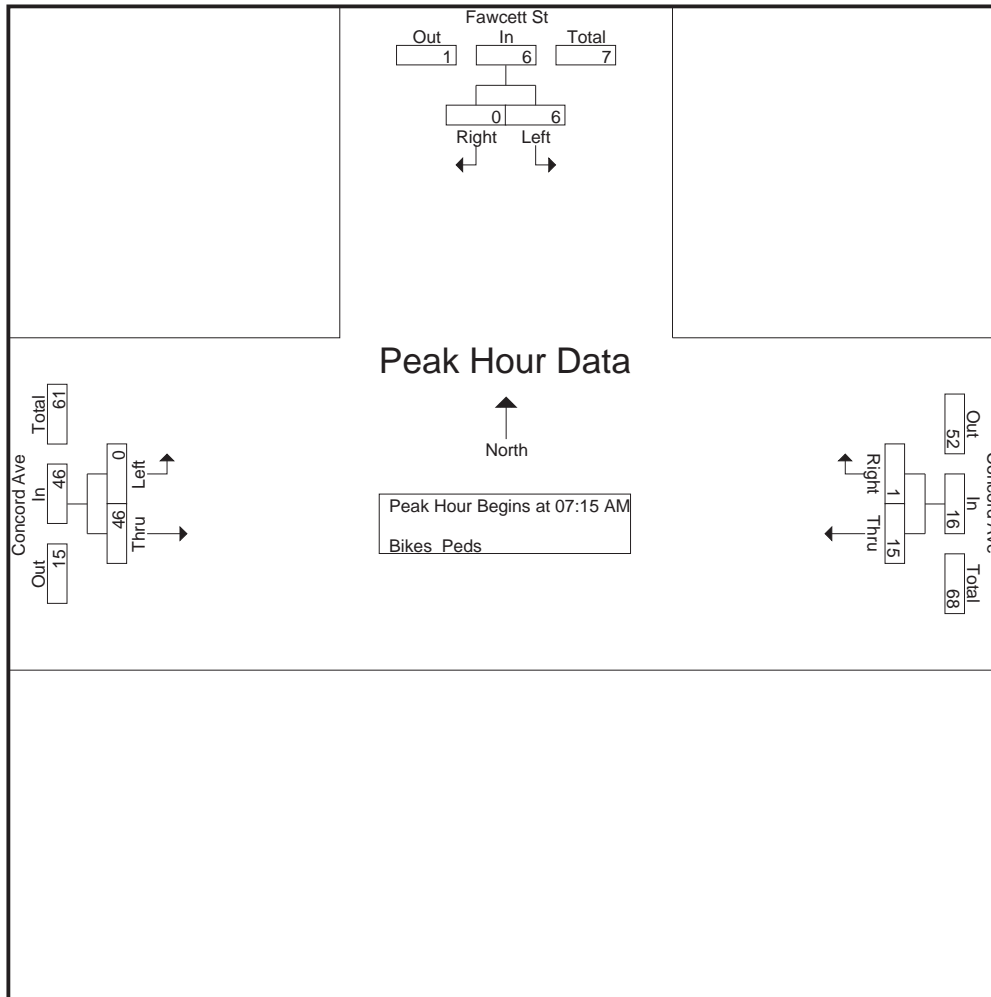
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 11

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	0	0	0	0	12	12	14
07:30 AM	2	0	2	3	0	3	0	15	15	20
07:45 AM	0	0	0	6	1	7	0	8	8	15
08:00 AM	2	0	2	6	0	6	0	11	11	19
Total Volume	6	0	6	15	1	16	0	46	46	68
% App. Total	100	0		93.8	6.2		0	100		
PHF	.750	.000	.750	.625	.250	.571	.000	.767	.767	.850



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

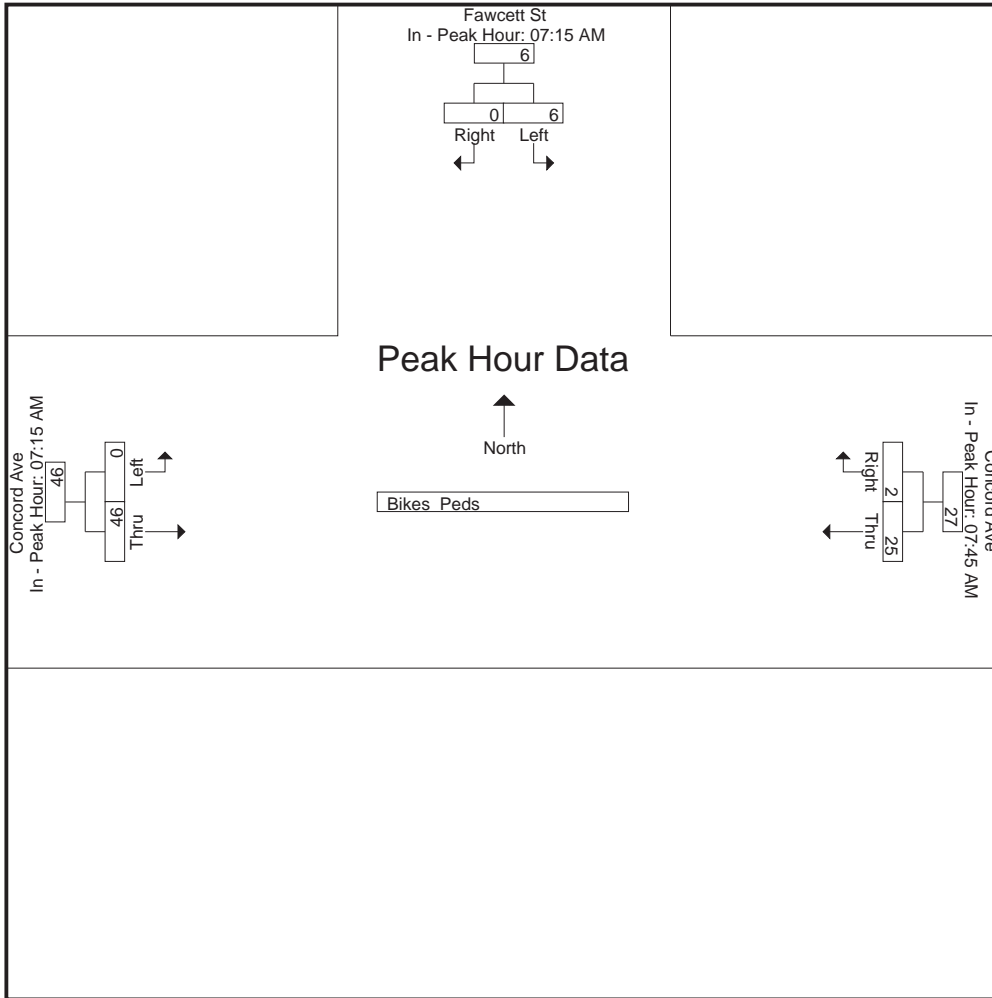
	07:15 AM			07:45 AM			07:15 AM		
+0 mins.	2	0	2	6	1	7	0	12	12
+15 mins.	2	0	2	6	0	6	0	15	15
+30 mins.	0	0	0	5	1	6	0	8	8
+45 mins.	2	0	2	8	0	8	0	11	11
Total Volume	6	0	6	25	2	27	0	46	46
% App. Total	100	0		92.6	7.4		0	100	
PHF	.750	.000	.750	.781	.500	.844	.000	.767	.767

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009001
Site Code : 15009001
Start Date : 9/9/2015
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	26	5	164	16	3	179	393
04:15 PM	16	5	172	24	3	142	362
04:30 PM	25	8	176	14	5	189	417
04:45 PM	20	9	151	31	5	175	391
Total	87	27	663	85	16	685	1563
05:00 PM	33	12	158	17	6	194	420
05:15 PM	24	16	195	24	5	185	449
05:30 PM	33	8	202	34	2	206	485
05:45 PM	13	3	168	29	12	190	415
Total	103	39	723	104	25	775	1769
Grand Total	190	66	1386	189	41	1460	3332
Apprch %	74.2	25.8	88	12	2.7	97.3	
Total %	5.7	2	41.6	5.7	1.2	43.8	
Cars	188	65	1369	186	40	1447	3295
% Cars	98.9	98.5	98.8	98.4	97.6	99.1	98.9
Trucks	2	1	17	3	1	13	37
% Trucks	1.1	1.5	1.2	1.6	2.4	0.9	1.1

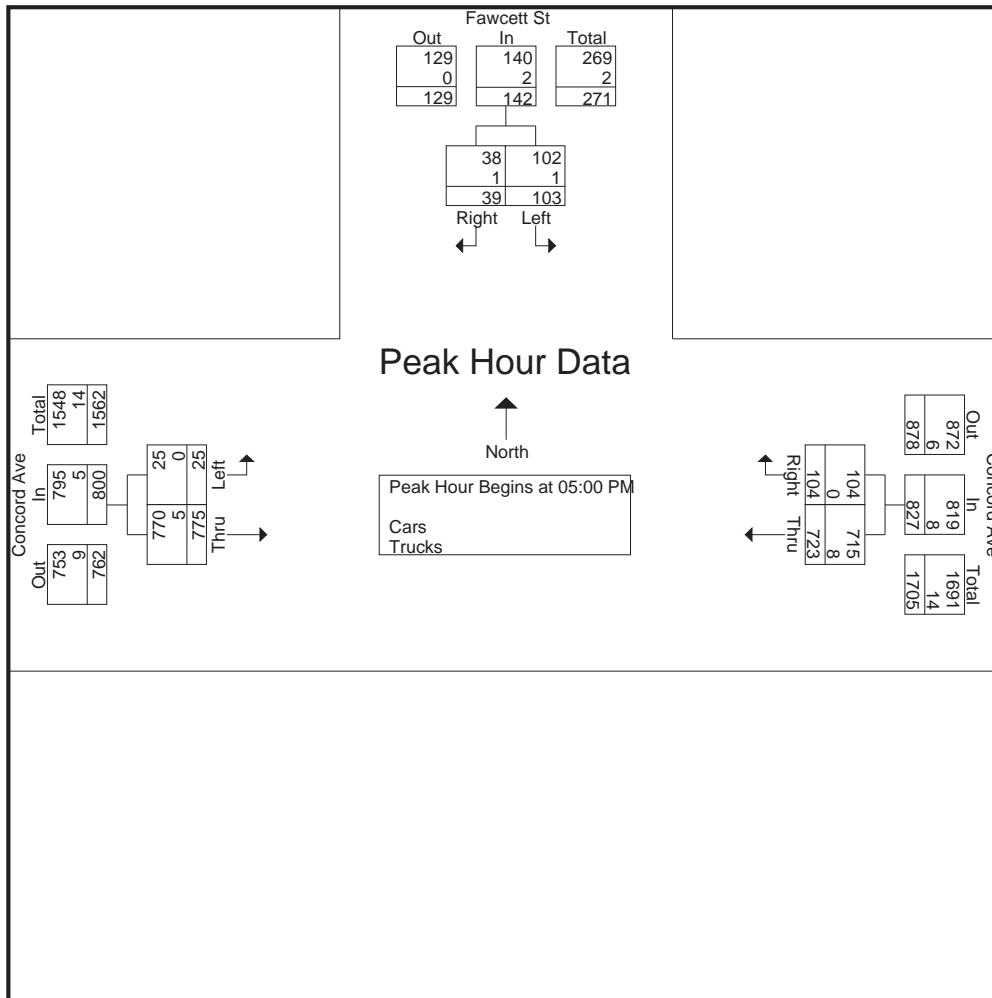
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 2

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	33	12	45	158	17	175	6	194	200	420
05:15 PM	24	16	40	195	24	219	5	185	190	449
05:30 PM	33	8	41	202	34	236	2	206	208	485
05:45 PM	13	3	16	168	29	197	12	190	202	415
Total Volume	103	39	142	723	104	827	25	775	800	1769
% App. Total	72.5	27.5		87.4	12.6		3.1	96.9		
PHF	.780	.609	.789	.895	.765	.876	.521	.941	.962	.912
Cars	102	38	140	715	104	819	25	770	795	1754
% Cars	99.0	97.4	98.6	98.9	100	99.0	100	99.4	99.4	99.2
Trucks	1	1	2	8	0	8	0	5	5	15
% Trucks	1.0	2.6	1.4	1.1	0	1.0	0	0.6	0.6	0.8



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

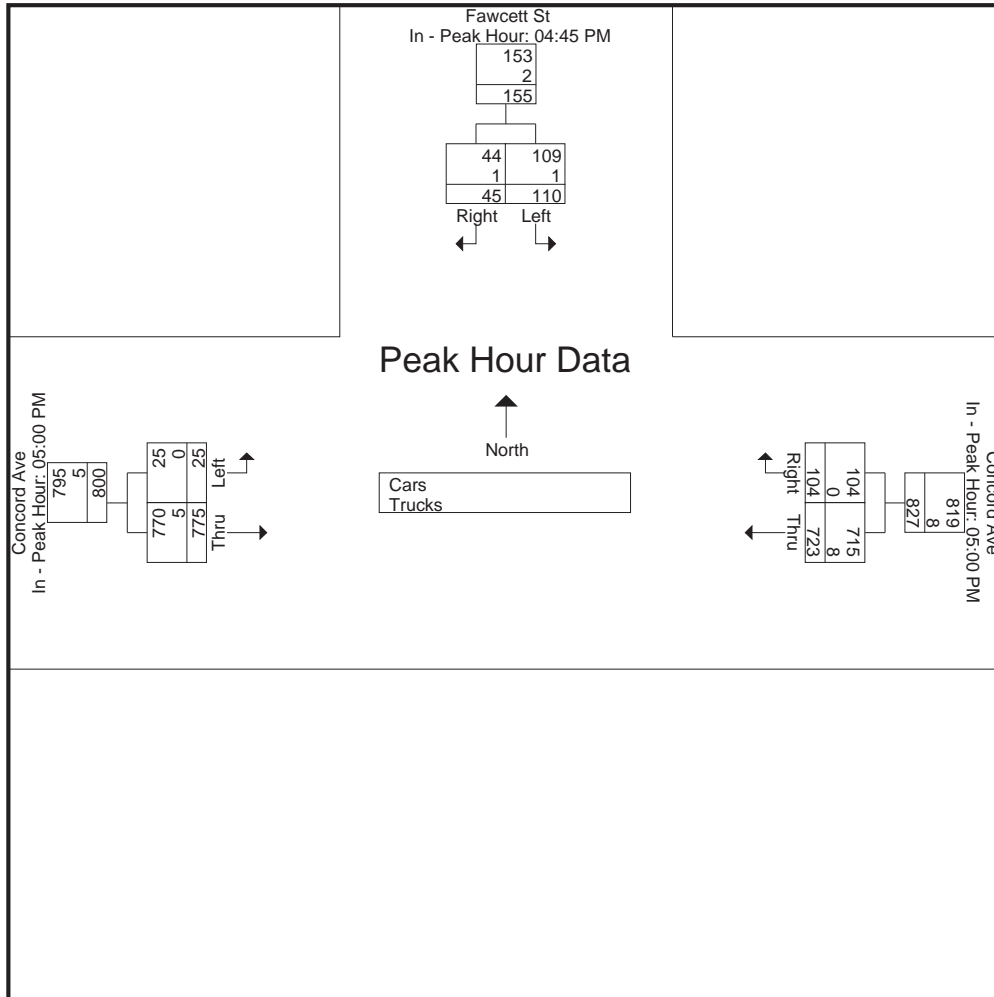
File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			05:00 PM		
+0 mins.	20	9	29	158	17	175	6	194	200
+15 mins.	33	12	45	195	24	219	5	185	190
+30 mins.	24	16	40	202	34	236	2	206	208
+45 mins.	33	8	41	168	29	197	12	190	202
Total Volume	110	45	155	723	104	827	25	775	800
% App. Total	71	29		87.4	12.6		3.1	96.9	
PHF	.833	.703	.861	.895	.765	.876	.521	.941	.962
Cars	109	44	153	715	104	819	25	770	795
% Cars	99.1	97.8	98.7	98.9	100	99	100	99.4	99.4
Trucks	1	1	2	8	0	8	0	5	5
% Trucks	0.9	2.2	1.3	1.1	0	1	0	0.6	0.6



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	25	5	161	15	3	177	386
04:15 PM	16	5	169	23	3	141	357
04:30 PM	25	8	174	14	4	185	410
04:45 PM	20	9	150	30	5	174	388
Total	86	27	654	82	15	677	1541
05:00 PM	33	12	154	17	6	192	414
05:15 PM	23	15	195	24	5	184	446
05:30 PM	33	8	201	34	2	206	484
05:45 PM	13	3	165	29	12	188	410
Total	102	38	715	104	25	770	1754
Grand Total	188	65	1369	186	40	1447	3295
Apprch %	74.3	25.7	88	12	2.7	97.3	
Total %	5.7	2	41.5	5.6	1.2	43.9	

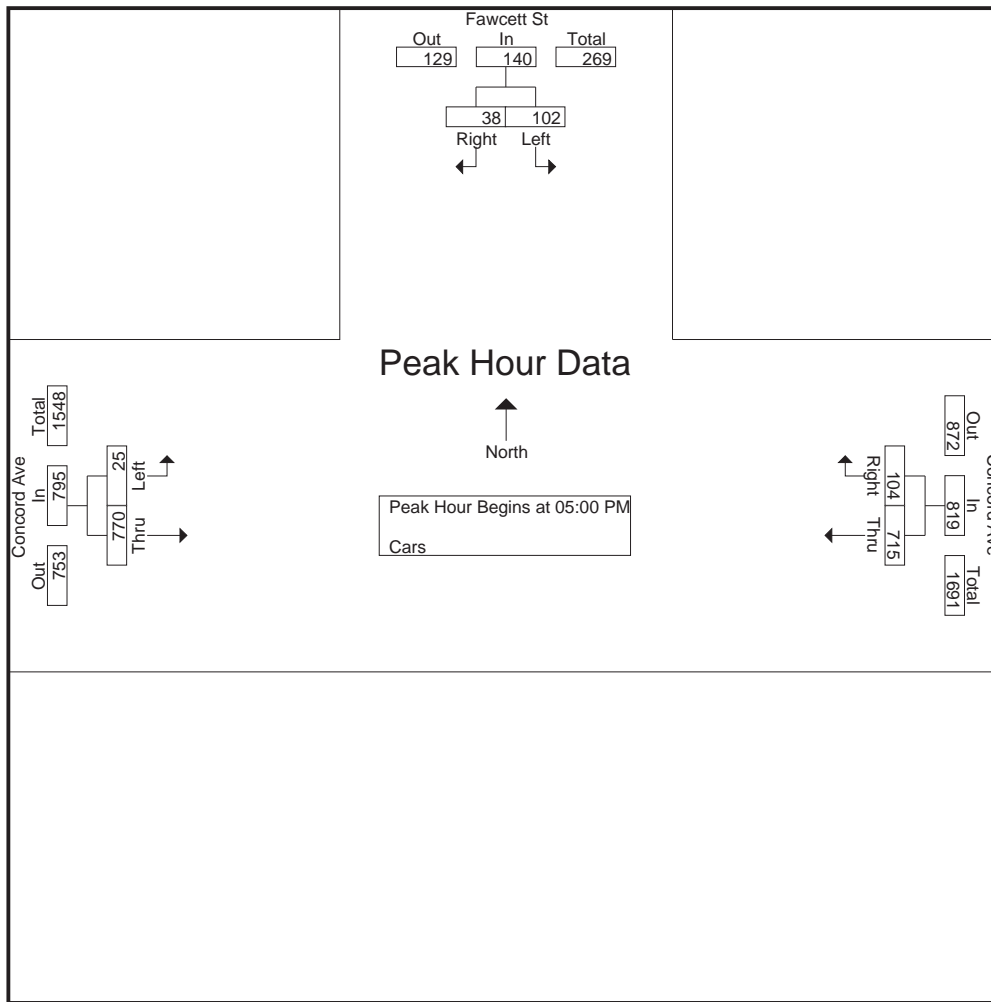
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	33	12	45	154	17	171	6	192	198	414
05:15 PM	23	15	38	195	24	219	5	184	189	446
05:30 PM	33	8	41	201	34	235	2	206	208	484
05:45 PM	13	3	16	165	29	194	12	188	200	410
Total Volume	102	38	140	715	104	819	25	770	795	1754
% App. Total	72.9	27.1		87.3	12.7		3.1	96.9		
PHF	.773	.633	.778	.889	.765	.871	.521	.934	.956	.906



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

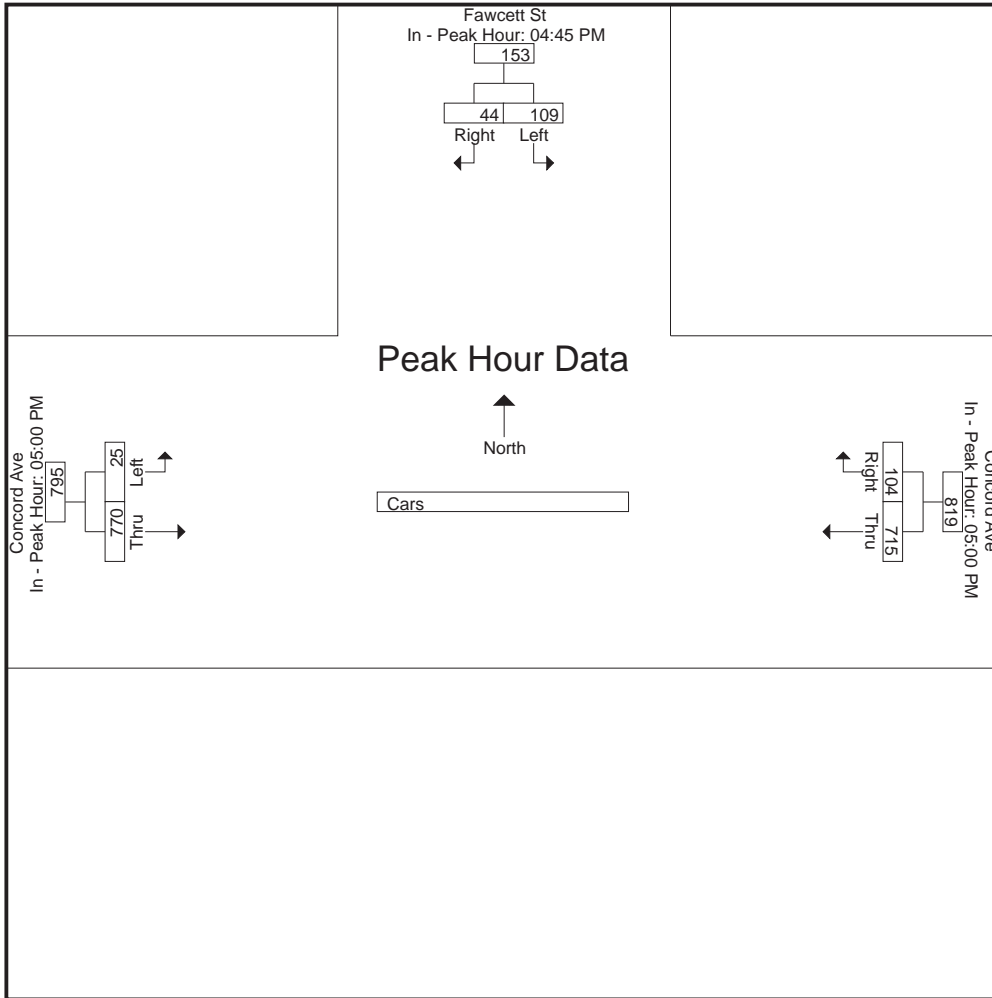
	04:45 PM			05:00 PM			05:00 PM		
+0 mins.	20	9	29	154	17	171	6	192	198
+15 mins.	33	12	45	195	24	219	5	184	189
+30 mins.	23	15	38	201	34	235	2	206	208
+45 mins.	33	8	41	165	29	194	12	188	200
Total Volume	109	44	153	715	104	819	25	770	795
% App. Total	71.2	28.8		87.3	12.7		3.1	96.9	
PHF	.826	.733	.850	.889	.765	.871	.521	.934	.956

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009001
Site Code : 15009001
Start Date : 9/9/2015
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Fawcett St From North		Concord Ave From East		Concord Ave From West		Int. Total
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	1	0	3	1	0	2	7
04:15 PM	0	0	3	1	0	1	5
04:30 PM	0	0	2	0	1	4	7
04:45 PM	0	0	1	1	0	1	3
Total	1	0	9	3	1	8	22
05:00 PM	0	0	4	0	0	2	6
05:15 PM	1	1	0	0	0	1	3
05:30 PM	0	0	1	0	0	0	1
05:45 PM	0	0	3	0	0	2	5
Total	1	1	8	0	0	5	15
Grand Total	2	1	17	3	1	13	37
Apprch %	66.7	33.3	85	15	7.1	92.9	
Total %	5.4	2.7	45.9	8.1	2.7	35.1	

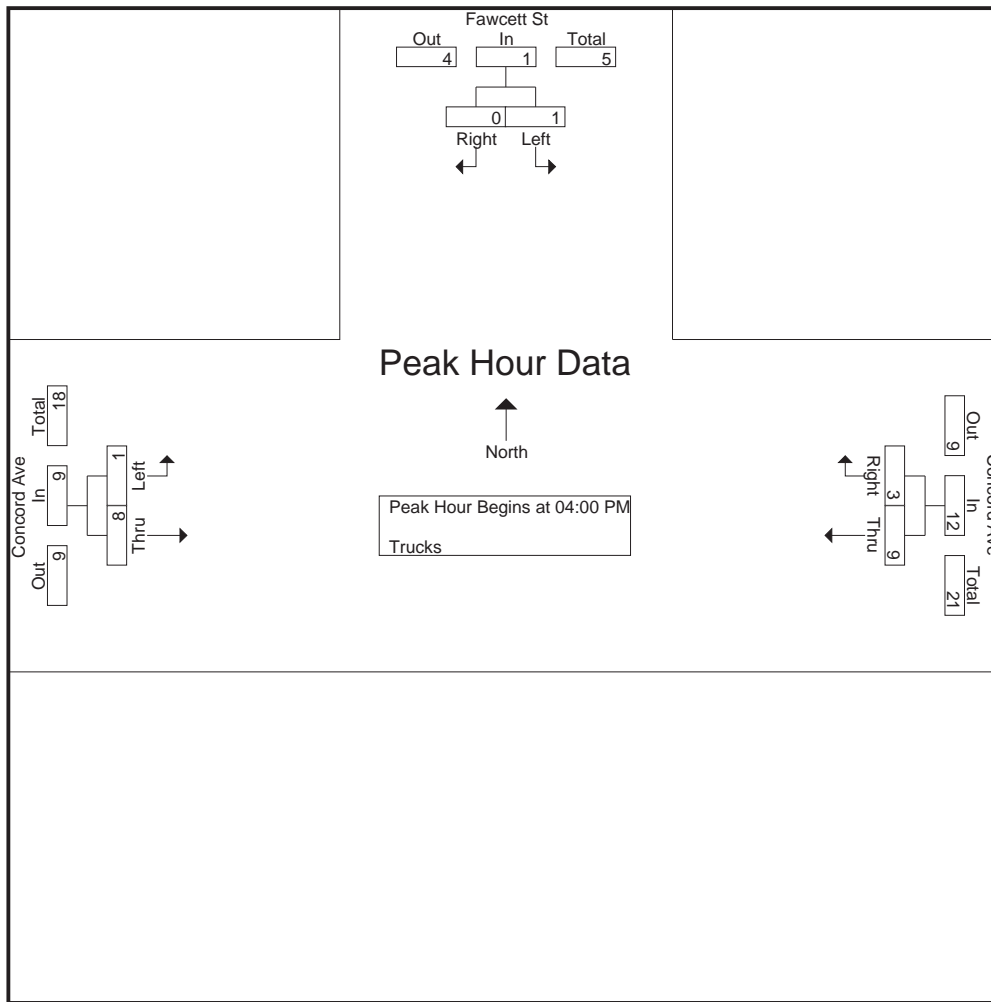
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 8

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	0	1	3	1	4	0	2	2	7
04:15 PM	0	0	0	3	1	4	0	1	1	5
04:30 PM	0	0	0	2	0	2	1	4	5	7
04:45 PM	0	0	0	1	1	2	0	1	1	3
Total Volume	1	0	1	9	3	12	1	8	9	22
% App. Total	100	0		75	25		11.1	88.9		
PHF	.250	.000	.250	.750	.750	.750	.250	.500	.450	.786



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

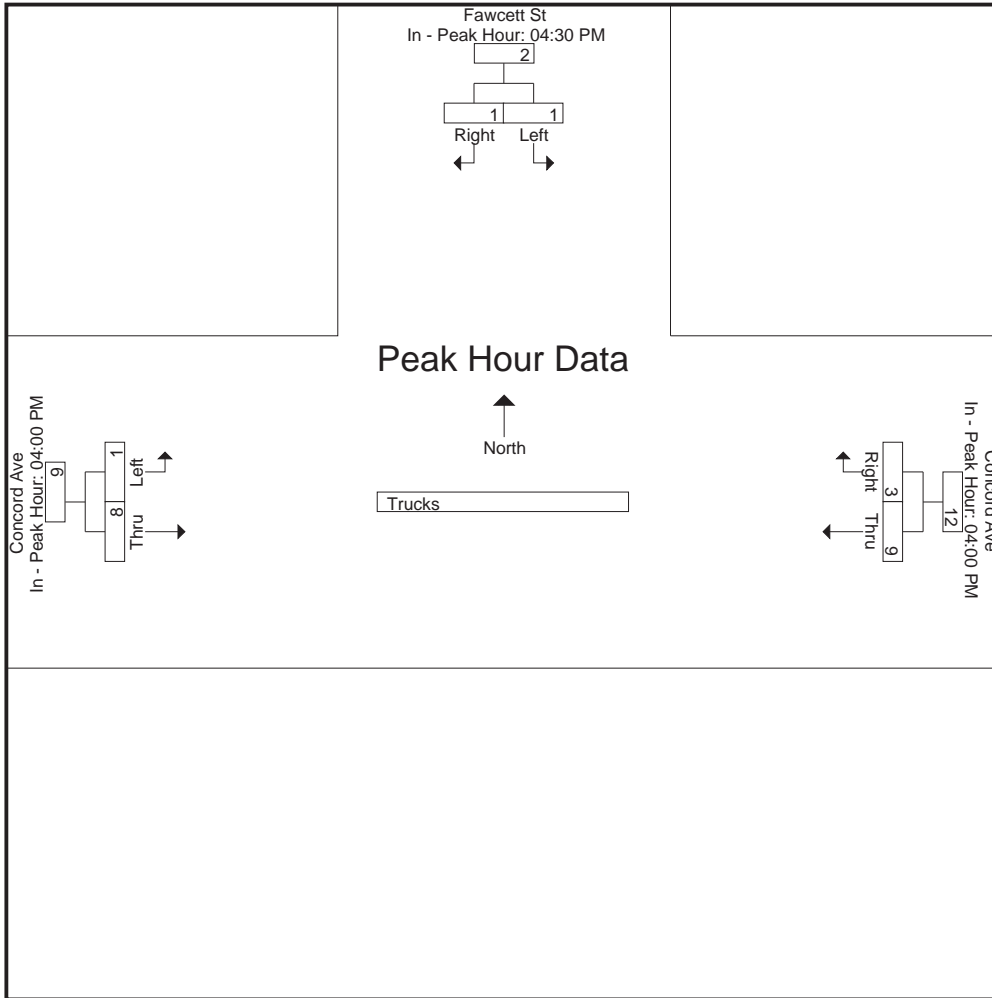
	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	3	1	4	0	2	2
+15 mins.	0	0	0	3	1	4	0	1	1
+30 mins.	0	0	0	2	0	2	1	4	5
+45 mins.	1	1	2	1	1	2	0	1	1
Total Volume	1	1	2	9	3	12	1	8	9
% App. Total	50	50		75	25		11.1	88.9	
PHF	.250	.250	.250	.750	.750	.750	.250	.500	.450

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009001
Site Code : 15009001
Start Date : 9/9/2015
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
04:00 PM	0	0	5	2	0	0	0	1	1	6	3	9
04:15 PM	1	0	4	2	0	0	0	3	1	5	6	11
04:30 PM	0	0	2	0	0	0	0	4	1	3	4	7
04:45 PM	2	0	6	3	0	0	0	2	2	8	7	15
Total	3	0	17	7	0	0	0	10	5	22	20	42
05:00 PM	2	0	10	8	1	0	0	3	3	13	14	27
05:15 PM	3	0	3	6	0	0	0	5	2	5	14	19
05:30 PM	0	0	5	14	2	0	0	3	2	7	19	26
05:45 PM	0	0	4	9	1	0	0	4	0	4	14	18
Total	5	0	22	37	4	0	0	15	7	29	61	90
Grand Total	8	0	39	44	4	0	0	25	12	51	81	132
Apprch %	100	0		91.7	8.3		0	100				
Total %	9.9	0		54.3	4.9		0	30.9		38.6	61.4	

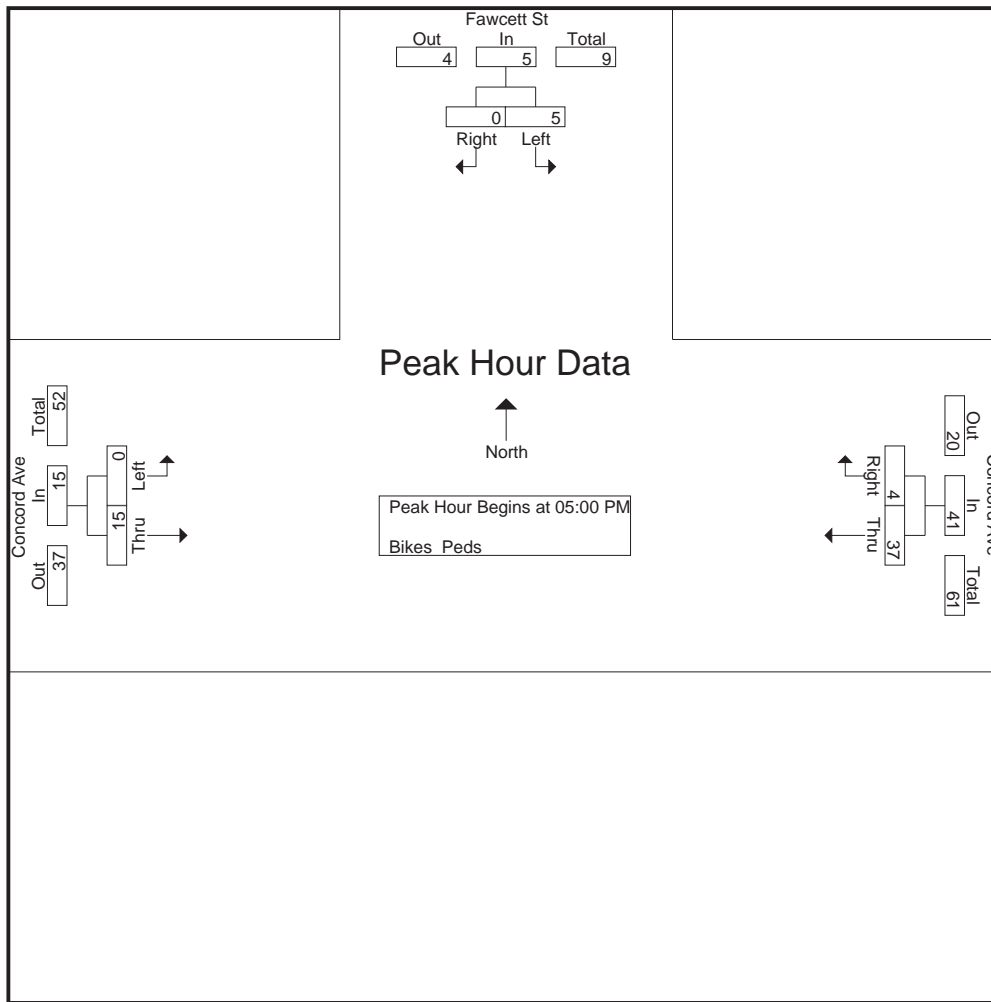
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 11

Start Time	Fawcett St From North			Concord Ave From East			Concord Ave From West			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	2	0	2	8	1	9	0	3	3	14
05:15 PM	3	0	3	6	0	6	0	5	5	14
05:30 PM	0	0	0	14	2	16	0	3	3	19
05:45 PM	0	0	0	9	1	10	0	4	4	14
Total Volume	5	0	5	37	4	41	0	15	15	61
% App. Total	100	0		90.2	9.8		0	100		
PHF	.417	.000	.417	.661	.500	.641	.000	.750	.750	.803



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

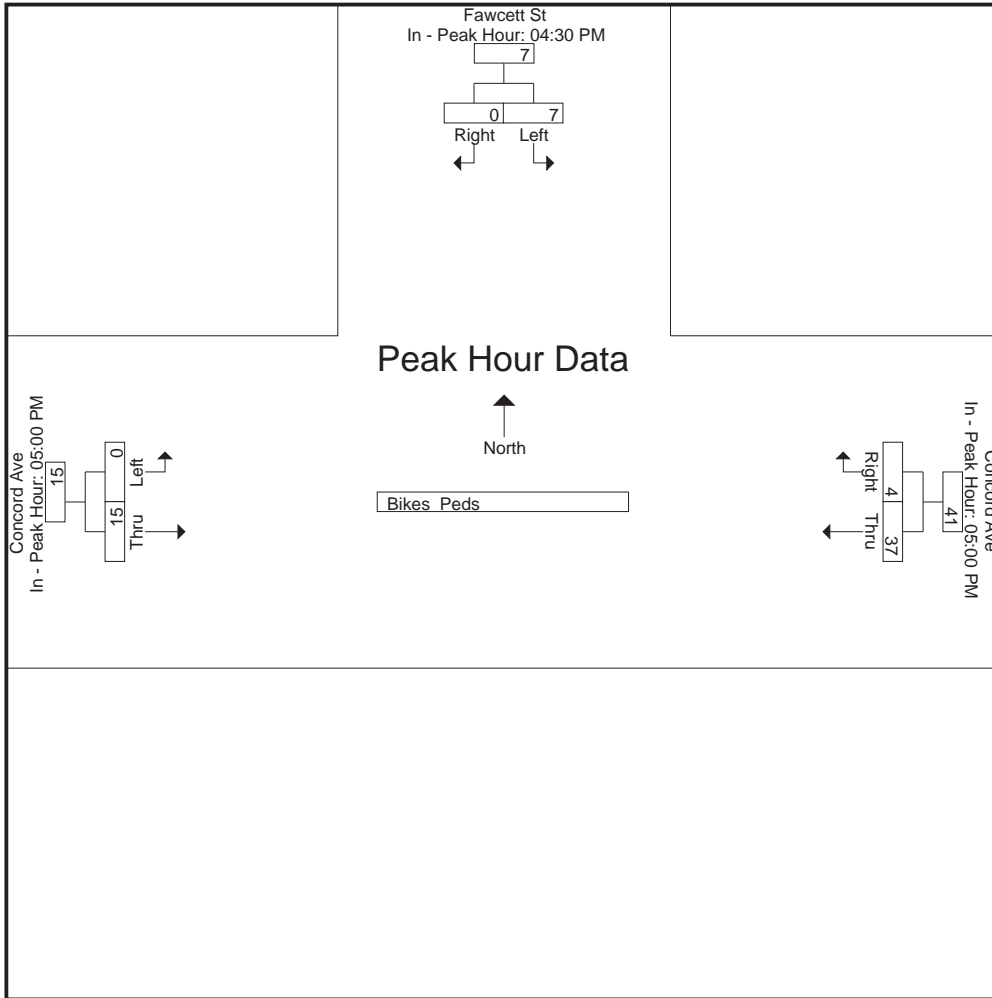
	04:30 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	8	1	9	0	3	3
+15 mins.	2	0	2	6	0	6	0	5	5
+30 mins.	2	0	2	14	2	16	0	3	3
+45 mins.	3	0	3	9	1	10	0	4	4
Total Volume	7	0	7	37	4	41	0	15	15
% App. Total	100	0		90.2	9.8		0	100	
PHF	.583	.000	.583	.661	.500	.641	.000	.750	.750

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009001
 Site Code : 15009001
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	14	0	0	10	111	17	2	0	3	2	136	3	298
07:15 AM	19	0	0	9	114	13	0	0	3	2	117	1	278
07:30 AM	15	0	0	0	122	20	1	0	1	2	174	1	336
07:45 AM	5	0	0	5	157	15	1	0	3	3	163	2	354
Total	53	0	0	24	504	65	4	0	10	9	590	7	1266
08:00 AM	11	0	5	2	162	20	1	1	3	1	173	5	384
08:15 AM	4	0	1	5	169	27	2	0	2	3	185	2	400
08:30 AM	12	0	1	5	136	22	1	0	3	2	190	0	372
08:45 AM	13	0	2	6	154	29	1	0	1	9	242	4	461
Total	40	0	9	18	621	98	5	1	9	15	790	11	1617
Grand Total	93	0	9	42	1125	163	9	1	19	24	1380	18	2883
Apprch %	91.2	0	8.8	3.2	84.6	12.3	31	3.4	65.5	1.7	97	1.3	
Total %	3.2	0	0.3	1.5	39	5.7	0.3	0	0.7	0.8	47.9	0.6	
Cars	85	0	8	42	1084	160	9	1	19	24	1348	18	2798
% Cars	91.4	0	88.9	100	96.4	98.2	100	100	100	100	97.7	100	97.1
Trucks	8	0	1	0	41	3	0	0	0	0	32	0	85
% Trucks	8.6	0	11.1	0	3.6	1.8	0	0	0	0	2.3	0	2.9

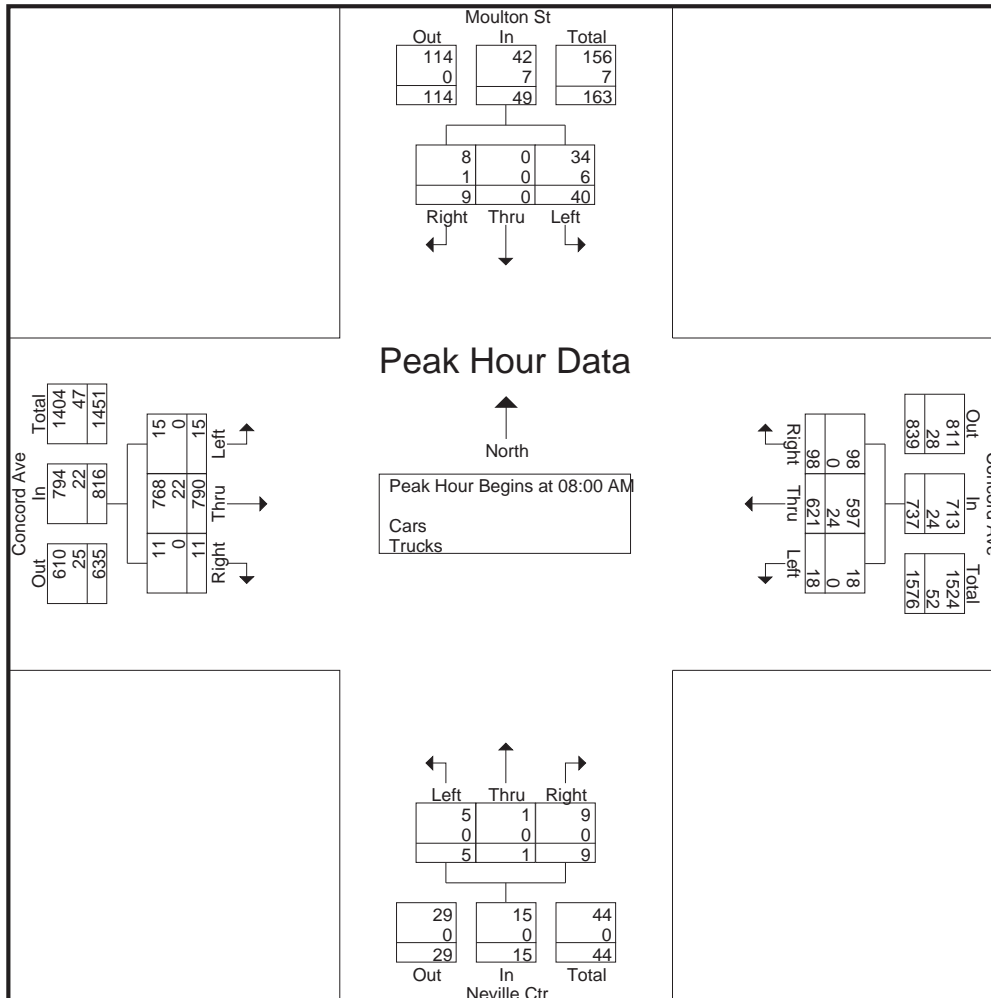
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 2

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	11	0	5	16	2	162	20	184	1	1	3	5	1	173	5	179	384
08:15 AM	4	0	1	5	5	169	27	201	2	0	2	4	3	185	2	190	400
08:30 AM	12	0	1	13	5	136	22	163	1	0	3	4	2	190	0	192	372
08:45 AM	13	0	2	15	6	154	29	189	1	0	1	2	9	242	4	255	461
Total Volume	40	0	9	49	18	621	98	737	5	1	9	15	15	790	11	816	1617
% App. Total	81.6	0	18.4		2.4	84.3	13.3		33.3	6.7	60		1.8	96.8	1.3		
PHF	.769	.000	.450	.766	.750	.919	.845	.917	.625	.250	.750	.750	.417	.816	.550	.800	.877
Cars	34	0	8	42	18	597	98	713	5	1	9	15	15	768	11	794	1564
% Cars	85.0	0	88.9	85.7	100	96.1	100	96.7	100	100	100	100	100	97.2	100	97.3	96.7
Trucks	6	0	1	7	0	24	0	24	0	0	0	0	0	22	0	22	53
% Trucks	15.0	0	11.1	14.3	0	3.9	0	3.3	0	0	0	0	0	2.8	0	2.7	3.3



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

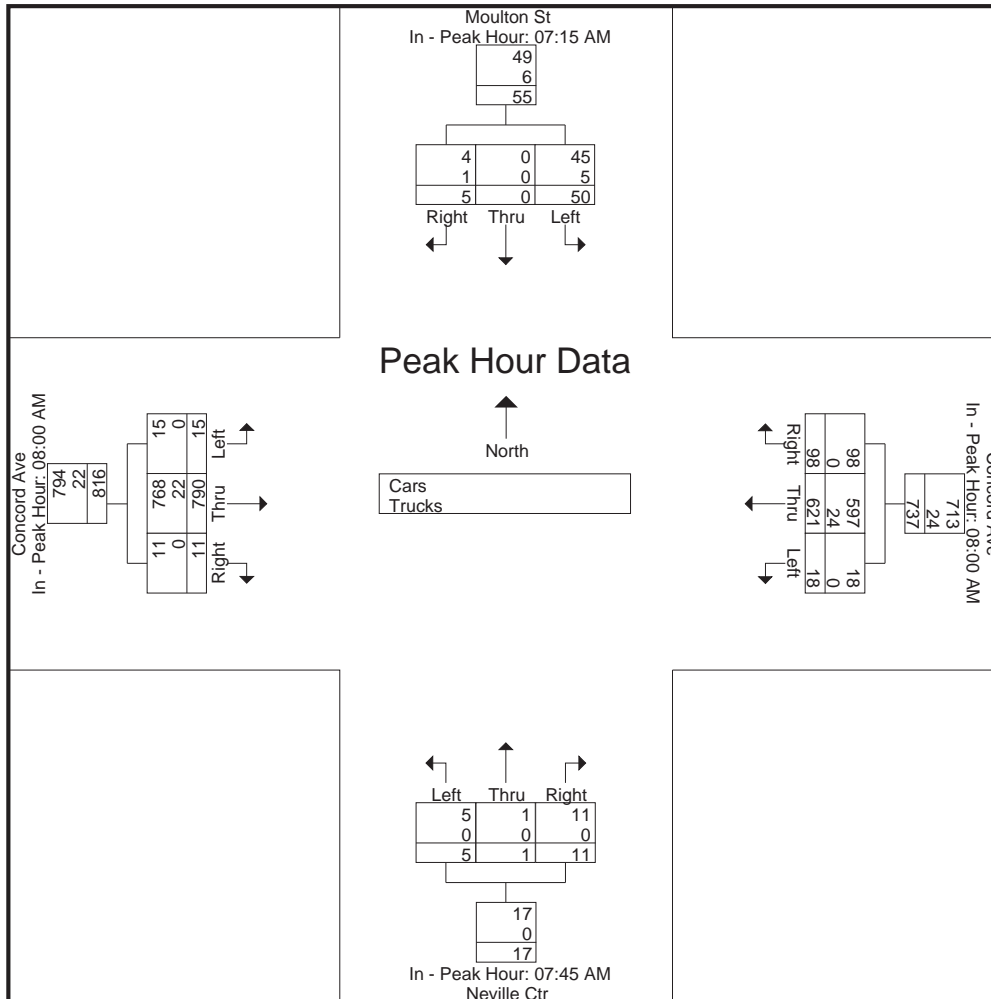
File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 3

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:45 AM				08:00 AM			
+0 mins.	19	0	0	19	2	162	20	184	1	0	3	4	1	173	5	179
+15 mins.	15	0	0	15	5	169	27	201	1	1	3	5	3	185	2	190
+30 mins.	5	0	0	5	5	136	22	163	2	0	2	4	2	190	0	192
+45 mins.	11	0	5	16	6	154	29	189	1	0	3	4	9	242	4	255
Total Volume	50	0	5	55	18	621	98	737	5	1	11	17	15	790	11	816
% App. Total	90.9	0	9.1		2.4	84.3	13.3		29.4	5.9	64.7		1.8	96.8	1.3	
PHF	.658	.000	.250	.724	.750	.919	.845	.917	.625	.250	.917	.850	.417	.816	.550	.800
Cars	45	0	4	49	18	597	98	713	5	1	11	17	15	768	11	794
% Cars	90	0	80	89.1	100	96.1	100	96.7	100	100	100	100	100	97.2	100	97.3
Trucks	5	0	1	6	0	24	0	24	0	0	0	0	0	22	0	22
% Trucks	10	0	20	10.9	0	3.9	0	3.3	0	0	0	0	0	2.8	0	2.7



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	14	0	0	10	106	17	2	0	3	2	134	3	291
07:15 AM	19	0	0	9	111	13	0	0	3	2	115	1	273
07:30 AM	14	0	0	0	116	20	1	0	1	2	172	1	327
07:45 AM	4	0	0	5	154	12	1	0	3	3	159	2	343
Total	51	0	0	24	487	62	4	0	10	9	580	7	1234
08:00 AM	8	0	4	2	153	20	1	1	3	1	164	5	362
08:15 AM	4	0	1	5	168	27	2	0	2	3	182	2	396
08:30 AM	11	0	1	5	131	22	1	0	3	2	185	0	361
08:45 AM	11	0	2	6	145	29	1	0	1	9	237	4	445
Total	34	0	8	18	597	98	5	1	9	15	768	11	1564
Grand Total	85	0	8	42	1084	160	9	1	19	24	1348	18	2798
Apprch %	91.4	0	8.6	3.3	84.3	12.4	31	3.4	65.5	1.7	97	1.3	
Total %	3	0	0.3	1.5	38.7	5.7	0.3	0	0.7	0.9	48.2	0.6	

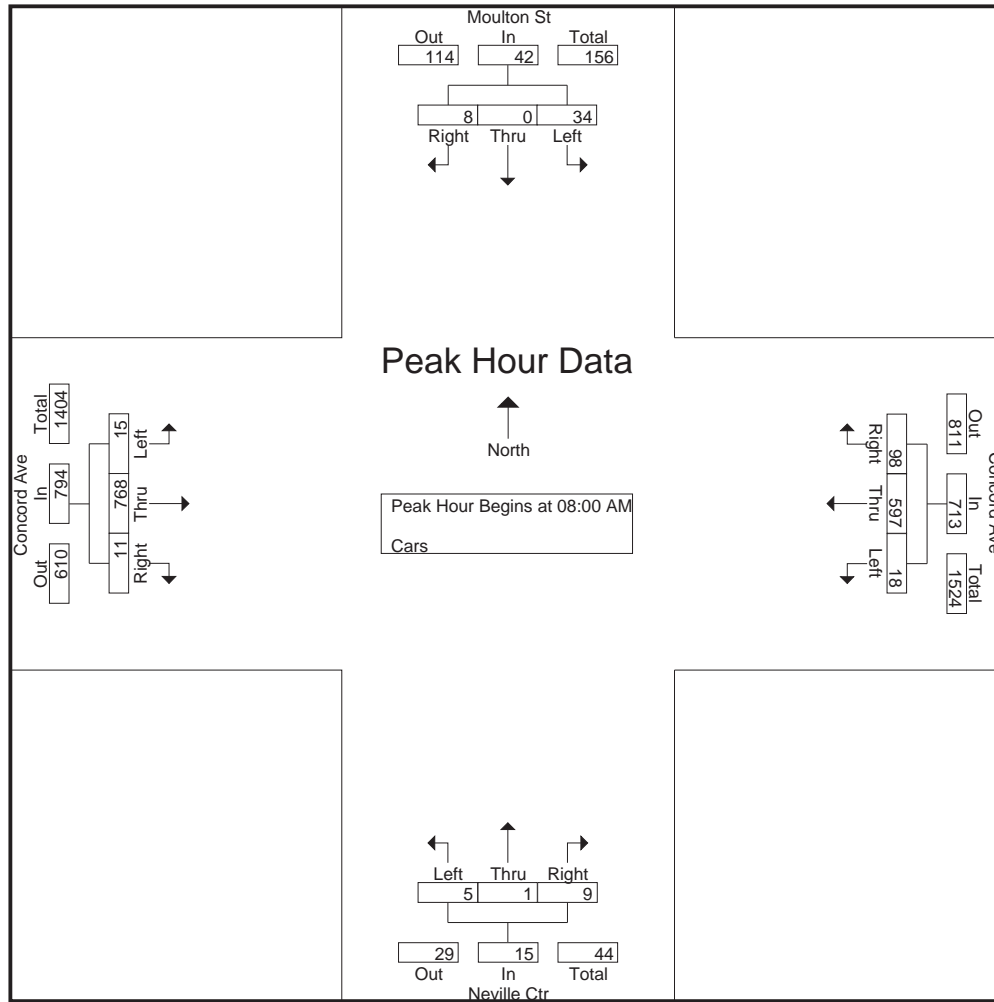
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 5

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	0	4	12	2	153	20	175	1	1	3	5	1	164	5	170	362
08:15 AM	4	0	1	5	5	168	27	200	2	0	2	4	3	182	2	187	396
08:30 AM	11	0	1	12	5	131	22	158	1	0	3	4	2	185	0	187	361
08:45 AM	11	0	2	13	6	145	29	180	1	0	1	2	9	237	4	250	445
Total Volume	34	0	8	42	18	597	98	713	5	1	9	15	15	768	11	794	1564
% App. Total	81	0	19		2.5	83.7	13.7		33.3	6.7	60		1.9	96.7	1.4		
PHF	.773	.000	.500	.808	.750	.888	.845	.891	.625	.250	.750	.750	.417	.810	.550	.794	.879



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

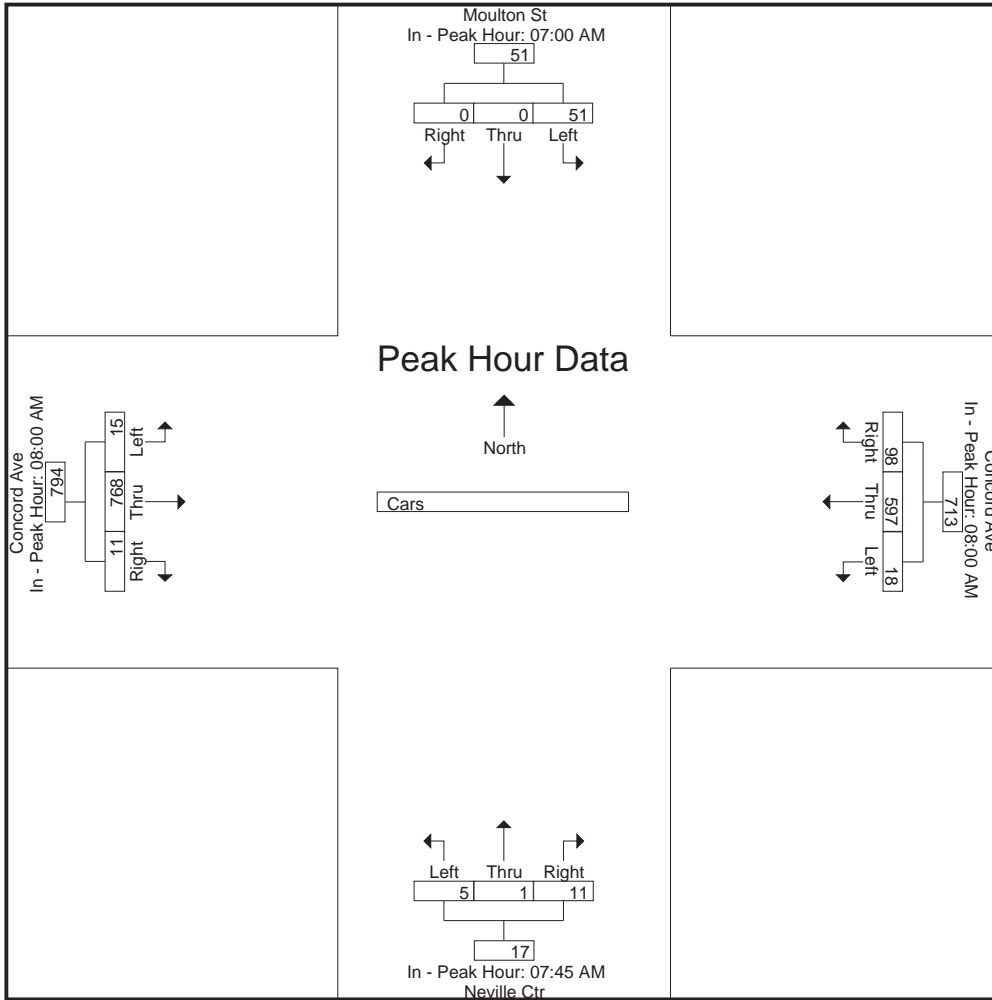
	07:00 AM				08:00 AM				07:45 AM				08:00 AM			
+0 mins.	14	0	0	14	2	153	20	175	1	0	3	4	1	164	5	170
+15 mins.	19	0	0	19	5	168	27	200	1	1	3	5	3	182	2	187
+30 mins.	14	0	0	14	5	131	22	158	2	0	2	4	2	185	0	187
+45 mins.	4	0	0	4	6	145	29	180	1	0	3	4	9	237	4	250
Total Volume	51	0	0	51	18	597	98	713	5	1	11	17	15	768	11	794
% App. Total	100	0	0		2.5	83.7	13.7		29.4	5.9	64.7		1.9	96.7	1.4	
PHF	.671	.000	.000	.671	.750	.888	.845	.891	.625	.250	.917	.850	.417	.810	.550	.794

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 6



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	5	0	0	0	0	0	2	0	7
07:15 AM	0	0	0	0	3	0	0	0	0	0	2	0	5
07:30 AM	1	0	0	0	6	0	0	0	0	0	2	0	9
07:45 AM	1	0	0	0	3	3	0	0	0	0	4	0	11
Total	2	0	0	0	17	3	0	0	0	0	10	0	32
08:00 AM	3	0	1	0	9	0	0	0	0	0	9	0	22
08:15 AM	0	0	0	0	1	0	0	0	0	0	3	0	4
08:30 AM	1	0	0	0	5	0	0	0	0	0	5	0	11
08:45 AM	2	0	0	0	9	0	0	0	0	0	5	0	16
Total	6	0	1	0	24	0	0	0	0	0	22	0	53
Grand Total	8	0	1	0	41	3	0	0	0	0	32	0	85
Apprch %	88.9	0	11.1	0	93.2	6.8	0	0	0	0	100	0	
Total %	9.4	0	1.2	0	48.2	3.5	0	0	0	0	37.6	0	

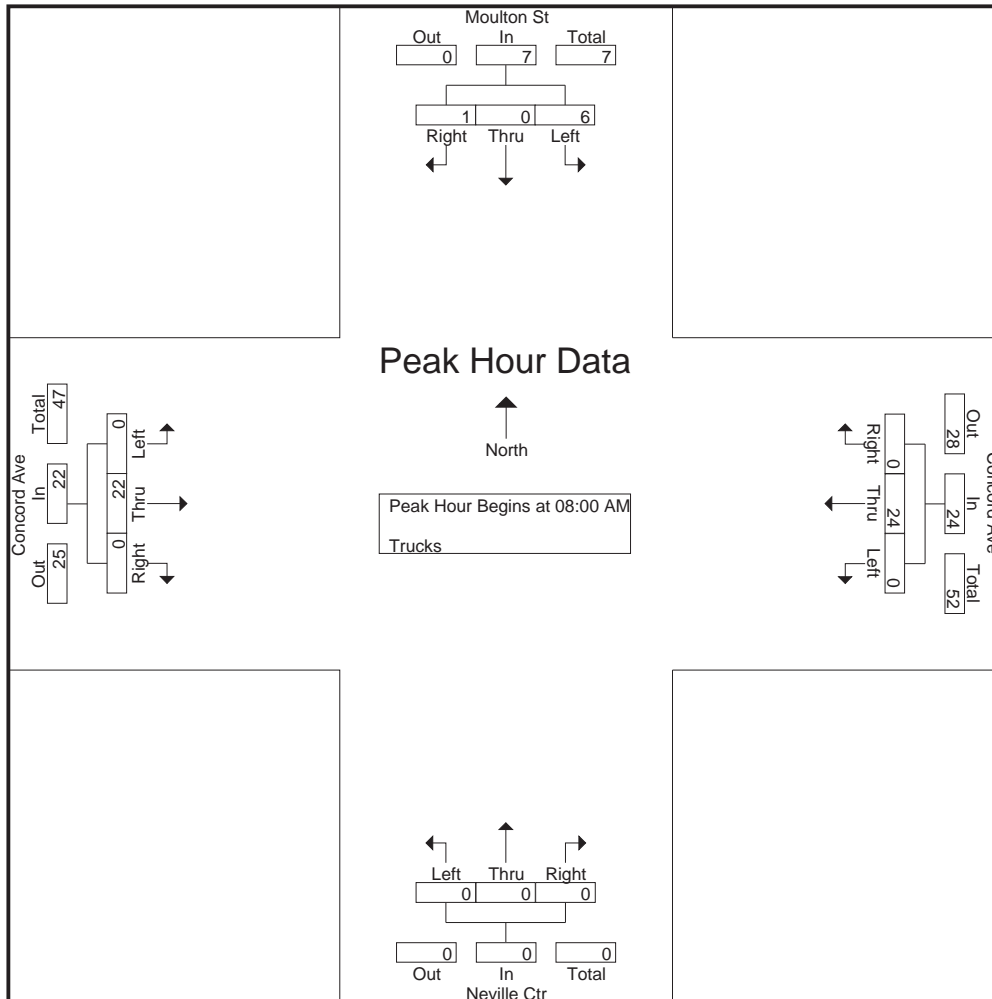
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 8

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	0	1	4	0	9	0	9	0	0	0	0	0	9	0	9	22
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:30 AM	1	0	0	1	0	5	0	5	0	0	0	0	0	5	0	5	11
08:45 AM	2	0	0	2	0	9	0	9	0	0	0	0	0	5	0	5	16
Total Volume	6	0	1	7	0	24	0	24	0	0	0	0	0	22	0	22	53
% App. Total	85.7	0	14.3		0	100	0		0	0	0		0	100	0		
PHF	.500	.000	.250	.438	.000	.667	.000	.667	.000	.000	.000	.000	.000	.611	.000	.611	.602



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

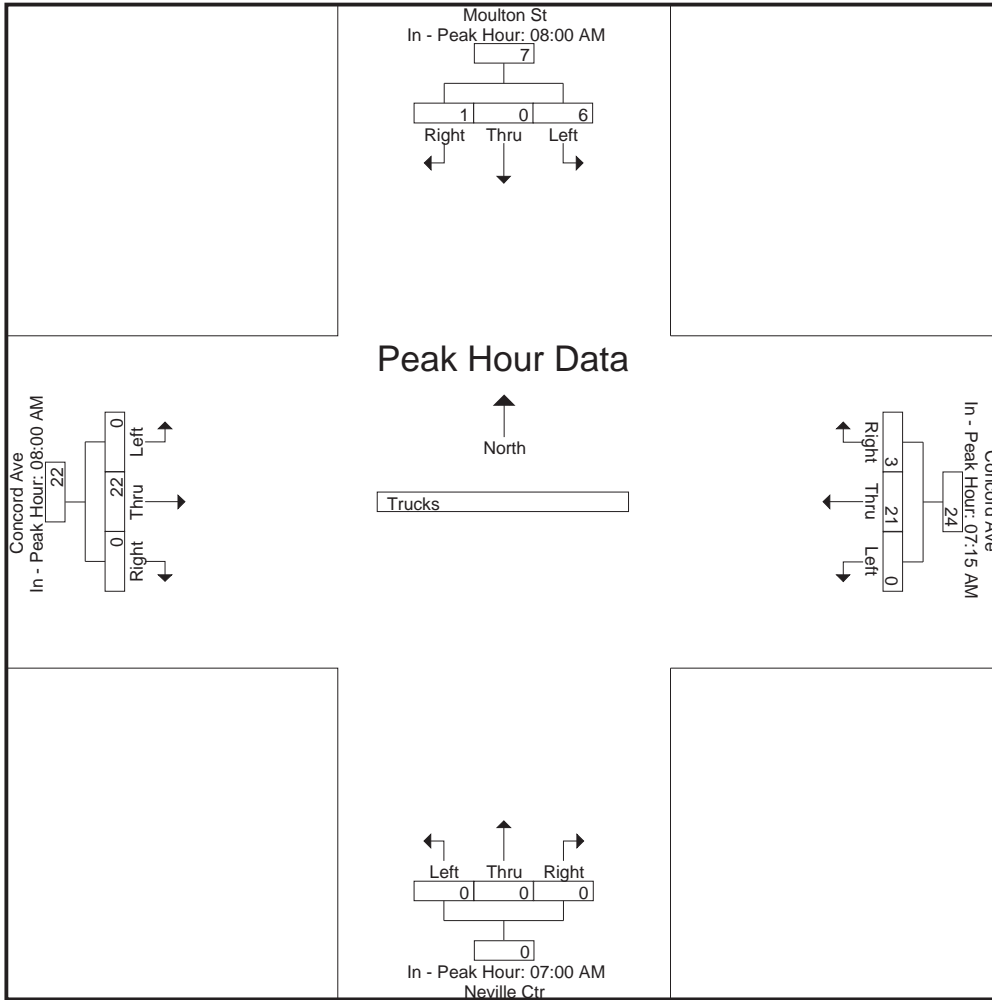
	08:00 AM				07:15 AM				07:00 AM				08:00 AM			
+0 mins.	3	0	1	4	0	3	0	3	0	0	0	0	0	9	0	9
+15 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3
+30 mins.	1	0	0	1	0	3	3	6	0	0	0	0	0	5	0	5
+45 mins.	2	0	0	2	0	9	0	9	0	0	0	0	0	5	0	5
Total Volume	6	0	1	7	0	21	3	24	0	0	0	0	0	22	0	22
% App. Total	85.7	0	14.3		0	87.5	12.5		0	0	0		0	100	0	
PHF	.500	.000	.250	.438	.000	.583	.250	.667	.000	.000	.000	.000	.000	.611	.000	.611

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 9



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	9	0	3	1	0	0	0	0	2	0	7	0	1	12	11	23
07:15 AM	0	0	0	3	0	0	0	1	0	0	0	2	0	10	0	0	6	10	16
07:30 AM	0	0	0	5	0	2	0	0	0	0	0	2	1	17	0	0	7	20	27
07:45 AM	0	0	0	4	0	5	1	0	0	0	0	3	0	6	0	3	10	12	22
Total	0	0	0	21	0	10	2	1	0	0	0	9	1	40	0	4	35	53	88
08:00 AM	0	0	0	3	0	3	2	1	0	0	0	2	0	13	0	0	6	18	24
08:15 AM	0	0	0	5	0	4	1	2	0	0	0	1	0	4	0	0	8	9	17
08:30 AM	0	0	0	1	0	6	1	1	0	0	0	2	0	10	0	1	5	17	22
08:45 AM	0	0	0	3	0	4	1	1	0	0	0	0	0	7	0	1	5	12	17
Total	0	0	0	12	0	17	5	5	0	0	0	5	0	34	0	2	24	56	80
Grand Total	0	0	0	33	0	27	7	6	0	0	0	14	1	74	0	6	59	109	168
Apprch %	0	0	0		0	79.4	20.6		0	0	0		1.3	98.7	0				
Total %	0	0	0		0	24.8	6.4		0	0	0		0.9	67.9	0		35.1	64.9	

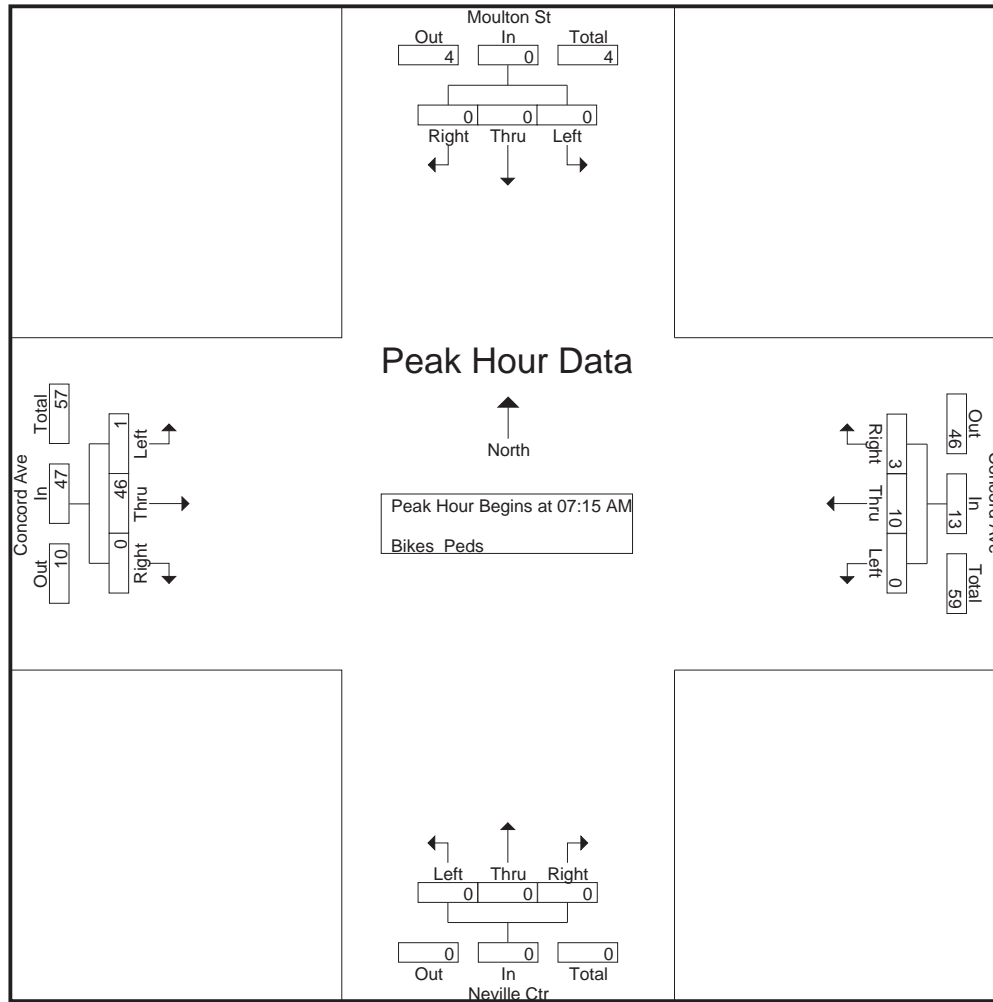
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 11

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	10
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	17	0	18	20
07:45 AM	0	0	0	0	0	5	1	6	0	0	0	0	0	6	0	6	12
08:00 AM	0	0	0	0	0	3	2	5	0	0	0	0	0	13	0	13	18
Total Volume	0	0	0	0	0	10	3	13	0	0	0	0	1	46	0	47	60
% App. Total	0	0	0	0	0	76.9	23.1		0	0	0	0	2.1	97.9	0		
PHF	.000	.000	.000	.000	.000	.500	.375	.542	.000	.000	.000	.000	.250	.676	.000	.653	.750



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

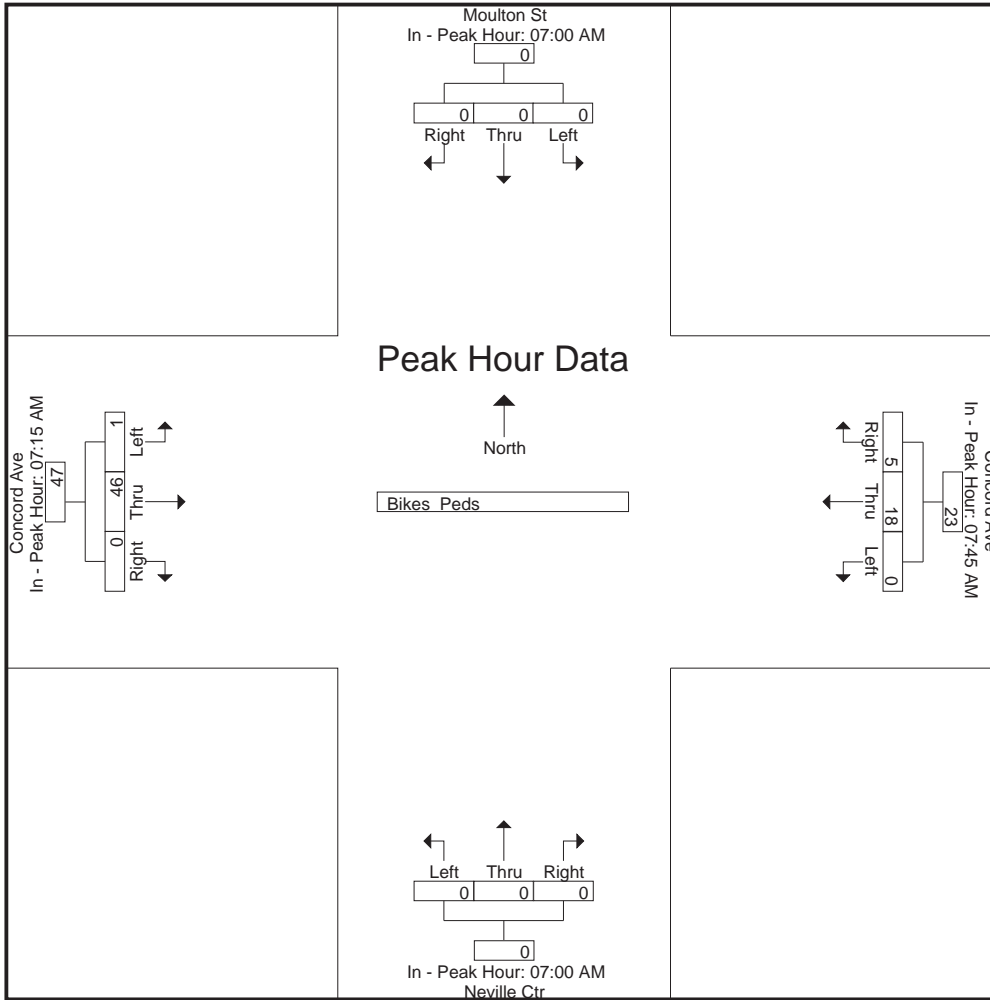
	07:00 AM				07:45 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	0	0	0	5	1	6	0	0	0	0	0	10	0	10
+15 mins.	0	0	0	0	0	3	2	5	0	0	0	0	1	17	0	18
+30 mins.	0	0	0	0	0	4	1	5	0	0	0	0	0	6	0	6
+45 mins.	0	0	0	0	0	6	1	7	0	0	0	0	0	13	0	13
Total Volume	0	0	0	0	0	18	5	23	0	0	0	0	1	46	0	47
% App. Total	0	0	0	0	0	78.3	21.7		0	0	0	0	2.1	97.9	0	
PHF	.000	.000	.000	.000	.000	.750	.625	.821	.000	.000	.000	.000	.250	.676	.000	.653

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	31	1	14	2	143	3	2	0	5	2	140	0	343
04:15 PM	20	0	4	3	141	0	4	0	7	0	117	2	298
04:30 PM	42	0	9	6	158	5	1	1	2	0	153	1	378
04:45 PM	22	0	8	8	123	8	3	0	7	1	149	1	330
Total	115	1	35	19	565	16	10	1	21	3	559	4	1349
05:00 PM	53	0	20	4	152	5	3	0	3	1	141	5	387
05:15 PM	41	0	12	4	170	5	3	0	7	0	130	5	377
05:30 PM	38	0	13	5	176	4	0	0	5	0	165	3	409
05:45 PM	21	0	9	4	155	2	2	1	3	0	152	4	353
Total	153	0	54	17	653	16	8	1	18	1	588	17	1526
Grand Total	268	1	89	36	1218	32	18	2	39	4	1147	21	2875
Apprch %	74.9	0.3	24.9	2.8	94.7	2.5	30.5	3.4	66.1	0.3	97.9	1.8	
Total %	9.3	0	3.1	1.3	42.4	1.1	0.6	0.1	1.4	0.1	39.9	0.7	
Cars	268	1	89	36	1206	31	18	2	39	2	1136	21	2849
% Cars	100	100	100	100	99	96.9	100	100	100	50	99	100	99.1
Trucks	0	0	0	0	12	1	0	0	0	2	11	0	26
% Trucks	0	0	0	0	1	3.1	0	0	0	50	1	0	0.9

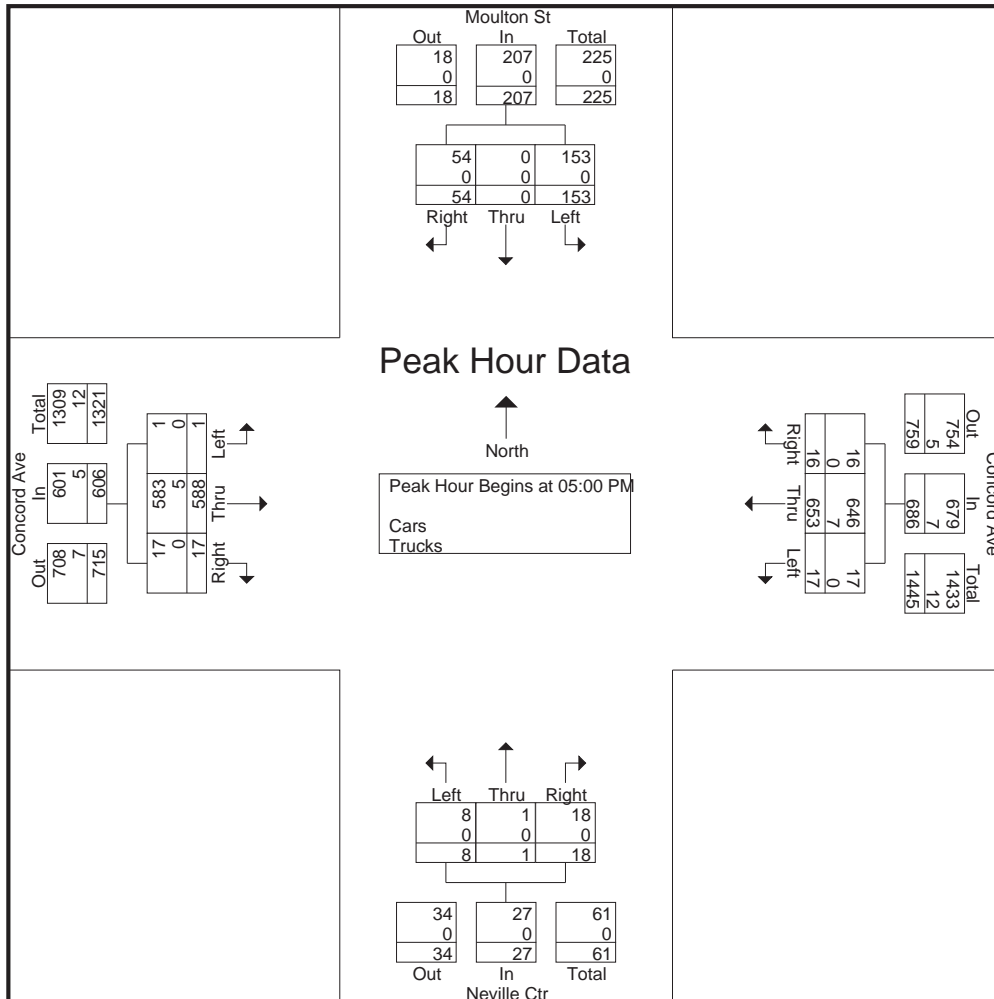
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 2

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	53	0	20	73	4	152	5	161	3	0	3	6	1	141	5	147	387
05:15 PM	41	0	12	53	4	170	5	179	3	0	7	10	0	130	5	135	377
05:30 PM	38	0	13	51	5	176	4	185	0	0	5	5	0	165	3	168	409
05:45 PM	21	0	9	30	4	155	2	161	2	1	3	6	0	152	4	156	353
Total Volume	153	0	54	207	17	653	16	686	8	1	18	27	1	588	17	606	1526
% App. Total	73.9	0	26.1		2.5	95.2	2.3		29.6	3.7	66.7		0.2	97	2.8		
PHF	.722	.000	.675	.709	.850	.928	.800	.927	.667	.250	.643	.675	.250	.891	.850	.902	.933
Cars	153	0	54	207	17	646	16	679	8	1	18	27	1	583	17	601	1514
% Cars	100	0	100	100	100	98.9	100	99.0	100	100	100	100	100	99.1	100	99.2	99.2
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
% Trucks	0	0	0	0	0	1.1	0	1.0	0	0	0	0	0	0.9	0	0.8	0.8



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

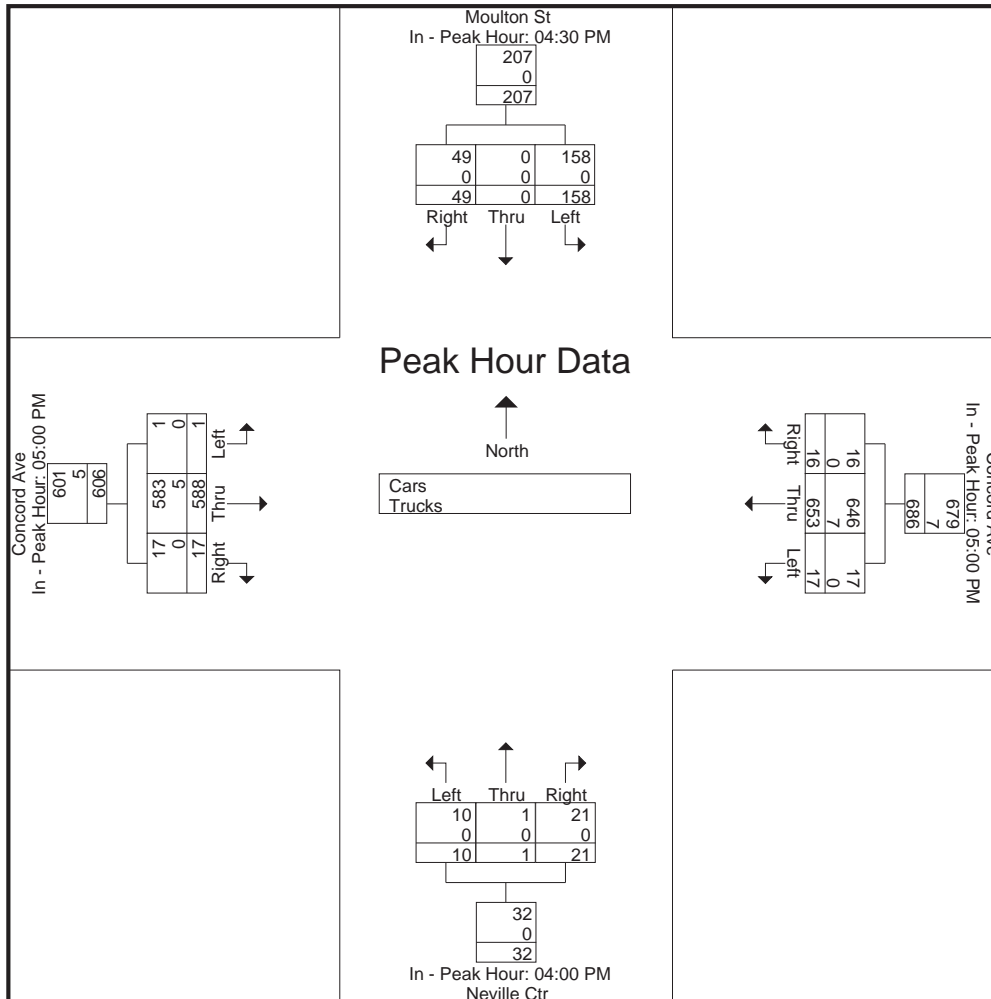
File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 3

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	42	0	9	51	4	152	5	161	2	0	5	7	1	141	5	147
+15 mins.	22	0	8	30	4	170	5	179	4	0	7	11	0	130	5	135
+30 mins.	53	0	20	73	5	176	4	185	1	1	2	4	0	165	3	168
+45 mins.	41	0	12	53	4	155	2	161	3	0	7	10	0	152	4	156
Total Volume	158	0	49	207	17	653	16	686	10	1	21	32	1	588	17	606
% App. Total	76.3	0	23.7		2.5	95.2	2.3		31.2	3.1	65.6		0.2	97	2.8	
PHF	.745	.000	.613	.709	.850	.928	.800	.927	.625	.250	.750	.727	.250	.891	.850	.902
Cars	158	0	49	207	17	646	16	679	10	1	21	32	1	583	17	601
% Cars	100	0	100	100	100	98.9	100	99	100	100	100	100	100	99.1	100	99.2
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5
% Trucks	0	0	0	0	0	1.1	0	1	0	0	0	0	0	0.9	0	0.8



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	31	1	14	2	142	2	2	0	5	0	138	0	337
04:15 PM	20	0	4	3	139	0	4	0	7	0	116	2	295
04:30 PM	42	0	9	6	157	5	1	1	2	0	151	1	375
04:45 PM	22	0	8	8	122	8	3	0	7	1	148	1	328
Total	115	1	35	19	560	15	10	1	21	1	553	4	1335
05:00 PM	53	0	20	4	149	5	3	0	3	1	139	5	382
05:15 PM	41	0	12	4	170	5	3	0	7	0	129	5	376
05:30 PM	38	0	13	5	175	4	0	0	5	0	165	3	408
05:45 PM	21	0	9	4	152	2	2	1	3	0	150	4	348
Total	153	0	54	17	646	16	8	1	18	1	583	17	1514
Grand Total	268	1	89	36	1206	31	18	2	39	2	1136	21	2849
Apprch %	74.9	0.3	24.9	2.8	94.7	2.4	30.5	3.4	66.1	0.2	98	1.8	
Total %	9.4	0	3.1	1.3	42.3	1.1	0.6	0.1	1.4	0.1	39.9	0.7	

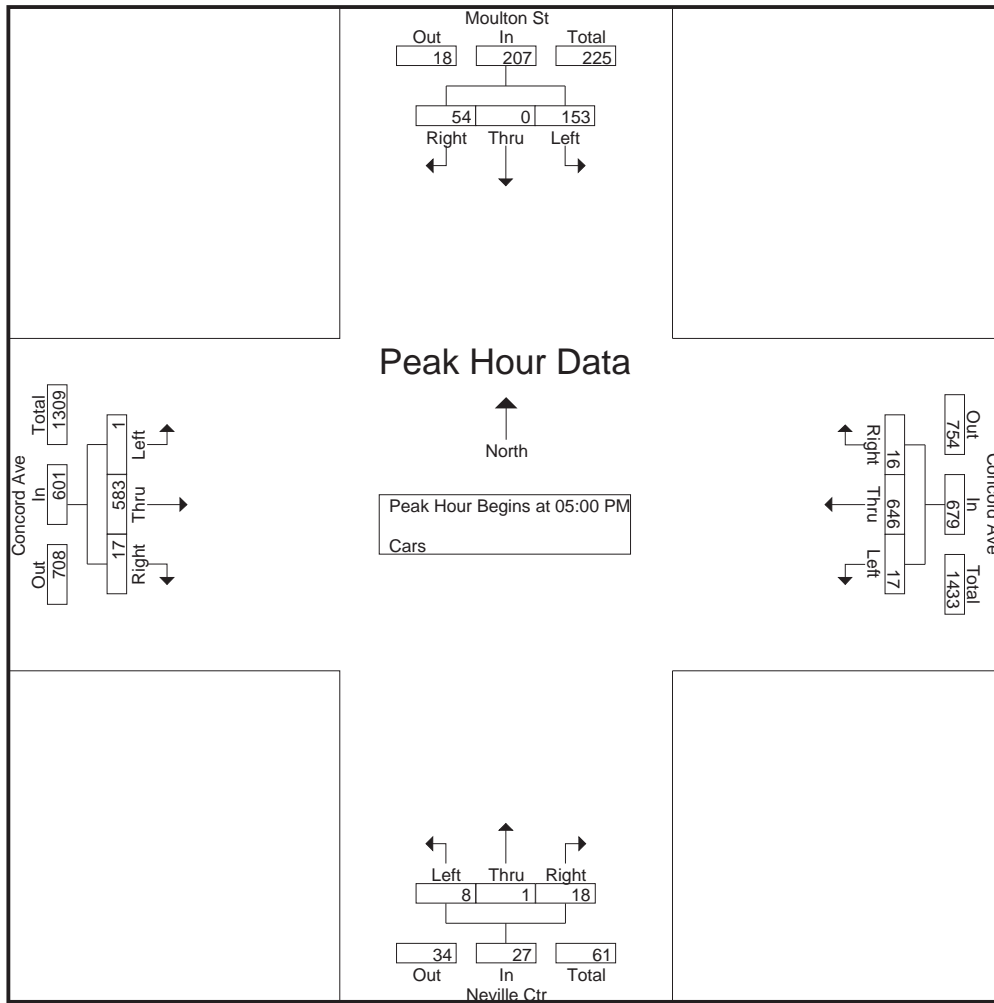
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 5

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	53	0	20	73	4	149	5	158	3	0	3	6	1	139	5	145	382
05:15 PM	41	0	12	53	4	170	5	179	3	0	7	10	0	129	5	134	376
05:30 PM	38	0	13	51	5	175	4	184	0	0	5	5	0	165	3	168	408
05:45 PM	21	0	9	30	4	152	2	158	2	1	3	6	0	150	4	154	348
Total Volume	153	0	54	207	17	646	16	679	8	1	18	27	1	583	17	601	1514
% App. Total	73.9	0	26.1		2.5	95.1	2.4		29.6	3.7	66.7		0.2	97	2.8		
PHF	.722	.000	.675	.709	.850	.923	.800	.923	.667	.250	.643	.675	.250	.883	.850	.894	.928



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

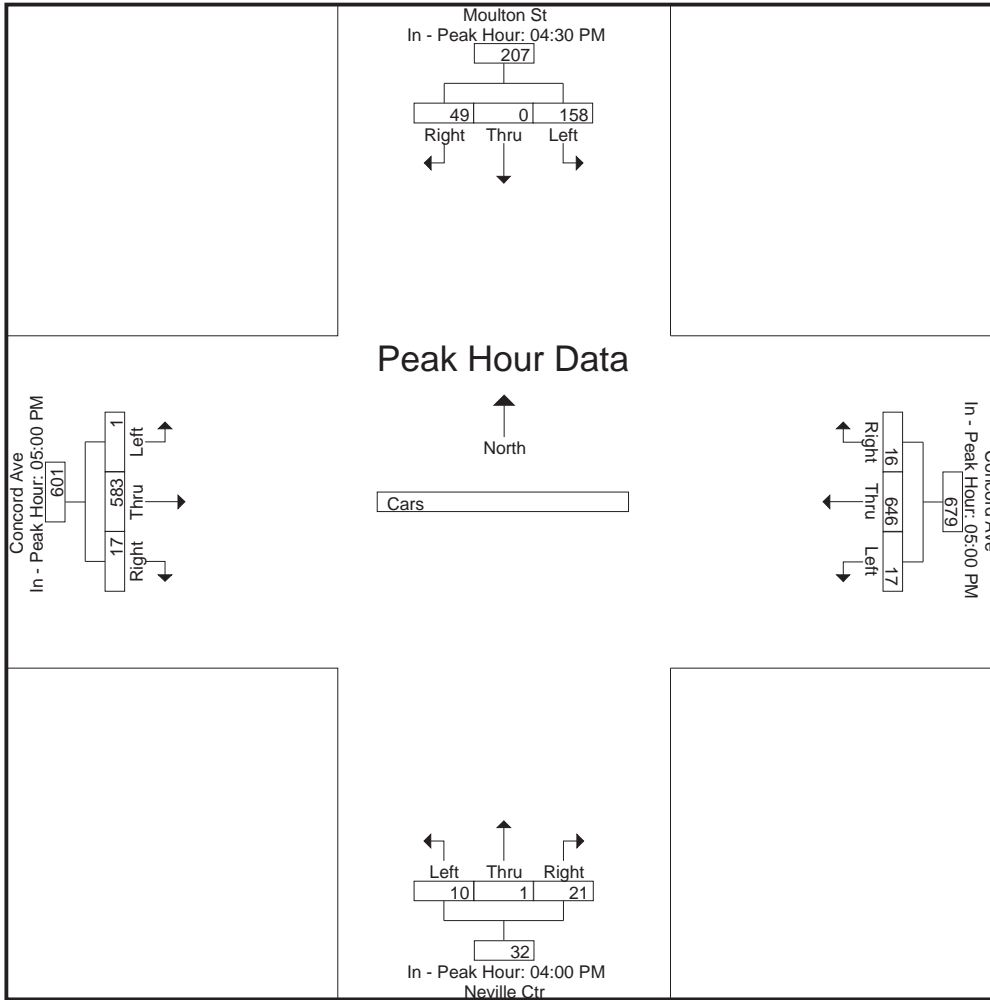
	04:30 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	42	0	9	51	4	149	5	158	2	0	5	7	1	139	5	145
+15 mins.	22	0	8	30	4	170	5	179	4	0	7	11	0	129	5	134
+30 mins.	53	0	20	73	5	175	4	184	1	1	2	4	0	165	3	168
+45 mins.	41	0	12	53	4	152	2	158	3	0	7	10	0	150	4	154
Total Volume	158	0	49	207	17	646	16	679	10	1	21	32	1	583	17	601
% App. Total	76.3	0	23.7		2.5	95.1	2.4		31.2	3.1	65.6		0.2	97	2.8	
PHF	.745	.000	.613	.709	.850	.923	.800	.923	.625	.250	.750	.727	.250	.883	.850	.894

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 6



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Moulton St From North			Concord Ave From East			Neville Ctr From South			Concord Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	1	1	0	0	0	2	2	0	6
04:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
04:30 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
04:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	0	0	0	0	5	1	0	0	0	2	6	0	14
05:00 PM	0	0	0	0	3	0	0	0	0	0	2	0	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	3	0	0	0	0	0	2	0	5
Total	0	0	0	0	7	0	0	0	0	0	5	0	12
Grand Total	0	0	0	0	12	1	0	0	0	2	11	0	26
Apprch %	0	0	0	0	92.3	7.7	0	0	0	15.4	84.6	0	
Total %	0	0	0	0	46.2	3.8	0	0	0	7.7	42.3	0	

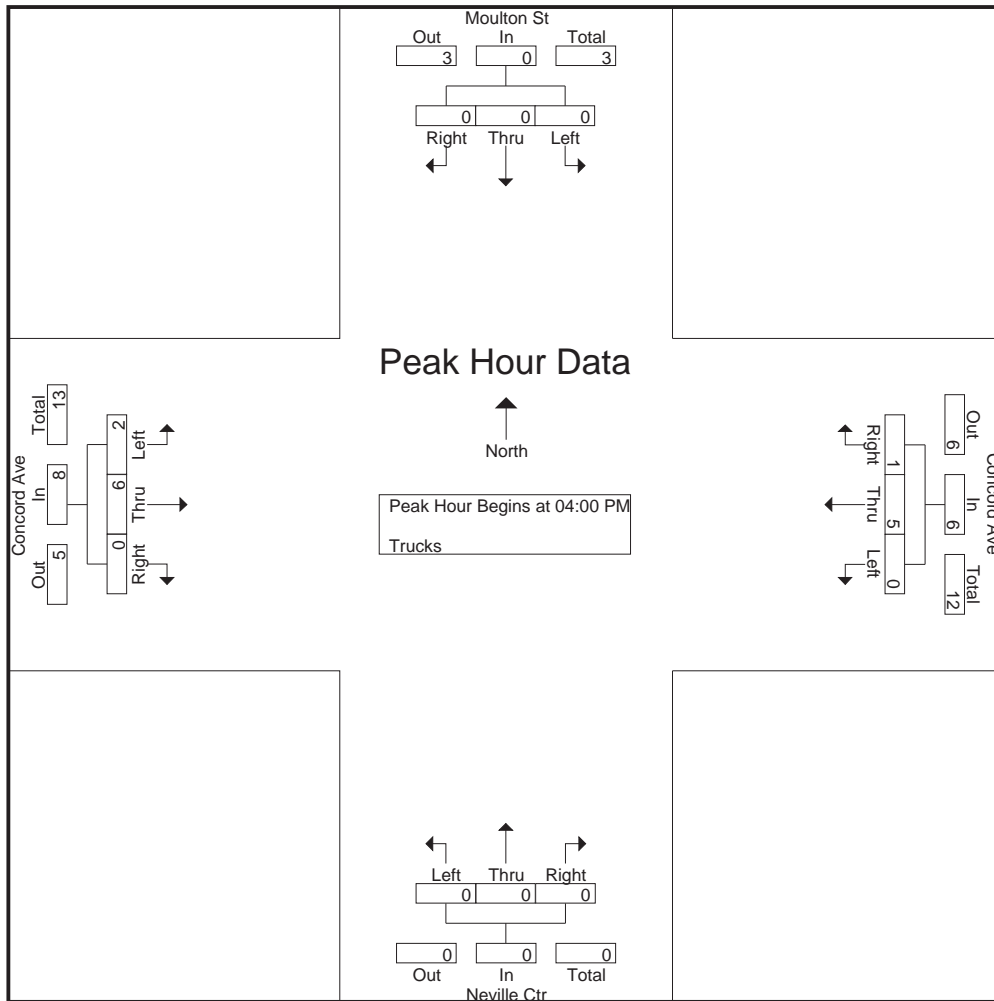
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 8

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	2	2	0	4	6
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	5	1	6	0	0	0	0	2	6	0	8	14
% App. Total	0	0	0	0	0	83.3	16.7		0	0	0	0	25	75	0		
PHF	.000	.000	.000	.000	.000	.625	.250	.750	.000	.000	.000	.000	.250	.750	.000	.500	.583



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

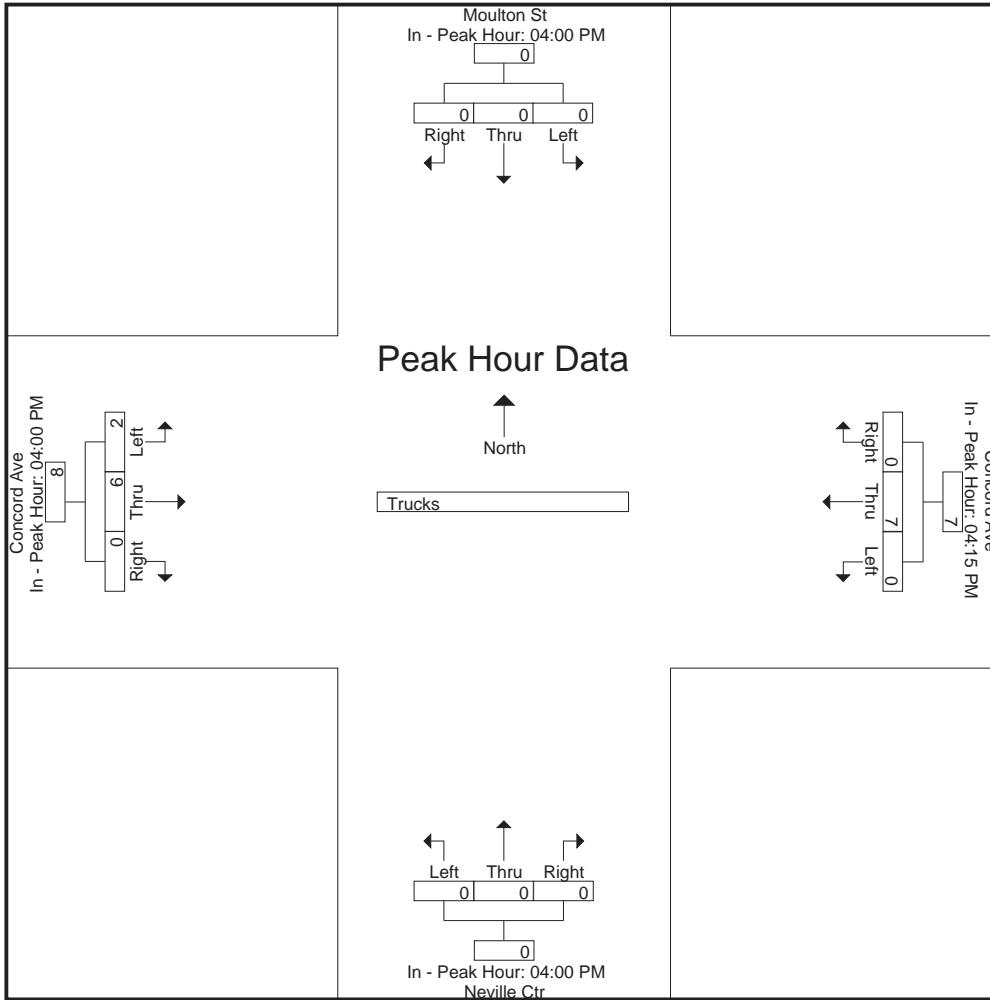
	04:00 PM				04:15 PM				04:30 PM				04:45 PM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	2	2	0	4
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	2	6	0	8
% App. Total	0	0	0	0	0	100	0		0	0	0	0	25	75	0	
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.000	.000	.000	.000	.250	.750	.000	.500

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 9



Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	6	0	3	0	0	0	0	0	0	0	2	0	0	6	5	11
04:15 PM	1	0	0	2	0	1	0	1	0	0	0	4	0	2	0	0	7	4	11
04:30 PM	2	0	0	2	0	0	0	1	0	0	0	2	0	2	0	2	7	4	11
04:45 PM	0	0	0	2	0	3	0	0	1	0	0	4	0	2	0	1	7	6	13
Total	3	0	0	12	0	7	0	2	1	0	0	10	0	8	0	3	27	19	46
05:00 PM	2	0	0	7	0	7	0	1	0	0	0	1	0	4	0	1	10	13	23
05:15 PM	1	0	0	3	0	7	0	3	0	0	0	2	0	2	0	3	11	10	21
05:30 PM	1	0	0	0	1	12	0	2	0	0	0	2	0	1	0	1	5	15	20
05:45 PM	1	0	0	1	0	10	0	0	0	0	0	2	0	2	0	1	4	13	17
Total	5	0	0	11	1	36	0	6	0	0	0	7	0	9	0	6	30	51	81
Grand Total	8	0	0	23	1	43	0	8	1	0	0	17	0	17	0	9	57	70	127
Apprch %	100	0	0		2.3	97.7	0		100	0	0		0	100	0				
Total %	11.4	0	0		1.4	61.4	0		1.4	0	0		0	24.3	0		44.9	55.1	

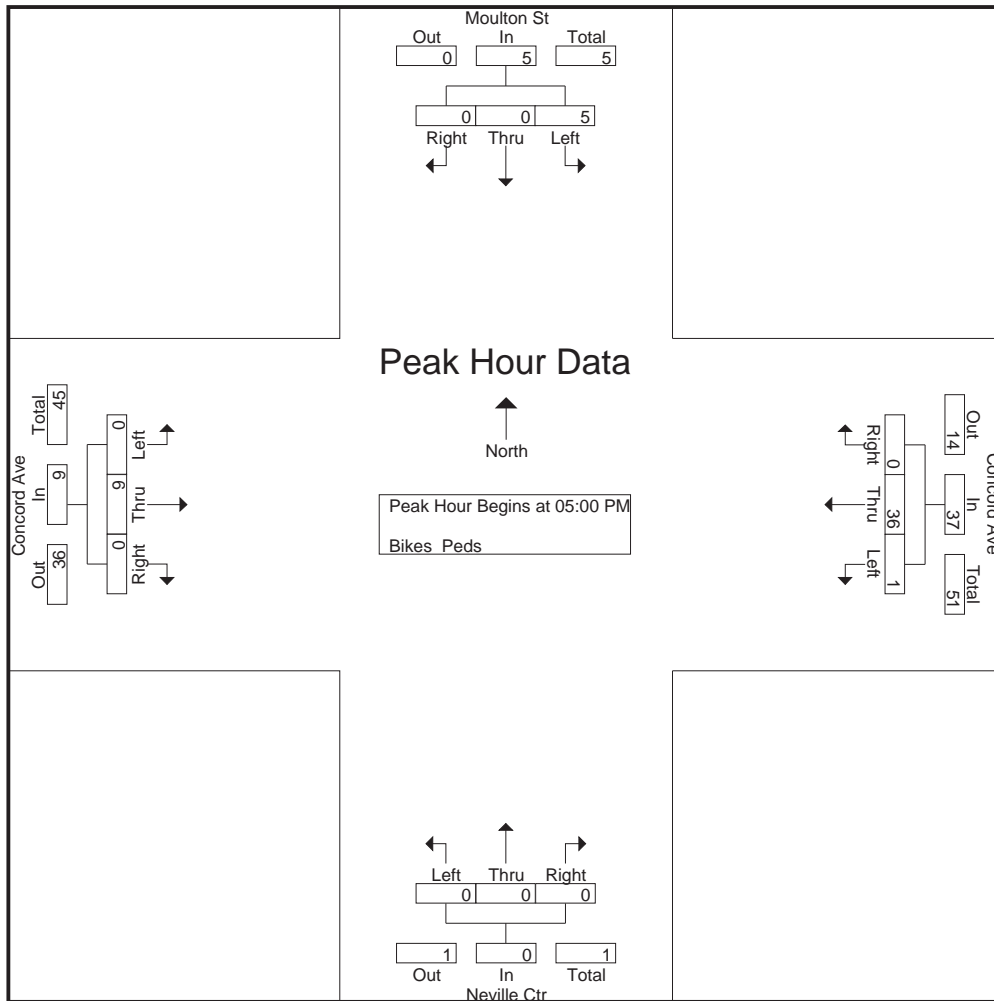
Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 11

Start Time	Moulton St From North				Concord Ave From East				Neville Ctr From South				Concord Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	0	0	2	0	7	0	7	0	0	0	0	0	4	0	4	13
05:15 PM	1	0	0	1	0	7	0	7	0	0	0	0	0	2	0	2	10
05:30 PM	1	0	0	1	1	12	0	13	0	0	0	0	0	1	0	1	15
05:45 PM	1	0	0	1	0	10	0	10	0	0	0	0	0	2	0	2	13
Total Volume	5	0	0	5	1	36	0	37	0	0	0	0	0	9	0	9	51
% App. Total	100	0	0		2.7	97.3	0		0	0	0		0	100	0		
PHF	.625	.000	.000	.625	.250	.750	.000	.712	.000	.000	.000	.000	.000	.563	.000	.563	.850



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

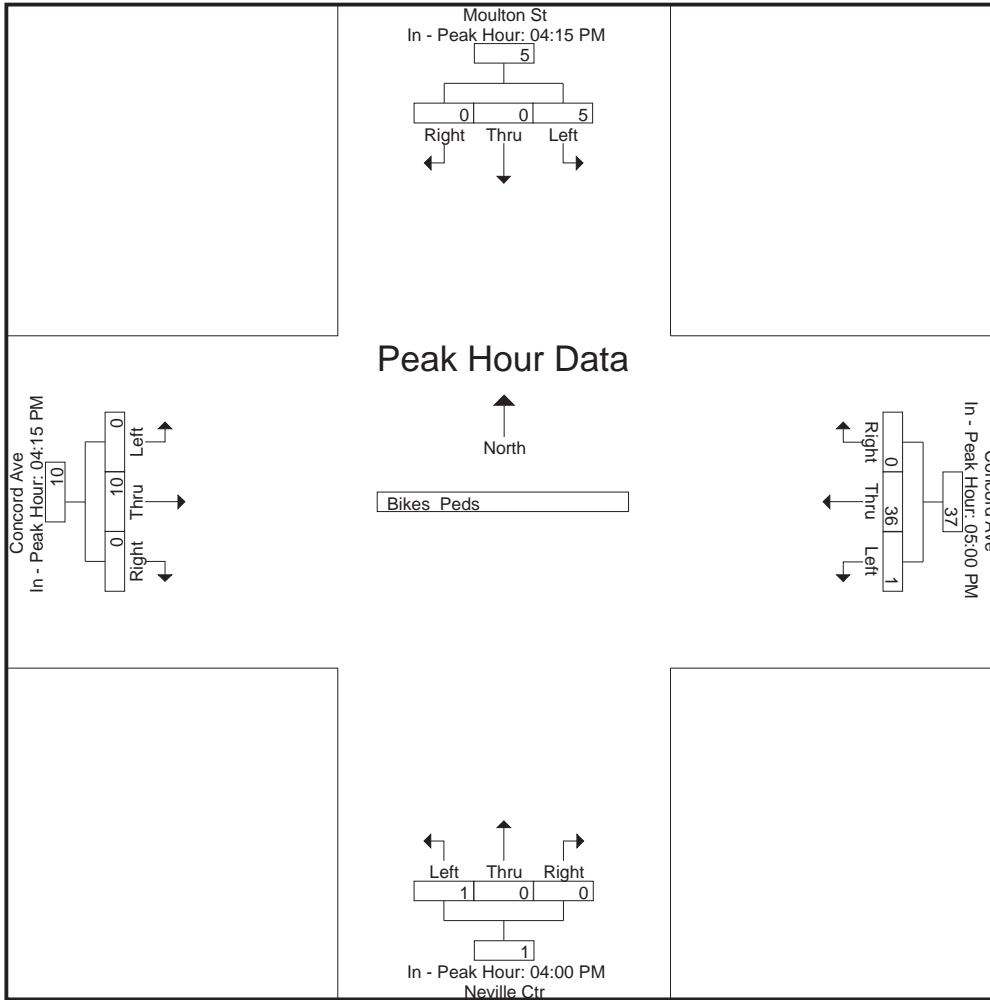
	04:15 PM				05:00 PM				04:00 PM				04:15 PM			
+0 mins.	1	0	0	1	0	7	0	7	0	0	0	0	0	2	0	2
+15 mins.	2	0	0	2	0	7	0	7	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	1	12	0	13	0	0	0	0	0	2	0	2
+45 mins.	2	0	0	2	0	10	0	10	1	0	0	1	0	4	0	4
Total Volume	5	0	0	5	1	36	0	37	1	0	0	1	0	10	0	10
% App. Total	100	0	0		2.7	97.3	0		100	0	0		0	100	0	
PHF	.625	.000	.000	.625	.250	.750	.000	.712	.250	.000	.000	.250	.000	.625	.000	.625

Accurate Counts

978-664-2565

N/S Street : Moulton St / Neville Ctr
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009002
 Site Code : 15009002
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	2	3	0	5	6	3	6	12	10	0	1	0	48
07:15 AM	1	3	0	6	1	13	6	14	5	0	0	2	51
07:30 AM	3	15	0	11	2	9	4	7	4	1	3	1	60
07:45 AM	0	10	0	8	3	5	2	6	9	0	0	1	44
Total	6	31	0	30	12	30	18	39	28	1	4	4	203
08:00 AM	2	6	0	12	1	3	1	8	5	0	1	1	40
08:15 AM	0	4	0	8	1	3	1	7	11	0	1	1	37
08:30 AM	0	10	0	7	0	7	2	5	6	0	0	2	39
08:45 AM	4	7	0	6	0	9	2	5	8	0	0	1	42
Total	6	27	0	33	2	22	6	25	30	0	2	5	158
Grand Total	12	58	0	63	14	52	24	64	58	1	6	9	361
Apprch %	17.1	82.9	0	48.8	10.9	40.3	16.4	43.8	39.7	6.2	37.5	56.2	
Total %	3.3	16.1	0	17.5	3.9	14.4	6.6	17.7	16.1	0.3	1.7	2.5	
Cars	9	42	0	63	13	46	24	45	56	1	5	9	313
% Cars	75	72.4	0	100	92.9	88.5	100	70.3	96.6	100	83.3	100	86.7
Trucks	3	16	0	0	1	6	0	19	2	0	1	0	48
% Trucks	25	27.6	0	0	7.1	11.5	0	29.7	3.4	0	16.7	0	13.3

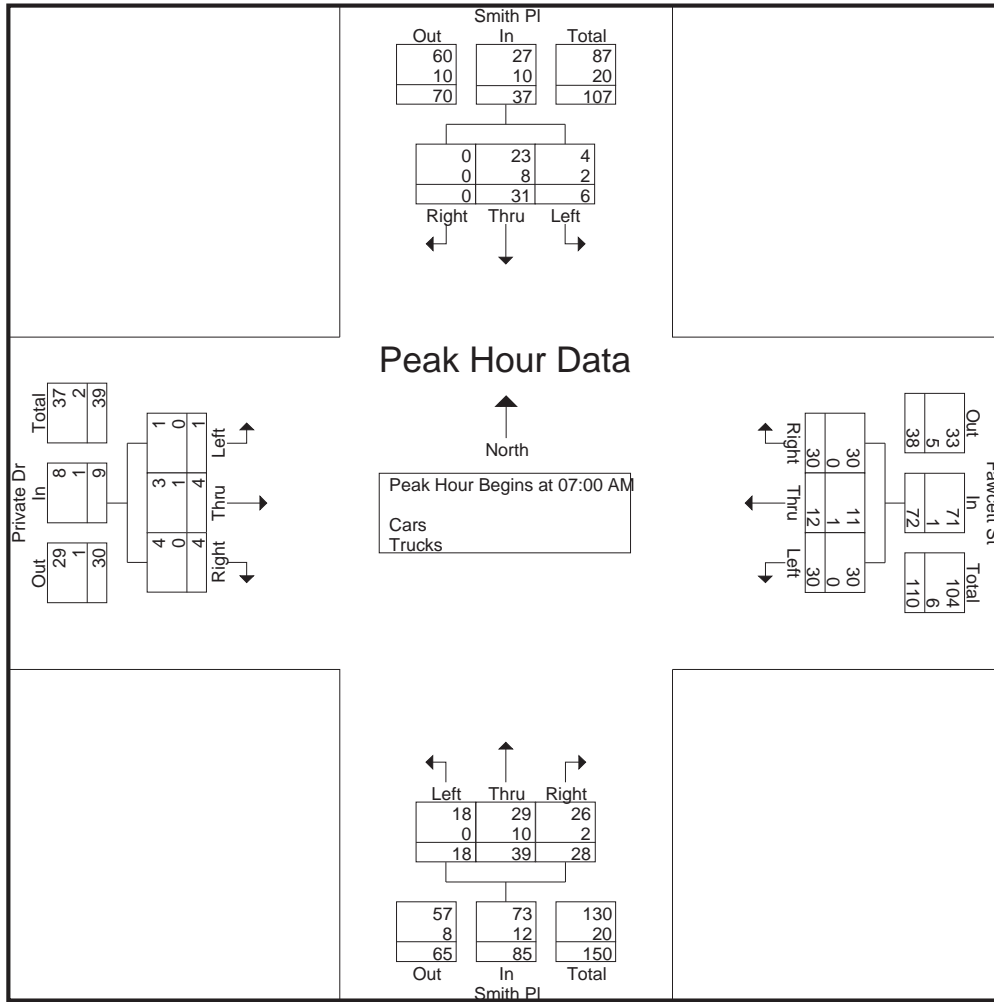
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 2

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	3	0	5	5	6	3	14	6	12	10	28	0	1	0	1	48
07:15 AM	1	3	0	4	6	1	13	20	6	14	5	25	0	0	2	2	51
07:30 AM	3	15	0	18	11	2	9	22	4	7	4	15	1	3	1	5	60
07:45 AM	0	10	0	10	8	3	5	16	2	6	9	17	0	0	1	1	44
Total Volume	6	31	0	37	30	12	30	72	18	39	28	85	1	4	4	9	203
% App. Total	16.2	83.8	0		41.7	16.7	41.7		21.2	45.9	32.9		11.1	44.4	44.4		
PHF	.500	.517	.000	.514	.682	.500	.577	.818	.750	.696	.700	.759	.250	.333	.500	.450	.846
Cars	4	23	0	27	30	11	30	71	18	29	26	73	1	3	4	8	179
% Cars	66.7	74.2	0	73.0	100	91.7	100	98.6	100	74.4	92.9	85.9	100	75.0	100	88.9	88.2
Trucks	2	8	0	10	0	1	0	1	0	10	2	12	0	1	0	1	24
% Trucks	33.3	25.8	0	27.0	0	8.3	0	1.4	0	25.6	7.1	14.1	0	25.0	0	11.1	11.8



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

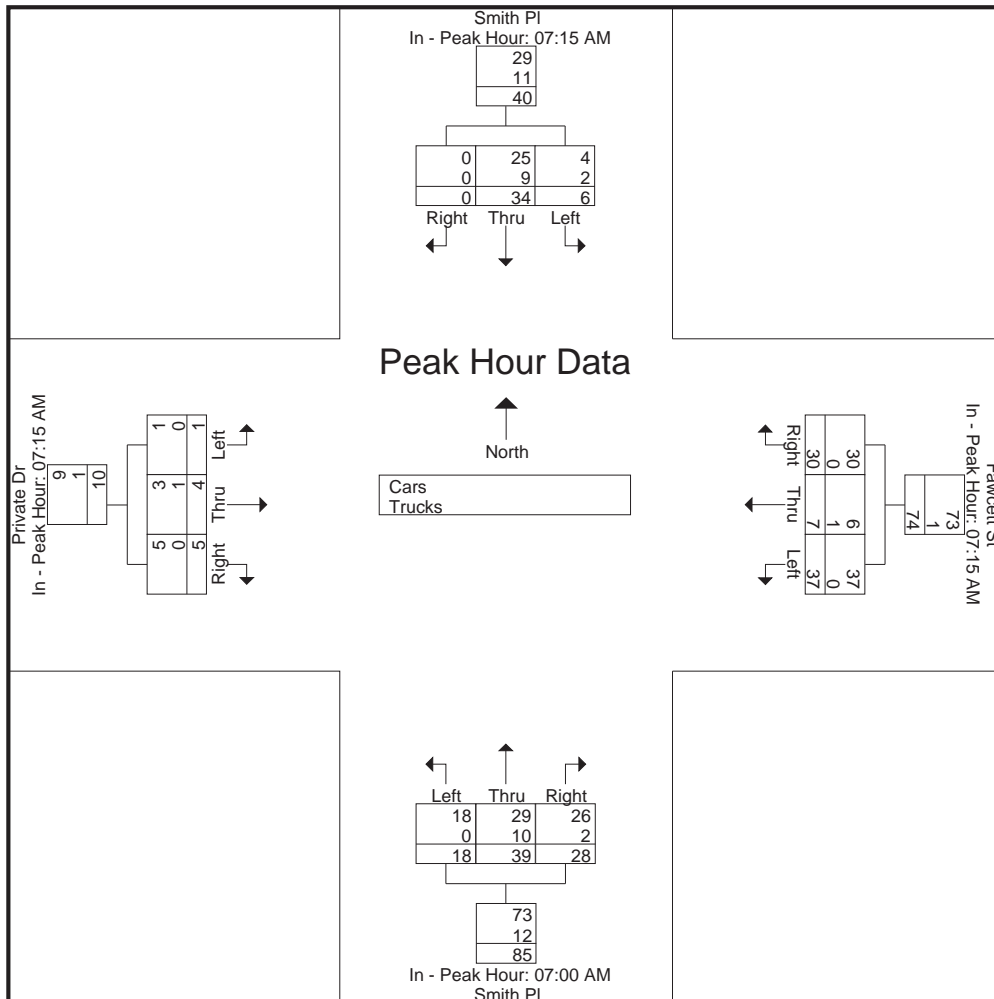
File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 3

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	1	3	0	4	6	1	13	20	6	12	10	28	0	0	2	2
+15 mins.	3	15	0	18	11	2	9	22	6	14	5	25	1	3	1	5
+30 mins.	0	10	0	10	8	3	5	16	4	7	4	15	0	0	1	1
+45 mins.	2	6	0	8	12	1	3	16	2	6	9	17	0	1	1	2
Total Volume	6	34	0	40	37	7	30	74	18	39	28	85	1	4	5	10
% App. Total	15	85	0		50	9.5	40.5		21.2	45.9	32.9		10	40	50	
PHF	.500	.567	.000	.556	.771	.583	.577	.841	.750	.696	.700	.759	.250	.333	.625	.500
Cars	4	25	0	29	37	6	30	73	18	29	26	73	1	3	5	9
% Cars	66.7	73.5	0	72.5	100	85.7	100	98.6	100	74.4	92.9	85.9	100	75	100	90
Trucks	2	9	0	11	0	1	0	1	0	10	2	12	0	1	0	1
% Trucks	33.3	26.5	0	27.5	0	14.3	0	1.4	0	25.6	7.1	14.1	0	25	0	10



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	2	2	0	5	6	3	6	7	9	0	1	0	41
07:15 AM	0	3	0	6	1	13	6	12	5	0	0	2	48
07:30 AM	2	13	0	11	1	9	4	5	4	1	2	1	53
07:45 AM	0	5	0	8	3	5	2	5	8	0	0	1	37
Total	4	23	0	30	11	30	18	29	26	1	3	4	179
08:00 AM	2	4	0	12	1	3	1	6	5	0	1	1	36
08:15 AM	0	3	0	8	1	2	1	5	11	0	1	1	33
08:30 AM	0	7	0	7	0	5	2	4	6	0	0	2	33
08:45 AM	3	5	0	6	0	6	2	1	8	0	0	1	32
Total	5	19	0	33	2	16	6	16	30	0	2	5	134
Grand Total	9	42	0	63	13	46	24	45	56	1	5	9	313
Apprch %	17.6	82.4	0	51.6	10.7	37.7	19.2	36	44.8	6.7	33.3	60	
Total %	2.9	13.4	0	20.1	4.2	14.7	7.7	14.4	17.9	0.3	1.6	2.9	

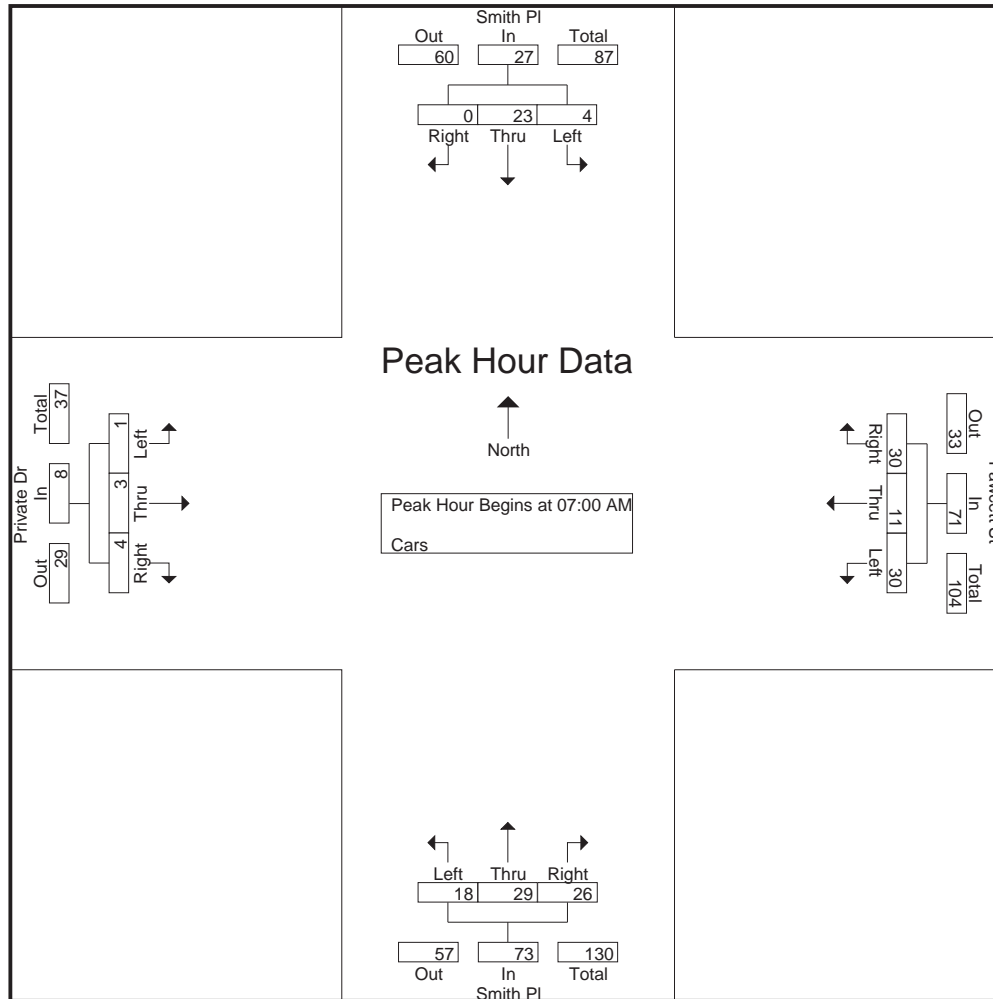
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 5

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	2	0	4	5	6	3	14	6	7	9	22	0	1	0	1	41
07:15 AM	0	3	0	3	6	1	13	20	6	12	5	23	0	0	2	2	48
07:30 AM	2	13	0	15	11	1	9	21	4	5	4	13	1	2	1	4	53
07:45 AM	0	5	0	5	8	3	5	16	2	5	8	15	0	0	1	1	37
Total Volume	4	23	0	27	30	11	30	71	18	29	26	73	1	3	4	8	179
% App. Total	14.8	85.2	0		42.3	15.5	42.3		24.7	39.7	35.6		12.5	37.5	50		
PHF	.500	.442	.000	.450	.682	.458	.577	.845	.750	.604	.722	.793	.250	.375	.500	.500	.844



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

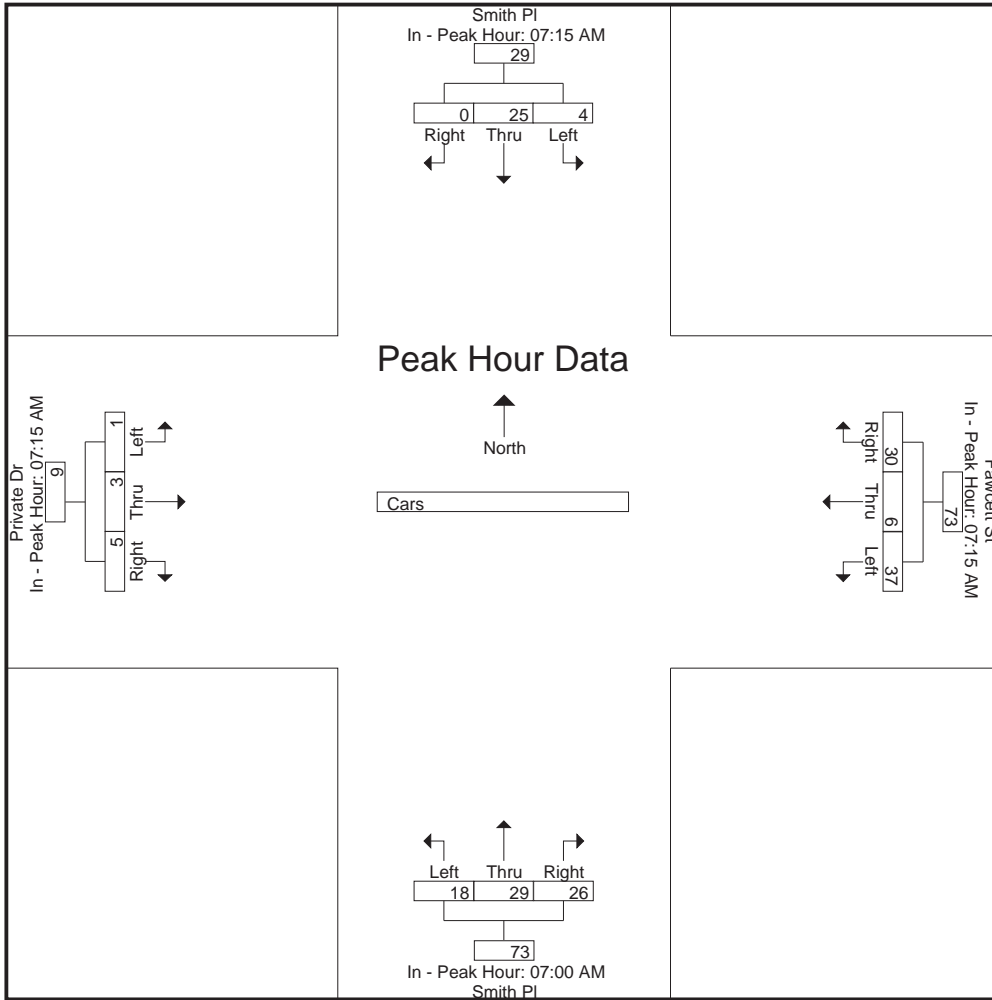
	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	0	3	0	3	6	1	13	20	6	7	9	22	0	0	2	2
+15 mins.	2	13	0	15	11	1	9	21	6	12	5	23	1	2	1	4
+30 mins.	0	5	0	5	8	3	5	16	4	5	4	13	0	0	1	1
+45 mins.	2	4	0	6	12	1	3	16	2	5	8	15	0	1	1	2
Total Volume	4	25	0	29	37	6	30	73	18	29	26	73	1	3	5	9
% App. Total	13.8	86.2	0		50.7	8.2	41.1		24.7	39.7	35.6		11.1	33.3	55.6	
PHF	.500	.481	.000	.483	.771	.500	.577	.869	.750	.604	.722	.793	.250	.375	.625	.563

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 6



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	1	0	0	0	0	0	5	1	0	0	0	7
07:15 AM	1	0	0	0	0	0	0	2	0	0	0	0	3
07:30 AM	1	2	0	0	1	0	0	2	0	0	1	0	7
07:45 AM	0	5	0	0	0	0	0	1	1	0	0	0	7
Total	2	8	0	0	1	0	0	10	2	0	1	0	24
08:00 AM	0	2	0	0	0	0	0	2	0	0	0	0	4
08:15 AM	0	1	0	0	0	1	0	2	0	0	0	0	4
08:30 AM	0	3	0	0	0	2	0	1	0	0	0	0	6
08:45 AM	1	2	0	0	0	3	0	4	0	0	0	0	10
Total	1	8	0	0	0	6	0	9	0	0	0	0	24
Grand Total	3	16	0	0	1	6	0	19	2	0	1	0	48
Apprch %	15.8	84.2	0	0	14.3	85.7	0	90.5	9.5	0	100	0	
Total %	6.2	33.3	0	0	2.1	12.5	0	39.6	4.2	0	2.1	0	

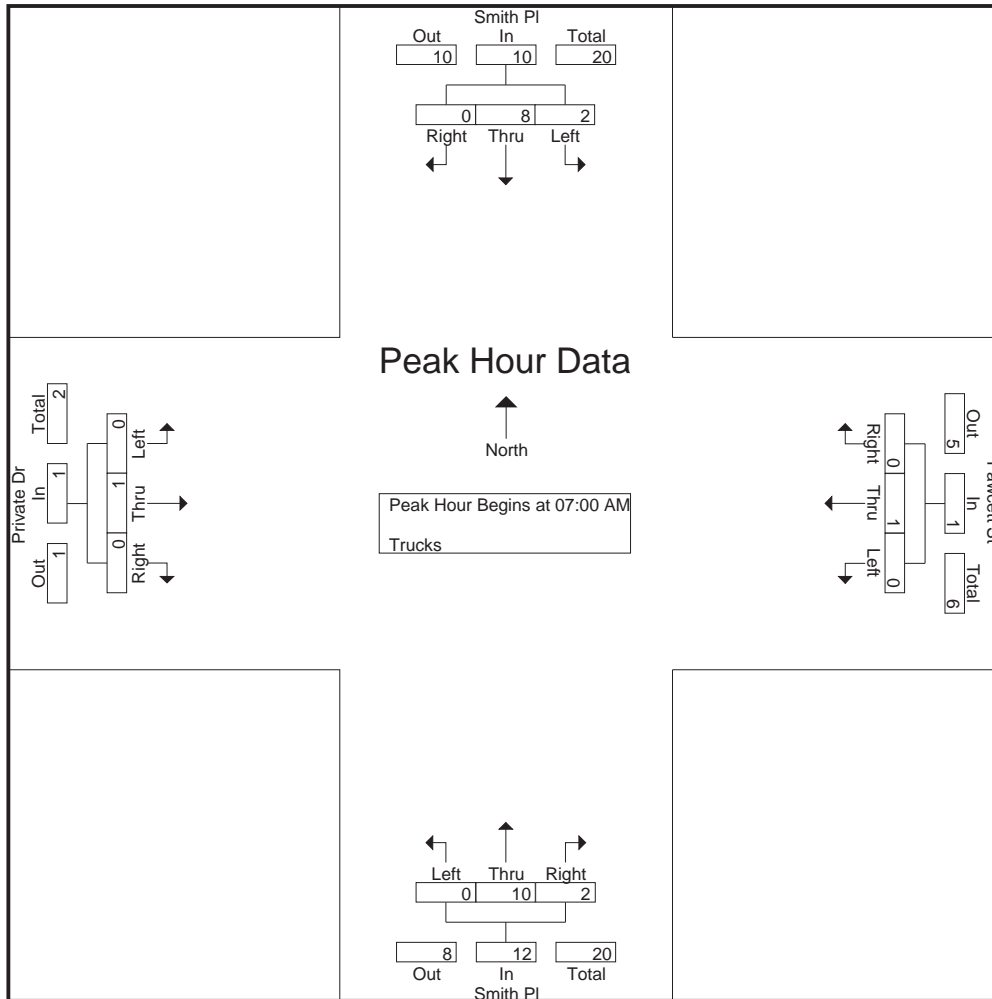
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 8

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	5	1	6	0	0	0	0	7
07:15 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:30 AM	1	2	0	3	0	1	0	1	0	2	0	2	0	1	0	1	7
07:45 AM	0	5	0	5	0	0	0	0	0	1	1	2	0	0	0	0	7
Total Volume	2	8	0	10	0	1	0	1	0	10	2	12	0	1	0	1	24
% App. Total	20	80	0		0	100	0		0	83.3	16.7		0	100	0		
PHF	.500	.400	.000	.500	.000	.250	.000	.250	.000	.500	.500	.500	.000	.250	.000	.250	.857



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

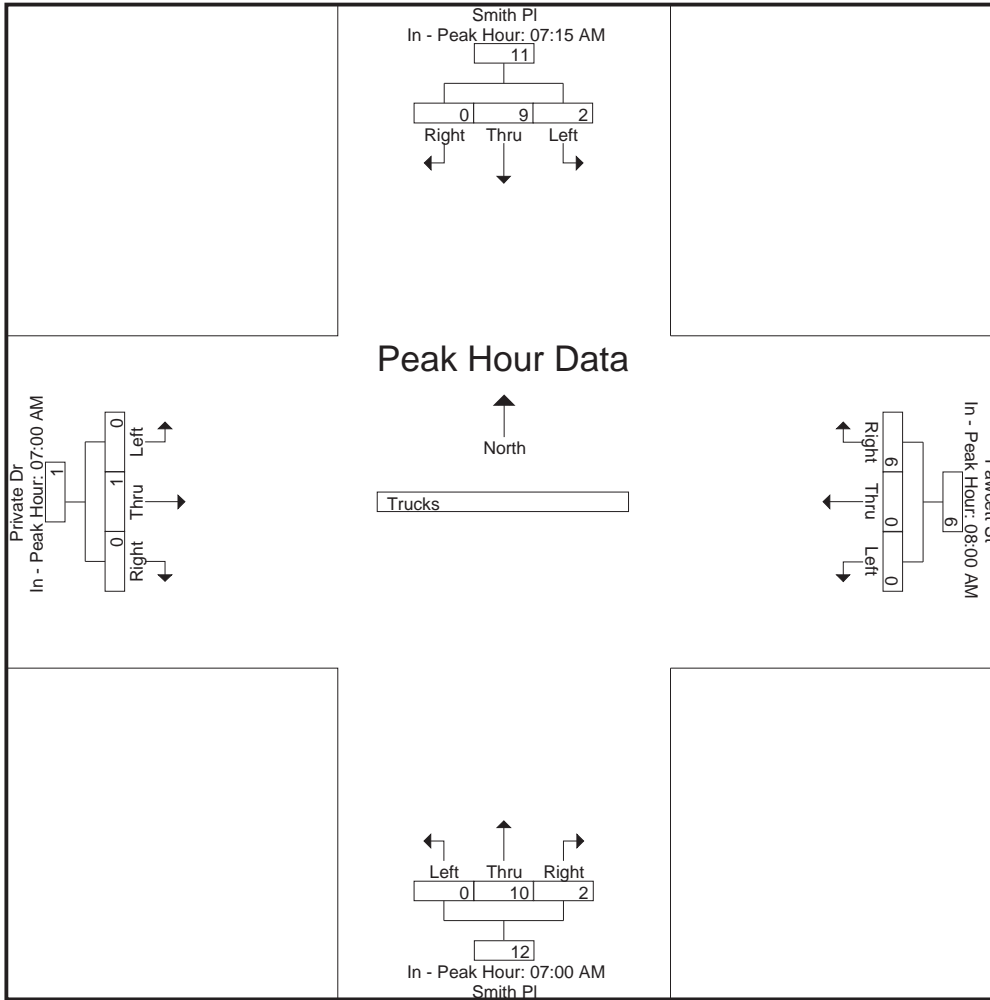
	07:15 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	1	0	0	1	0	0	0	0	0	5	1	6	0	0	0	0
+15 mins.	1	2	0	3	0	0	1	1	0	2	0	2	0	0	0	0
+30 mins.	0	5	0	5	0	0	2	2	0	2	0	2	0	1	0	1
+45 mins.	0	2	0	2	0	0	3	3	0	1	1	2	0	0	0	0
Total Volume	2	9	0	11	0	0	6	6	0	10	2	12	0	1	0	1
% App. Total	18.2	81.8	0		0	0	100		0	83.3	16.7		0	100	0	
PHF	.500	.450	.000	.550	.000	.000	.500	.500	.000	.500	.500	.500	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 9



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3	0	3
07:15 AM	0	0	0	0	0	0	0	8	0	0	0	1	0	0	0	0	9	0	9
07:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	1	0	0	1	2	0	2	0	0	0	0	0	0	3	3	6
Total	0	0	0	1	0	0	1	13	0	2	0	2	0	0	0	0	16	3	19
08:00 AM	1	0	0	1	1	0	0	0	0	1	3	0	0	0	0	0	1	6	7
08:15 AM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	1	3
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Total	1	0	0	2	1	0	0	1	0	2	4	0	0	0	0	1	4	8	12
Grand Total	1	0	0	3	1	0	1	14	0	4	4	2	0	0	0	1	20	11	31
Apprch %	100	0	0		50	0	50		0	50	50		0	0	0				
Total %	9.1	0	0		9.1	0	9.1		0	36.4	36.4		0	0	0		64.5	35.5	

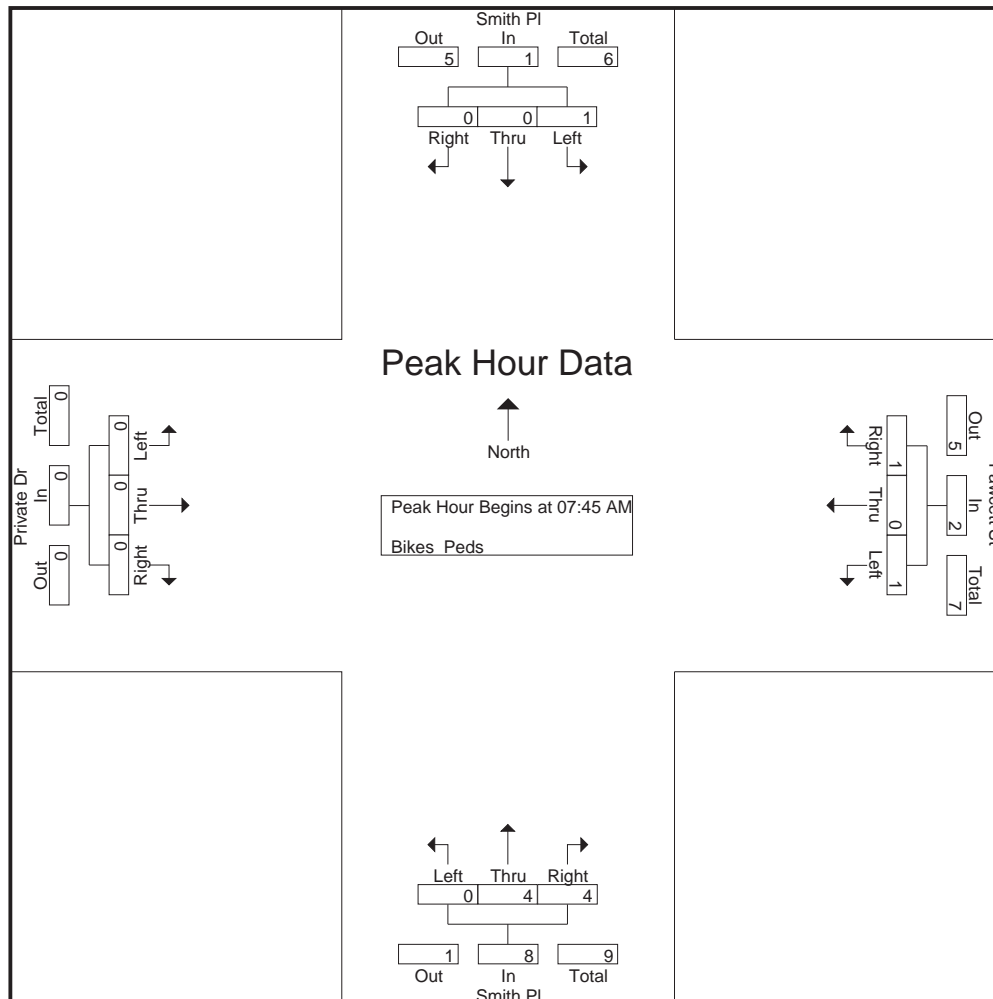
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 11

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
08:00 AM	1	0	0	1	1	0	0	1	0	1	3	4	0	0	0	0	6
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	1	0	0	1	1	0	1	2	0	4	4	8	0	0	0	0	11
% App. Total	100	0	0		50	0	50		0	50	50		0	0	0		
PHF	.250	.000	.000	.250	.250	.000	.250	.500	.000	.500	.333	.500	.000	.000	.000	.000	.458



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

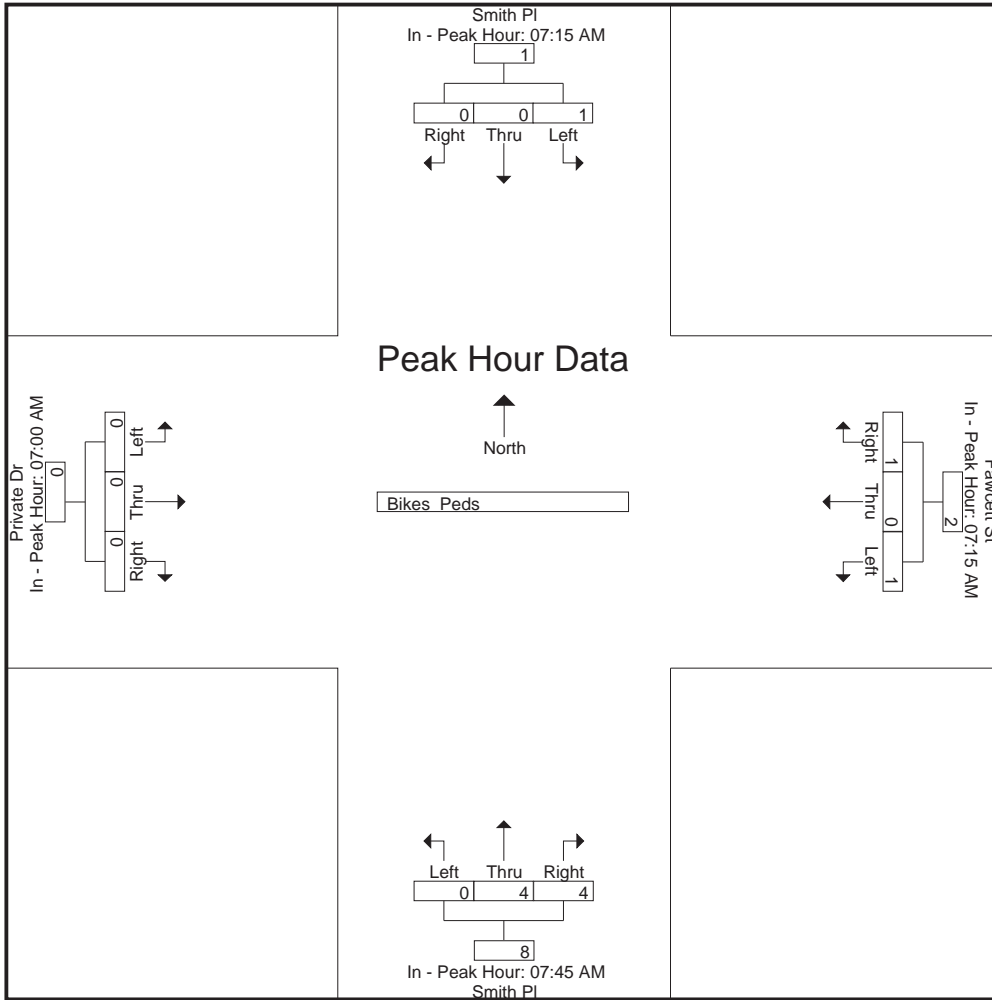
	07:15 AM				07:15 AM				07:45 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0
+45 mins.	1	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0
Total Volume	1	0	0	1	1	0	1	2	0	4	4	8	0	0	0	0
% App. Total	100	0	0		50	0	50		0	50	50		0	0	0	
PHF	.250	.000	.000	.250	.250	.000	.250	.500	.000	.500	.333	.500	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	1	19	1	12	0	5	4	5	6	0	0	11	64
04:15 PM	4	7	2	8	3	7	0	8	8	0	1	2	50
04:30 PM	6	24	0	4	1	3	4	4	7	0	2	9	64
04:45 PM	3	20	1	7	2	6	4	9	3	0	0	5	60
Total	14	70	4	31	6	21	12	26	24	0	3	27	238
05:00 PM	3	5	0	13	1	3	3	9	2	0	0	3	42
05:15 PM	2	8	0	5	5	8	3	6	4	0	1	2	44
05:30 PM	5	18	0	5	4	10	4	5	4	0	0	6	61
05:45 PM	1	7	0	10	3	3	2	4	2	0	1	6	39
Total	11	38	0	33	13	24	12	24	12	0	2	17	186
Grand Total	25	108	4	64	19	45	24	50	36	0	5	44	424
Apprch %	18.2	78.8	2.9	50	14.8	35.2	21.8	45.5	32.7	0	10.2	89.8	
Total %	5.9	25.5	0.9	15.1	4.5	10.6	5.7	11.8	8.5	0	1.2	10.4	
Cars	25	105	4	63	19	43	24	45	36	0	5	44	413
% Cars	100	97.2	100	98.4	100	95.6	100	90	100	0	100	100	97.4
Trucks	0	3	0	1	0	2	0	5	0	0	0	0	11
% Trucks	0	2.8	0	1.6	0	4.4	0	10	0	0	0	0	2.6

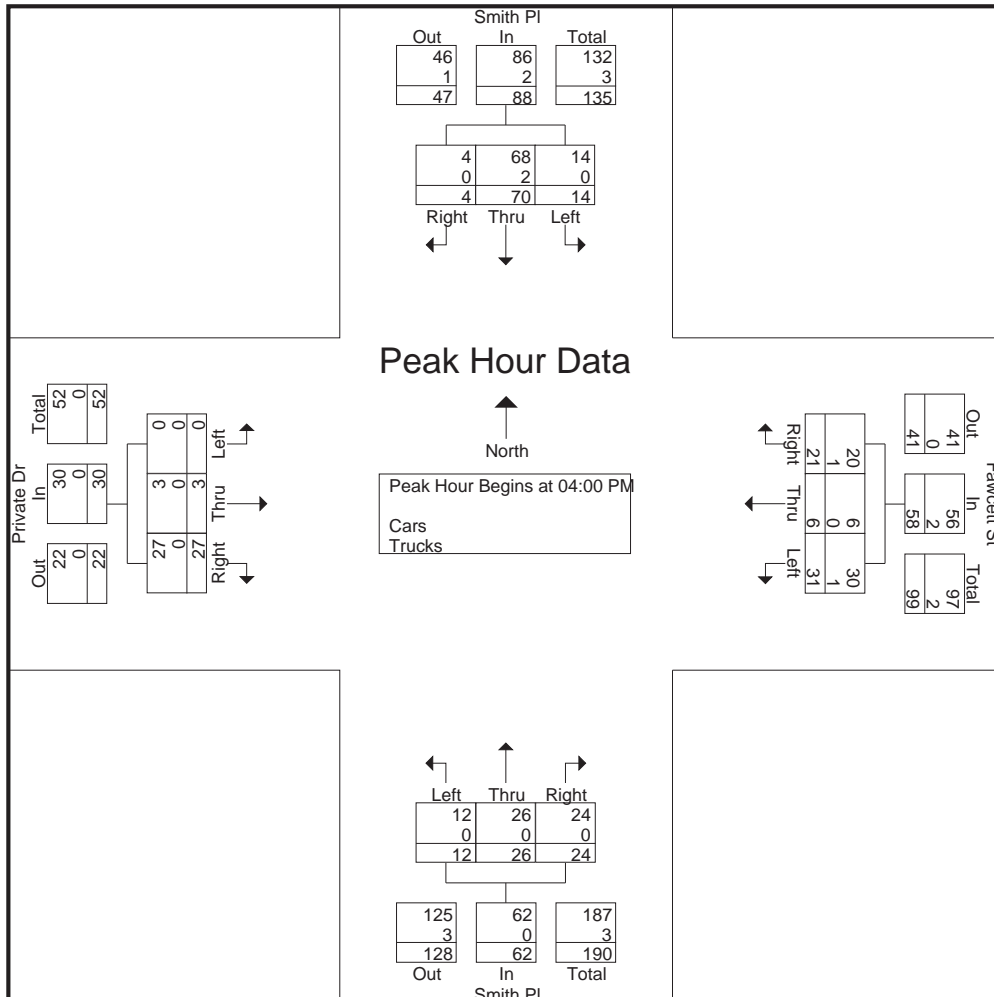
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 2

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	19	1	21	12	0	5	17	4	5	6	15	0	0	11	11	64
04:15 PM	4	7	2	13	8	3	7	18	0	8	8	16	0	1	2	3	50
04:30 PM	6	24	0	30	4	1	3	8	4	4	7	15	0	2	9	11	64
04:45 PM	3	20	1	24	7	2	6	15	4	9	3	16	0	0	5	5	60
Total Volume	14	70	4	88	31	6	21	58	12	26	24	62	0	3	27	30	238
% App. Total	15.9	79.5	4.5		53.4	10.3	36.2		19.4	41.9	38.7		0	10	90		
PHF	.583	.729	.500	.733	.646	.500	.750	.806	.750	.722	.750	.969	.000	.375	.614	.682	.930
Cars	14	68	4	86	30	6	20	56	12	26	24	62	0	3	27	30	234
% Cars	100	97.1	100	97.7	96.8	100	95.2	96.6	100	100	100	100	0	100	100	100	98.3
Trucks	0	2	0	2	1	0	1	2	0	0	0	0	0	0	0	0	4
% Trucks	0	2.9	0	2.3	3.2	0	4.8	3.4	0	0	0	0	0	0	0	0	1.7



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

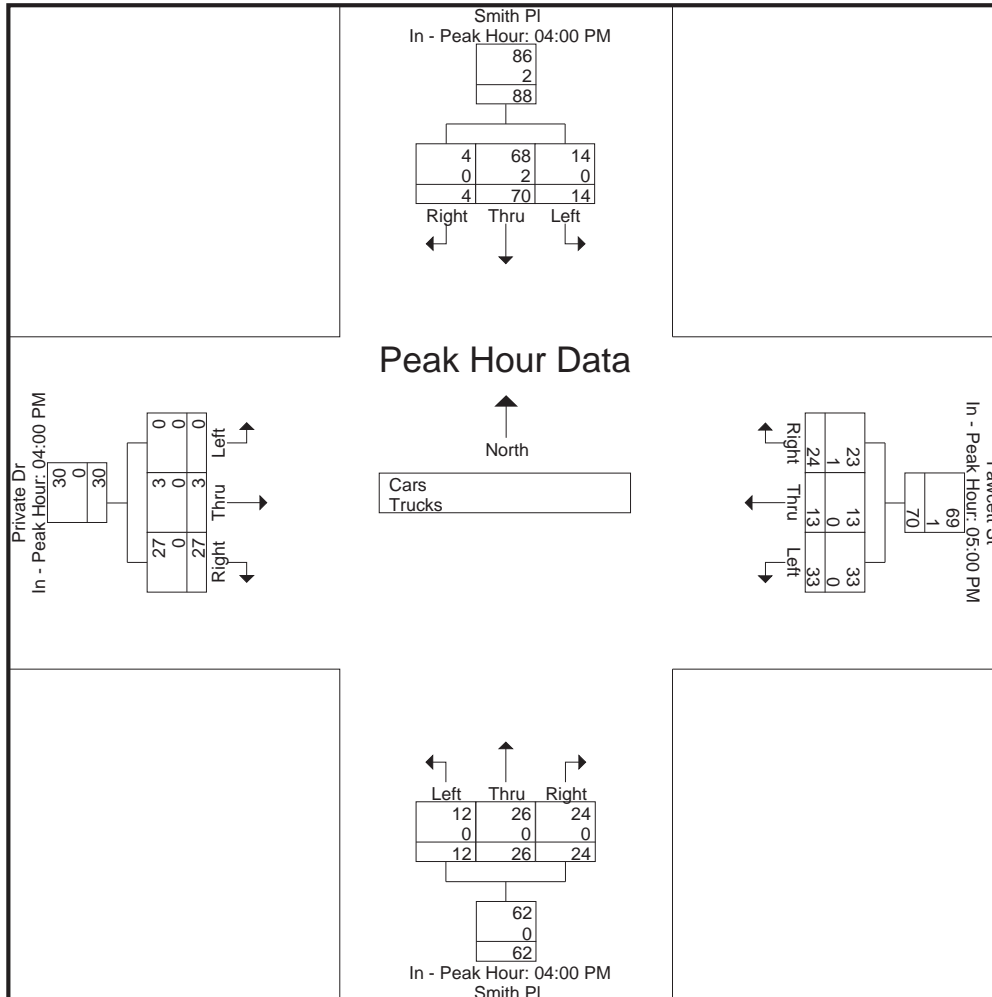
File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 3

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:00 PM				04:00 PM			
+0 mins.	1	19	1	21	13	1	3	17	4	5	6	15	0	0	11	11
+15 mins.	4	7	2	13	5	5	8	18	0	8	8	16	0	1	2	3
+30 mins.	6	24	0	30	5	4	10	19	4	4	7	15	0	2	9	11
+45 mins.	3	20	1	24	10	3	3	16	4	9	3	16	0	0	5	5
Total Volume	14	70	4	88	33	13	24	70	12	26	24	62	0	3	27	30
% App. Total	15.9	79.5	4.5		47.1	18.6	34.3		19.4	41.9	38.7		0	10	90	
PHF	.583	.729	.500	.733	.635	.650	.600	.921	.750	.722	.750	.969	.000	.375	.614	.682
Cars	14	68	4	86	33	13	23	69	12	26	24	62	0	3	27	30
% Cars	100	97.1	100	97.7	100	100	95.8	98.6	100	100	100	100	0	100	100	100
Trucks	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0
% Trucks	0	2.9	0	2.3	0	0	4.2	1.4	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	1	18	1	12	0	5	4	5	6	0	0	11	63
04:15 PM	4	7	2	7	3	6	0	8	8	0	1	2	48
04:30 PM	6	24	0	4	1	3	4	4	7	0	2	9	64
04:45 PM	3	19	1	7	2	6	4	9	3	0	0	5	59
Total	14	68	4	30	6	20	12	26	24	0	3	27	234
05:00 PM	3	5	0	13	1	2	3	7	2	0	0	3	39
05:15 PM	2	8	0	5	5	8	3	5	4	0	1	2	43
05:30 PM	5	17	0	5	4	10	4	4	4	0	0	6	59
05:45 PM	1	7	0	10	3	3	2	3	2	0	1	6	38
Total	11	37	0	33	13	23	12	19	12	0	2	17	179
Grand Total	25	105	4	63	19	43	24	45	36	0	5	44	413
Apprch %	18.7	78.4	3	50.4	15.2	34.4	22.9	42.9	34.3	0	10.2	89.8	
Total %	6.1	25.4	1	15.3	4.6	10.4	5.8	10.9	8.7	0	1.2	10.7	

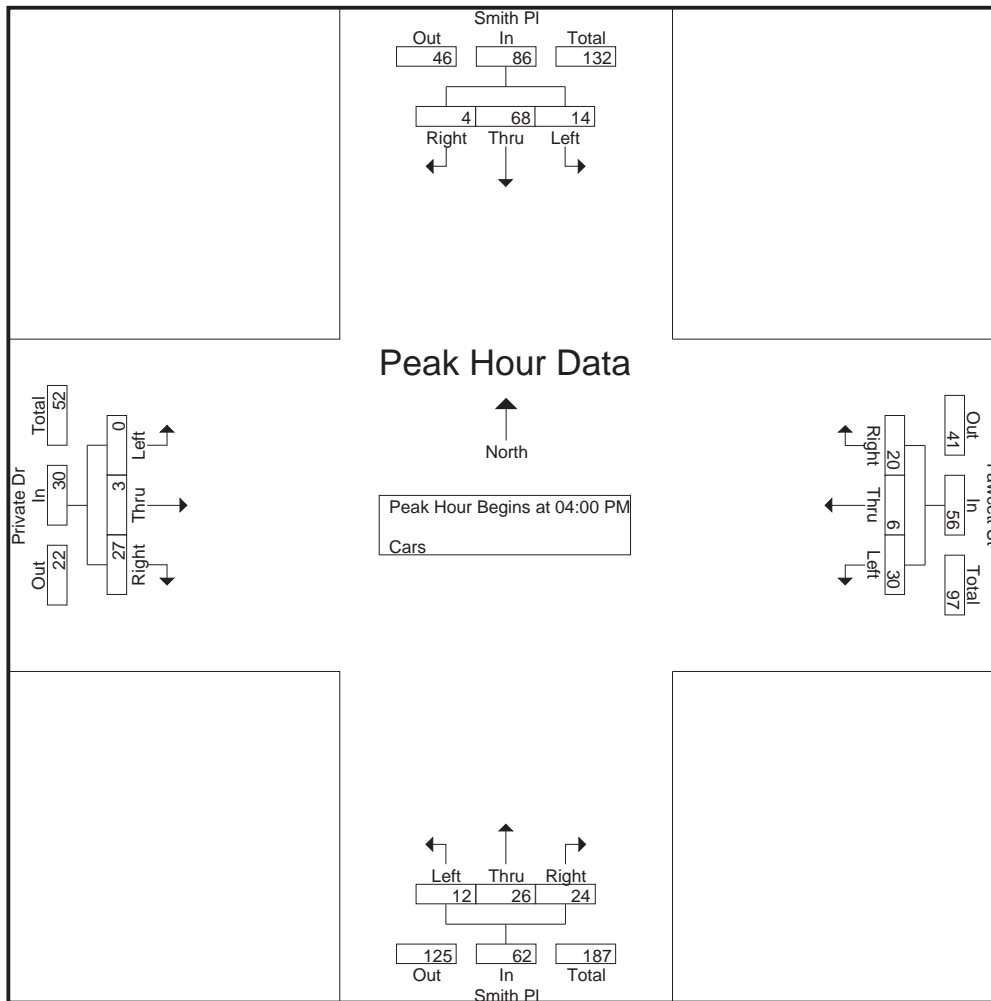
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 5

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	18	1	20	12	0	5	17	4	5	6	15	0	0	11	11	63
04:15 PM	4	7	2	13	7	3	6	16	0	8	8	16	0	1	2	3	48
04:30 PM	6	24	0	30	4	1	3	8	4	4	7	15	0	2	9	11	64
04:45 PM	3	19	1	23	7	2	6	15	4	9	3	16	0	0	5	5	59
Total Volume	14	68	4	86	30	6	20	56	12	26	24	62	0	3	27	30	234
% App. Total	16.3	79.1	4.7		53.6	10.7	35.7		19.4	41.9	38.7		0	10	90		
PHF	.583	.708	.500	.717	.625	.500	.833	.824	.750	.722	.750	.969	.000	.375	.614	.682	.914



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

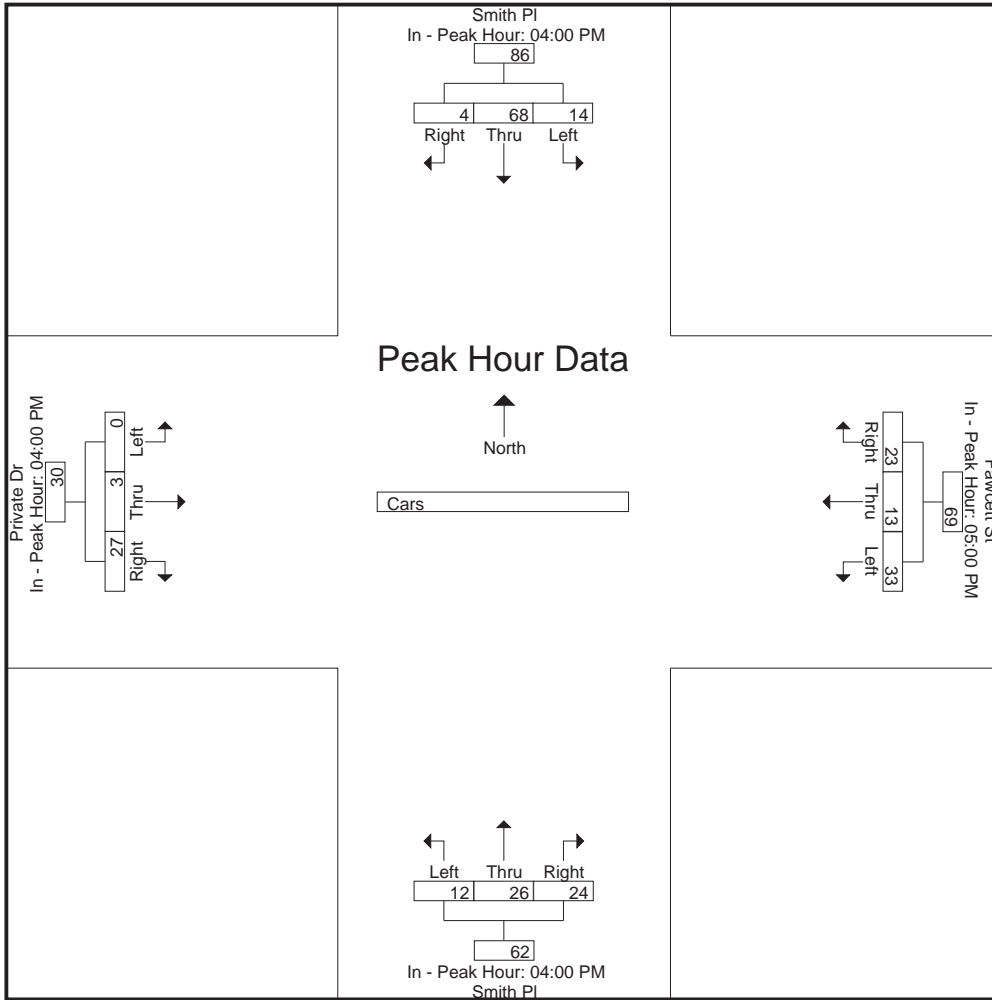
	04:00 PM				05:00 PM				04:00 PM				04:00 PM			
+0 mins.	1	18	1	20	13	1	2	16	4	5	6	15	0	0	11	11
+15 mins.	4	7	2	13	5	5	8	18	0	8	8	16	0	1	2	3
+30 mins.	6	24	0	30	5	4	10	19	4	4	7	15	0	2	9	11
+45 mins.	3	19	1	23	10	3	3	16	4	9	3	16	0	0	5	5
Total Volume	14	68	4	86	33	13	23	69	12	26	24	62	0	3	27	30
% App. Total	16.3	79.1	4.7		47.8	18.8	33.3		19.4	41.9	38.7		0	10	90	
PHF	.583	.708	.500	.717	.635	.650	.575	.908	.750	.722	.750	.969	.000	.375	.614	.682

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 6



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Smith Pl From North			Fawcett St From East			Smith Pl From South			Private Dr From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	1	0	1	0	0	0	0	0	0	4
05:00 PM	0	0	0	0	0	1	0	2	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	1	0	0	0	1	0	5	0	0	0	0	7
Grand Total	0	3	0	1	0	2	0	5	0	0	0	0	11
Apprch %	0	100	0	33.3	0	66.7	0	100	0	0	0	0	
Total %	0	27.3	0	9.1	0	18.2	0	45.5	0	0	0	0	

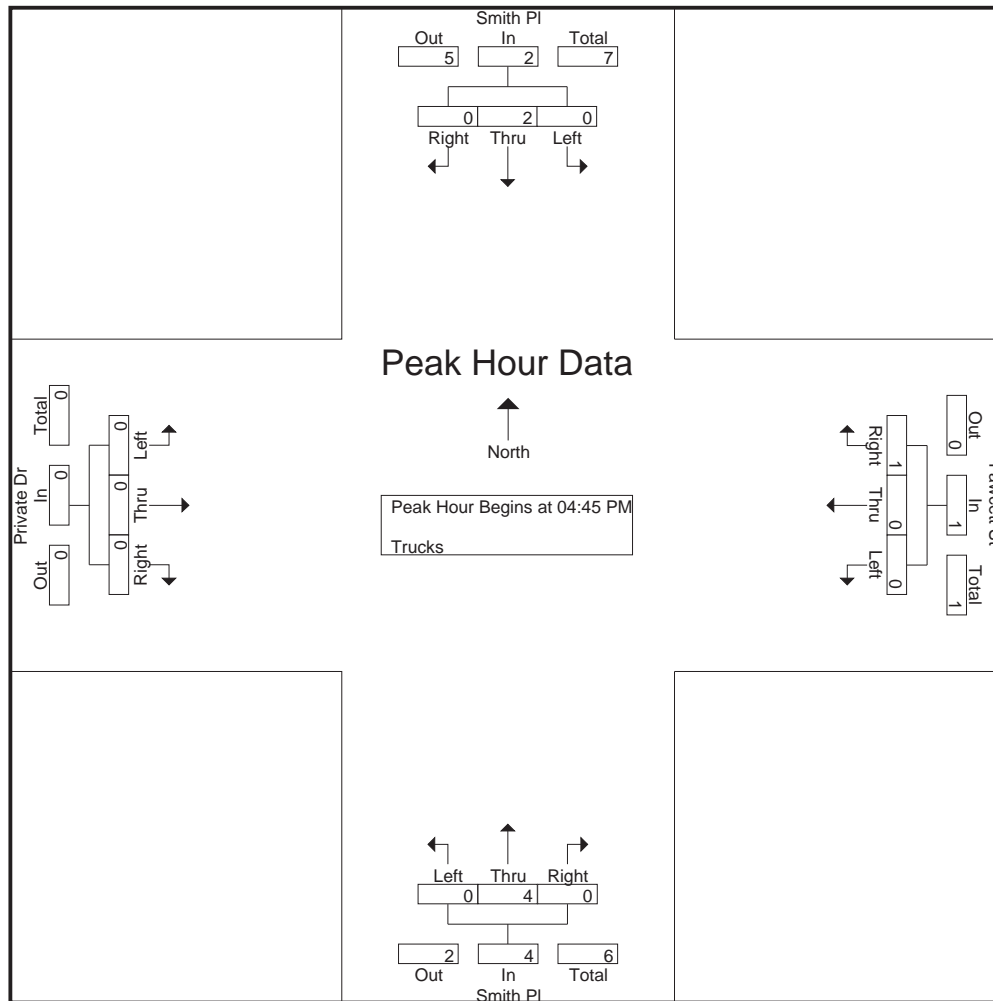
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 8

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	1	1	0	4	0	4	0	0	0	0	0	0
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0			
PHF	.000	.500	.000	.500	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.000	.583



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

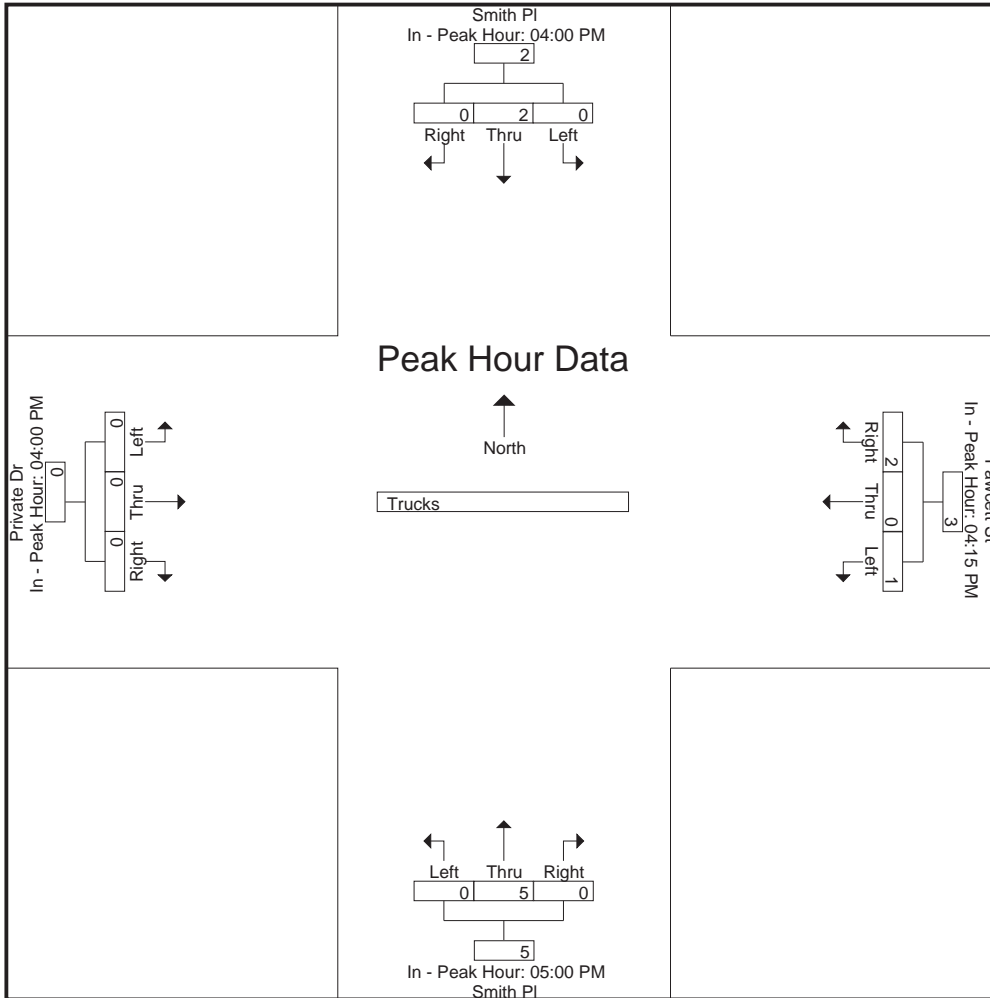
	04:00 PM				04:15 PM				05:00 PM				04:00 PM			
+0 mins.	0	1	0	1	1	0	1	2	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	0	2	0	2	1	0	2	3	0	5	0	5	0	0	0	0
% App. Total	0	100	0		33.3	0	66.7		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.250	.000	.500	.375	.000	.625	.000	.625	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 9



Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2
04:15 PM	1	2	0	5	1	0	0	1	0	0	0	4	0	0	0	2	12	4	16
04:30 PM	0	1	0	6	0	0	1	1	0	0	0	4	0	0	0	4	15	2	17
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	2	1	3
Total	1	3	0	12	1	0	1	3	0	0	1	9	0	0	0	7	31	7	38
05:00 PM	0	1	0	7	0	1	1	3	0	3	0	0	0	0	0	3	13	6	19
05:15 PM	0	0	0	7	1	0	0	1	0	0	0	1	0	0	0	0	9	1	10
05:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	1	3
05:45 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	2	2	4
Total	0	3	0	14	1	1	2	6	0	3	0	1	0	0	0	5	26	10	36
Grand Total	1	6	0	26	2	1	3	9	0	3	1	10	0	0	0	12	57	17	74
Apprch %	14.3	85.7	0		33.3	16.7	50		0	75	25		0	0	0				
Total %	5.9	35.3	0		11.8	5.9	17.6		0	17.6	5.9		0	0	0		77	23	

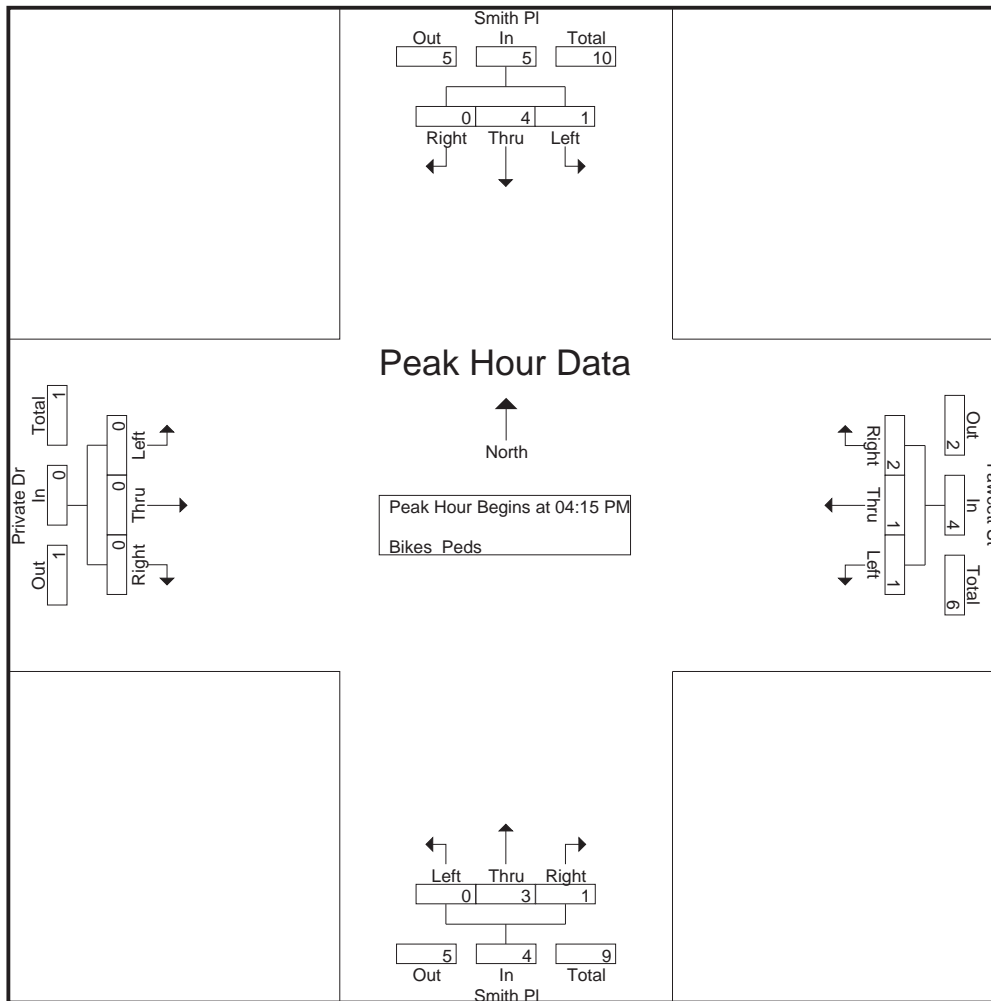
Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 11

Start Time	Smith Pl From North				Fawcett St From East				Smith Pl From South				Private Dr From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:15 PM																		
04:15 PM	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00 PM	0	1	0	1	0	1	1	2	0	3	0	3	0	0	0	0	0	0
Total Volume	1	4	0	5	1	1	2	4	0	3	1	4	0	0	0	0	0	0
% App. Total	20	80	0		25	25	50		0	75	25		0	0	0			
PHF	.250	.500	.000	.417	.250	.250	.500	.500	.000	.250	.250	.333	.000	.000	.000	.000		.542



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

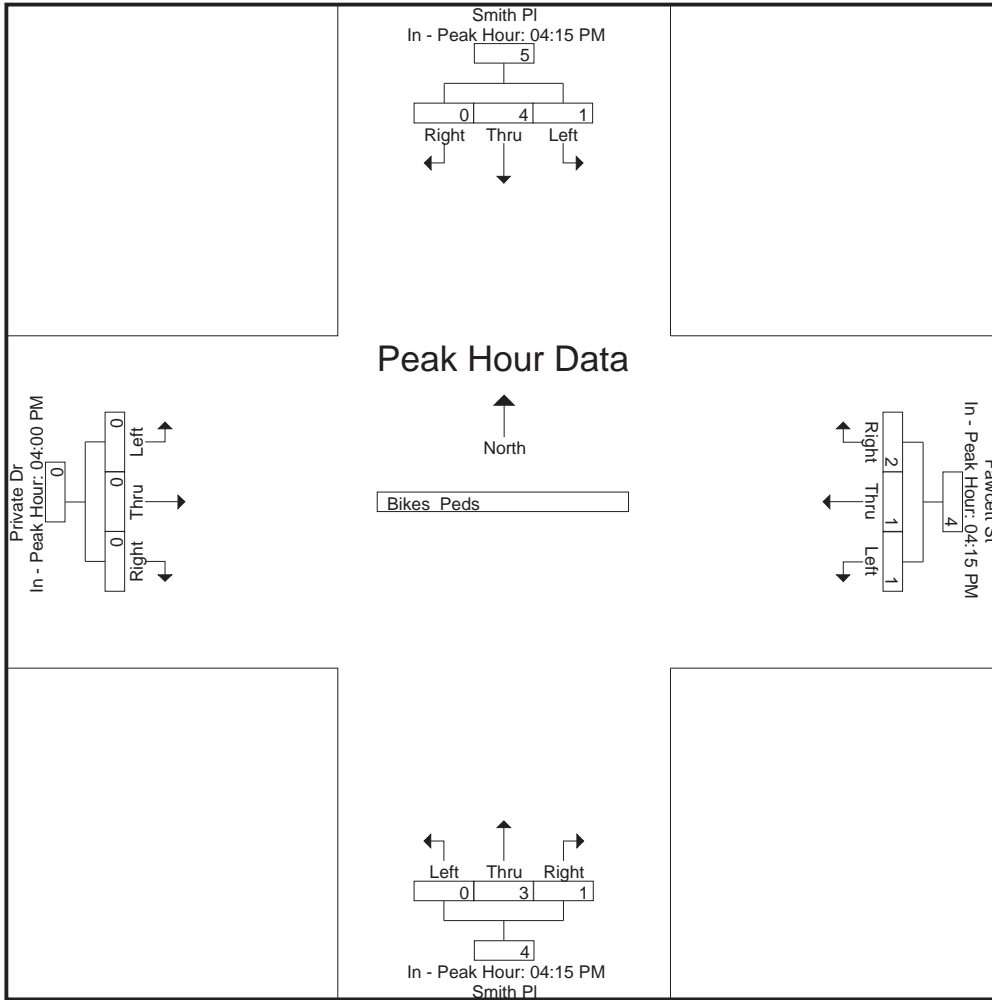
	04:15 PM				04:15 PM				04:15 PM				04:00 PM			
+0 mins.	1	2	0	3	1	0	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	1	0	1	0	1	1	2	0	3	0	3	0	0	0	0
Total Volume	1	4	0	5	1	1	2	4	0	3	1	4	0	0	0	0
% App. Total	20	80	0		25	25	50		0	75	25		0	0	0	
PHF	.250	.500	.000	.417	.250	.250	.500	.500	.000	.250	.250	.333	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Smith Place
 E/W Street : Fawcett St / Private Dr
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009003
 Site Code : 15009003
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	5	11	0	25	1	42
07:15 AM	0	19	19	1	24	2	65
07:30 AM	0	9	15	1	23	0	48
07:45 AM	0	11	17	0	20	2	50
Total	0	44	62	2	92	5	205
08:00 AM	0	7	16	0	14	1	38
08:15 AM	0	9	14	0	23	1	47
08:30 AM	0	4	17	0	19	2	42
08:45 AM	0	13	7	0	20	2	42
Total	0	33	54	0	76	6	169
Grand Total	0	77	116	2	168	11	374
Apprch %	0	100	98.3	1.7	93.9	6.1	
Total %	0	20.6	31	0.5	44.9	2.9	
Cars	0	63	116	2	148	10	339
% Cars	0	81.8	100	100	88.1	90.9	90.6
Trucks	0	14	0	0	20	1	35
% Trucks	0	18.2	0	0	11.9	9.1	9.4

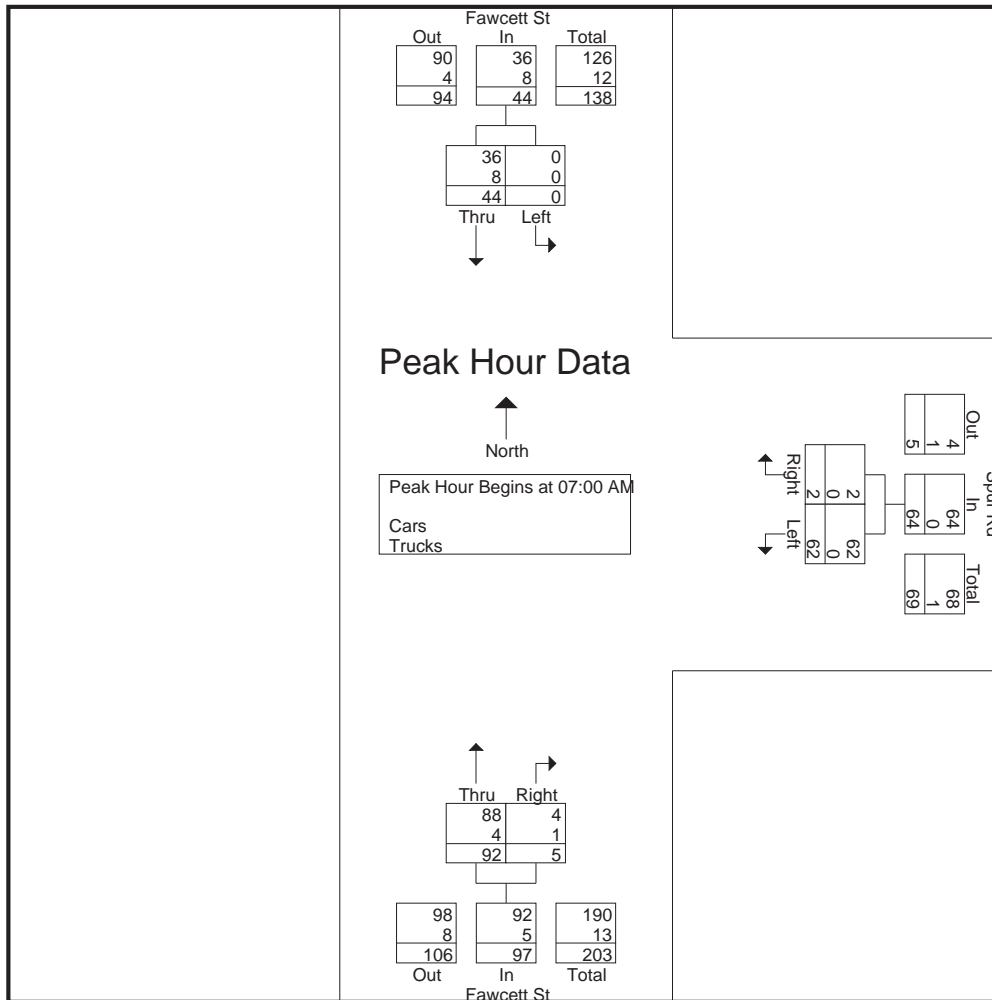
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 2

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	5	5	11	0	11	25	1	26	42
07:15 AM	0	19	19	19	1	20	24	2	26	65
07:30 AM	0	9	9	15	1	16	23	0	23	48
07:45 AM	0	11	11	17	0	17	20	2	22	50
Total Volume	0	44	44	62	2	64	92	5	97	205
% App. Total	0	100		96.9	3.1		94.8	5.2		
PHF	.000	.579	.579	.816	.500	.800	.920	.625	.933	.788
Cars	0	36	36	62	2	64	88	4	92	192
% Cars	0	81.8	81.8	100	100	100	95.7	80.0	94.8	93.7
Trucks	0	8	8	0	0	0	4	1	5	13
% Trucks	0	18.2	18.2	0	0	0	4.3	20.0	5.2	6.3



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

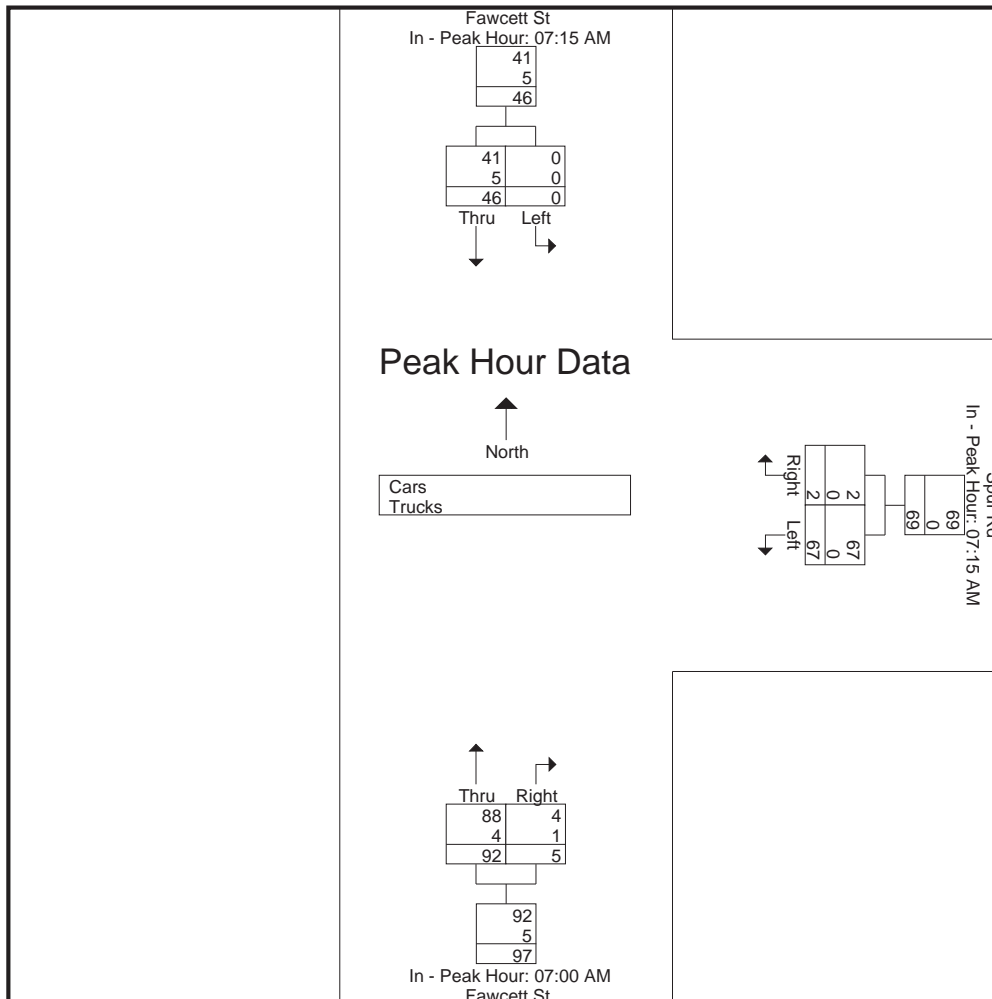
File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:00 AM		
+0 mins.	0	19	19	19	1	20	25	1	26
+15 mins.	0	9	9	15	1	16	24	2	26
+30 mins.	0	11	11	17	0	17	23	0	23
+45 mins.	0	7	7	16	0	16	20	2	22
Total Volume	0	46	46	67	2	69	92	5	97
% App. Total	0	100		97.1	2.9		94.8	5.2	
PHF	.000	.605	.605	.882	.500	.863	.920	.625	.933
Cars	0	41	41	67	2	69	88	4	92
% Cars	0	89.1	89.1	100	100	100	95.7	80	94.8
Trucks	0	5	5	0	0	0	4	1	5
% Trucks	0	10.9	10.9	0	0	0	4.3	20	5.2



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	2	11	0	25	1	39
07:15 AM	0	17	19	1	24	1	62
07:30 AM	0	8	15	1	22	0	46
07:45 AM	0	9	17	0	17	2	45
Total	0	36	62	2	88	4	192
08:00 AM	0	7	16	0	14	1	38
08:15 AM	0	8	14	0	18	1	41
08:30 AM	0	4	17	0	12	2	35
08:45 AM	0	8	7	0	16	2	33
Total	0	27	54	0	60	6	147
Grand Total	0	63	116	2	148	10	339
Apprch %	0	100	98.3	1.7	93.7	6.3	
Total %	0	18.6	34.2	0.6	43.7	2.9	

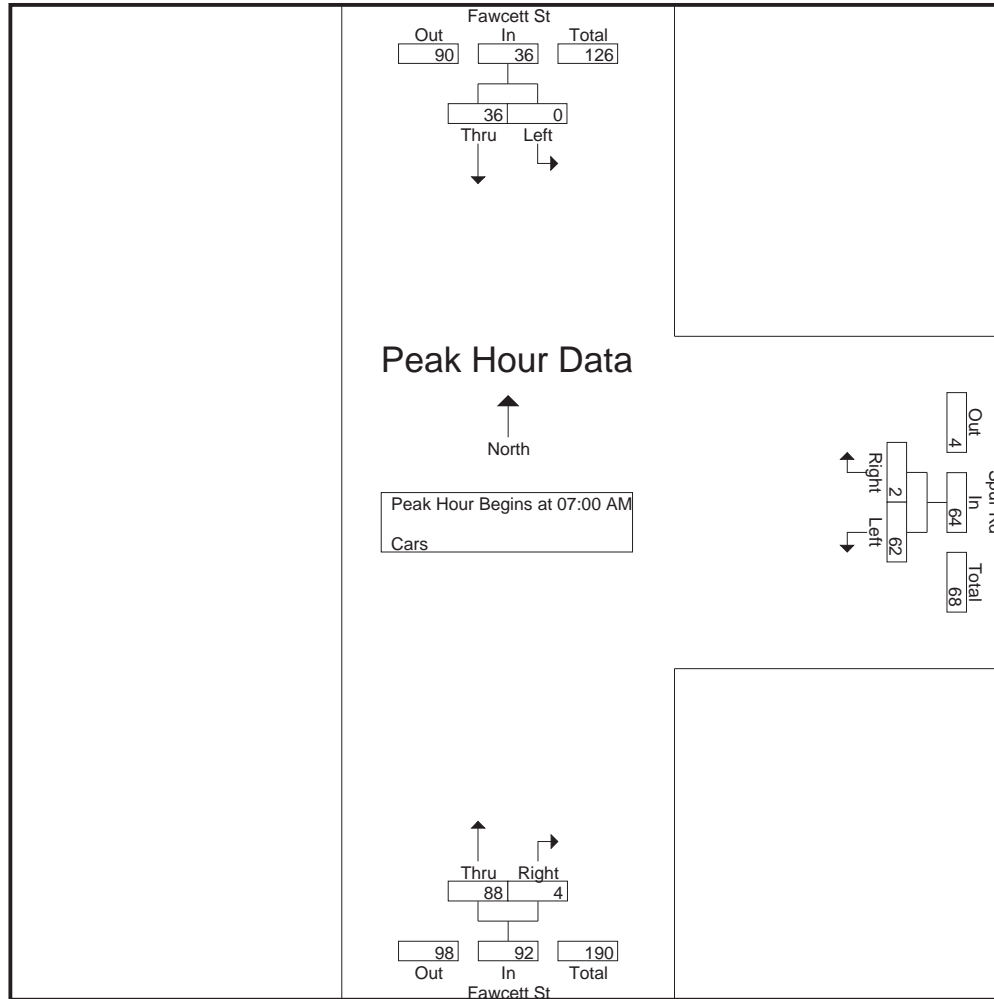
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	11	0	11	25	1	26	39
07:15 AM	0	17	17	19	1	20	24	1	25	62
07:30 AM	0	8	8	15	1	16	22	0	22	46
07:45 AM	0	9	9	17	0	17	17	2	19	45
Total Volume	0	36	36	62	2	64	88	4	92	192
% App. Total	0	100		96.9	3.1		95.7	4.3		
PHF	.000	.529	.529	.816	.500	.800	.880	.500	.885	.774



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

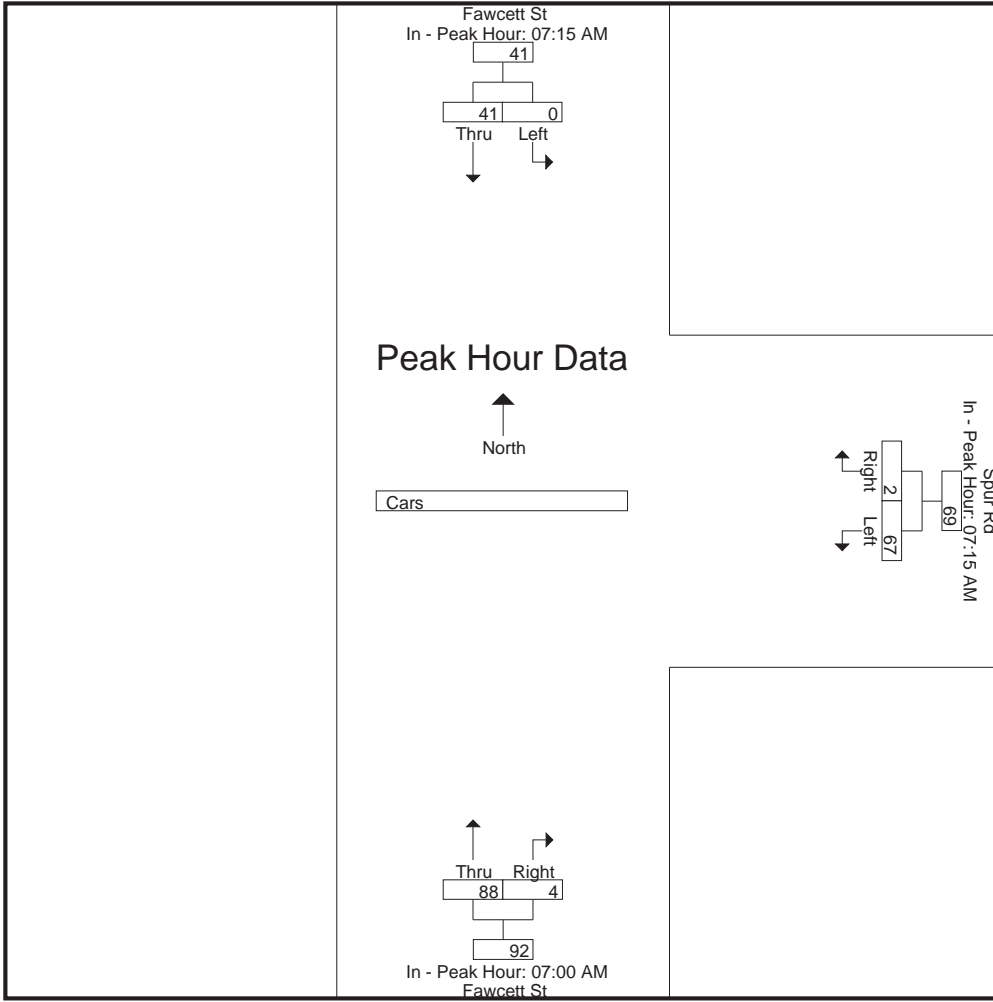
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:00 AM		
+0 mins.	0	17	17	19	1	20	25	1	26
+15 mins.	0	8	8	15	1	16	24	1	25
+30 mins.	0	9	9	17	0	17	22	0	22
+45 mins.	0	7	7	16	0	16	17	2	19
Total Volume	0	41	41	67	2	69	88	4	92
% App. Total	0	100		97.1	2.9		95.7	4.3	

Accurate Counts

978-664-2565

PHF | .000 | .603 | .603 | .882 | .500 | .863 | .880 | .500 | .885



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	3	0	0	0	0	3
07:15 AM	0	2	0	0	0	1	3
07:30 AM	0	1	0	0	1	0	2
07:45 AM	0	2	0	0	3	0	5
Total	0	8	0	0	4	1	13
08:00 AM	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	5	0	6
08:30 AM	0	0	0	0	7	0	7
08:45 AM	0	5	0	0	4	0	9
Total	0	6	0	0	16	0	22
Grand Total	0	14	0	0	20	1	35
Apprch %	0	100	0	0	95.2	4.8	
Total %	0	40	0	0	57.1	2.9	

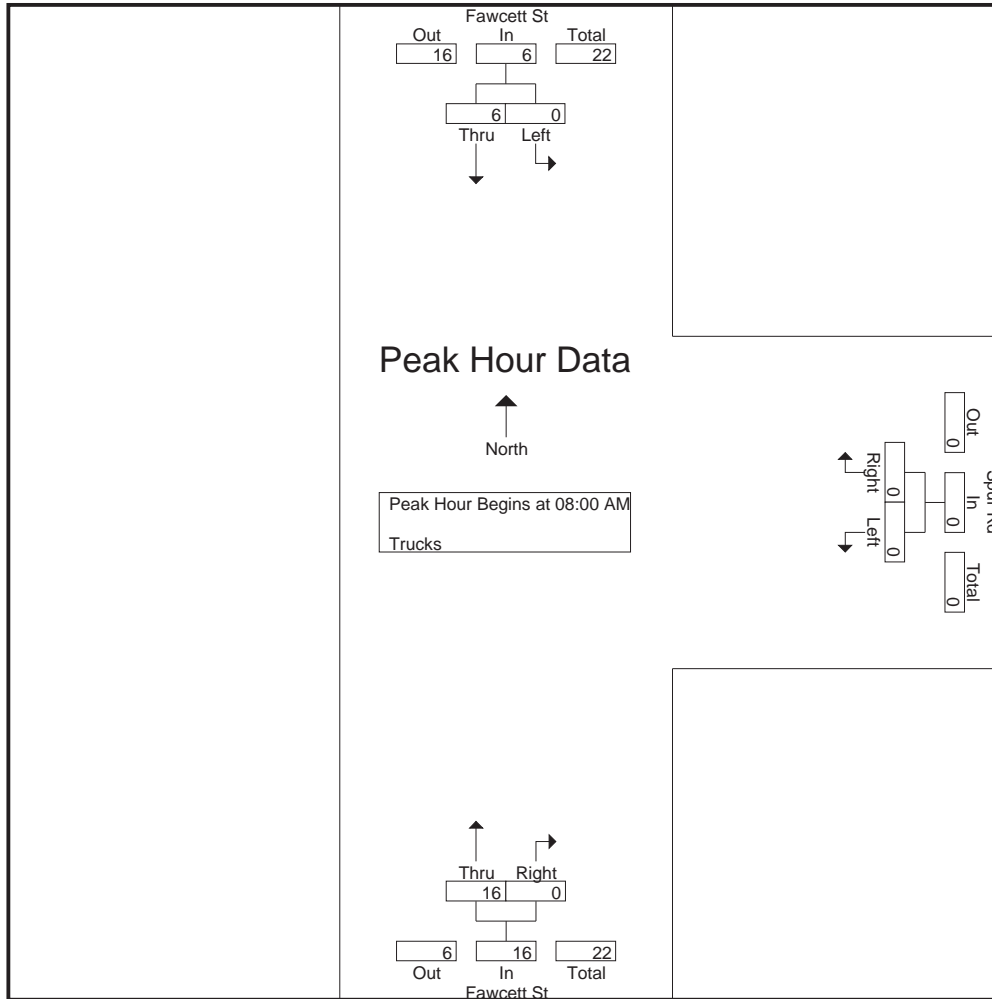
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 8

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	1	0	0	0	5	0	5	6
08:30 AM	0	0	0	0	0	0	7	0	7	7
08:45 AM	0	5	5	0	0	0	4	0	4	9
Total Volume	0	6	6	0	0	0	16	0	16	22
% App. Total	0	100		0	0		100	0		
PHF	.000	.300	.300	.000	.000	.000	.571	.000	.571	.611



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

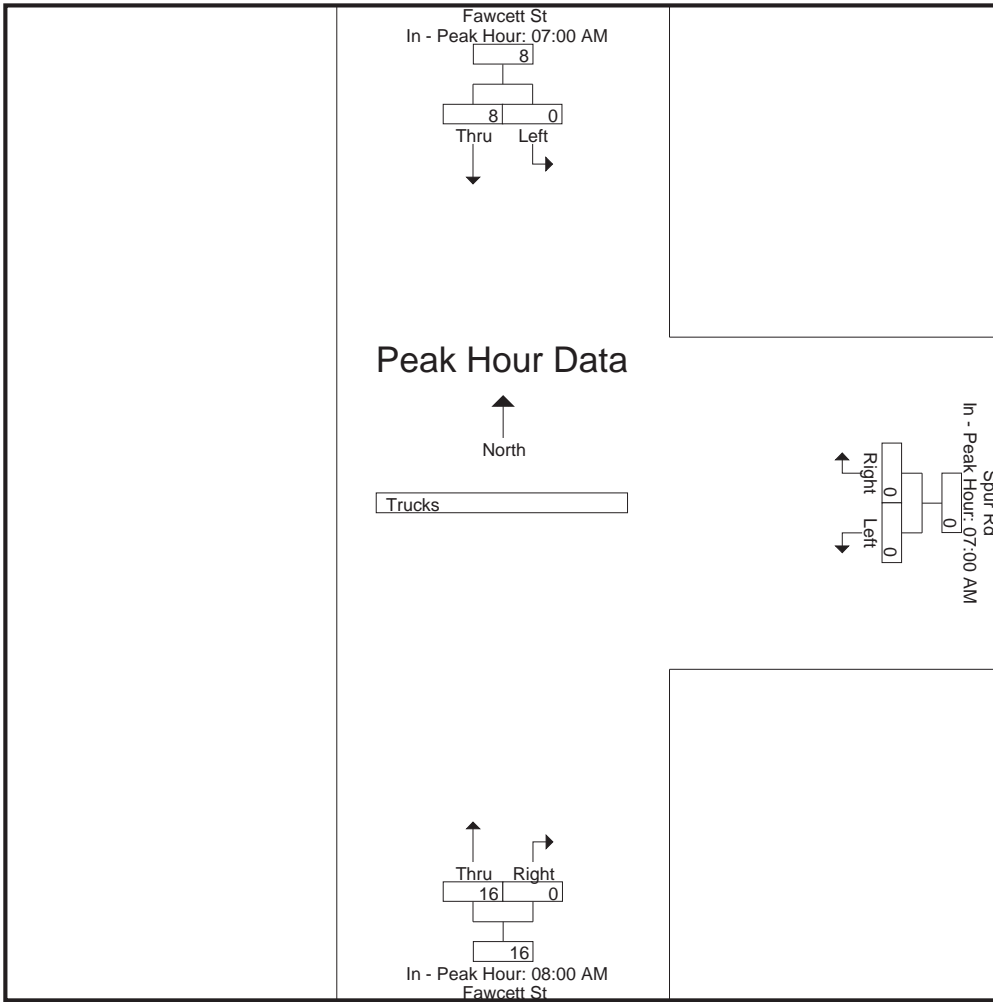
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			08:00 AM		
+0 mins.	0	3	3	0	0	0	0	0	0
+15 mins.	0	2	2	0	0	0	5	0	5
+30 mins.	0	1	1	0	0	0	7	0	7
+45 mins.	0	2	2	0	0	0	4	0	4
Total Volume	0	8	8	0	0	0	16	0	16
% App. Total	0	100		0	0		100	0	

Accurate Counts

978-664-2565

PHF | .000 | .667 | .667 | .000 | .000 | .000 | .571 | .000 | .571



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	1	0	0	4	0	0	2	7	0	7
07:15 AM	0	0	0	0	0	10	0	0	1	11	0	11
07:30 AM	0	0	0	0	0	9	1	0	1	10	1	11
07:45 AM	0	0	0	0	0	7	1	0	1	8	1	9
Total	0	0	1	0	0	30	2	0	5	36	2	38
08:00 AM	0	2	0	0	0	13	1	0	1	14	3	17
08:15 AM	0	0	1	2	0	6	0	0	2	9	2	11
08:30 AM	0	0	1	1	0	3	0	0	1	5	1	6
08:45 AM	0	0	2	0	0	8	1	0	0	10	1	11
Total	0	2	4	3	0	30	2	0	4	38	7	45
Grand Total	0	2	5	3	0	60	4	0	9	74	9	83
Apprch %	0	100		100	0		100	0				
Total %	0	22.2		33.3	0		44.4	0		89.2	10.8	

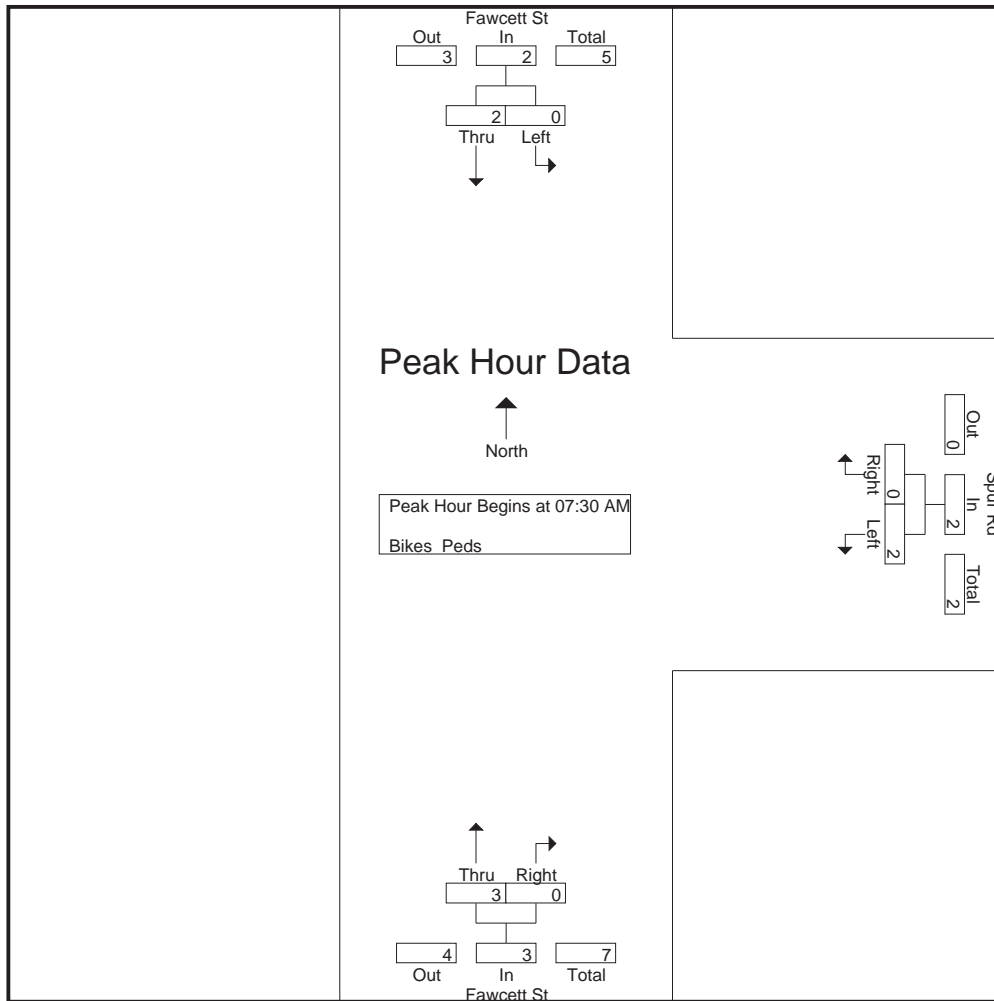
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 11

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	2	2	0	0	0	1	0	1	3
08:15 AM	0	0	0	2	0	2	0	0	0	2
Total Volume	0	2	2	2	0	2	3	0	3	7
% App. Total	0	100		100	0		100	0		
PHF	.000	.250	.250	.250	.000	.250	.750	.000	.750	.583



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

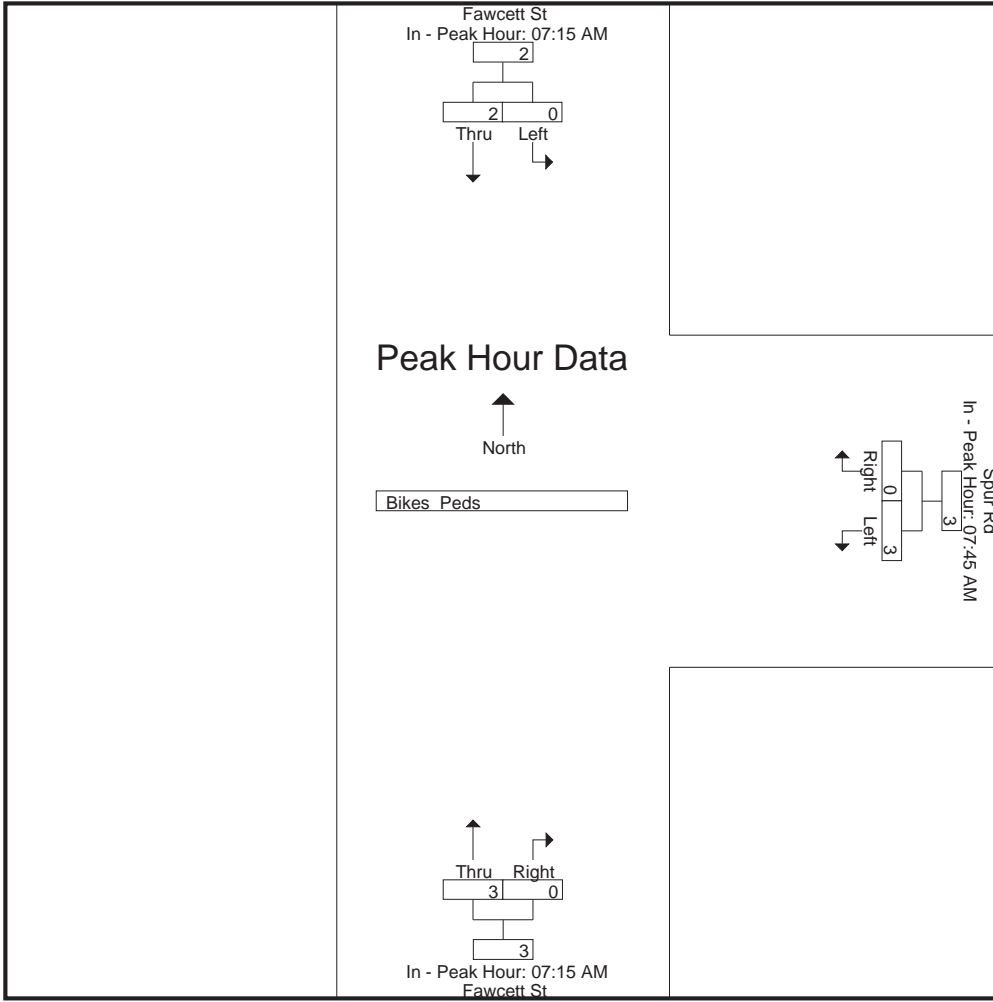
Peak Hour for Each Approach Begins at:

	07:15 AM			07:45 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	2	0	2	1	0	1
+45 mins.	0	2	2	1	0	1	1	0	1
Total Volume	0	2	2	3	0	3	3	0	3
% App. Total	0	100		100	0		100	0	

Accurate Counts

978-664-2565

PHF | .000 | .250 | .250 | .375 | .000 | .375 | .750 | .000 | .750



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	1	16	4	0	12	4	37
04:15 PM	0	7	4	0	12	7	30
04:30 PM	1	16	1	0	8	4	30
04:45 PM	0	3	5	0	18	12	38
Total	2	42	14	0	50	27	135
05:00 PM	0	15	0	0	13	11	39
05:15 PM	0	10	4	1	21	6	42
05:30 PM	2	14	8	0	24	9	57
05:45 PM	0	5	3	0	16	17	41
Total	2	44	15	1	74	43	179
Grand Total	4	86	29	1	124	70	314
Apprch %	4.4	95.6	96.7	3.3	63.9	36.1	
Total %	1.3	27.4	9.2	0.3	39.5	22.3	
Cars	4	85	29	1	115	70	304
% Cars	100	98.8	100	100	92.7	100	96.8
Trucks	0	1	0	0	9	0	10
% Trucks	0	1.2	0	0	7.3	0	3.2

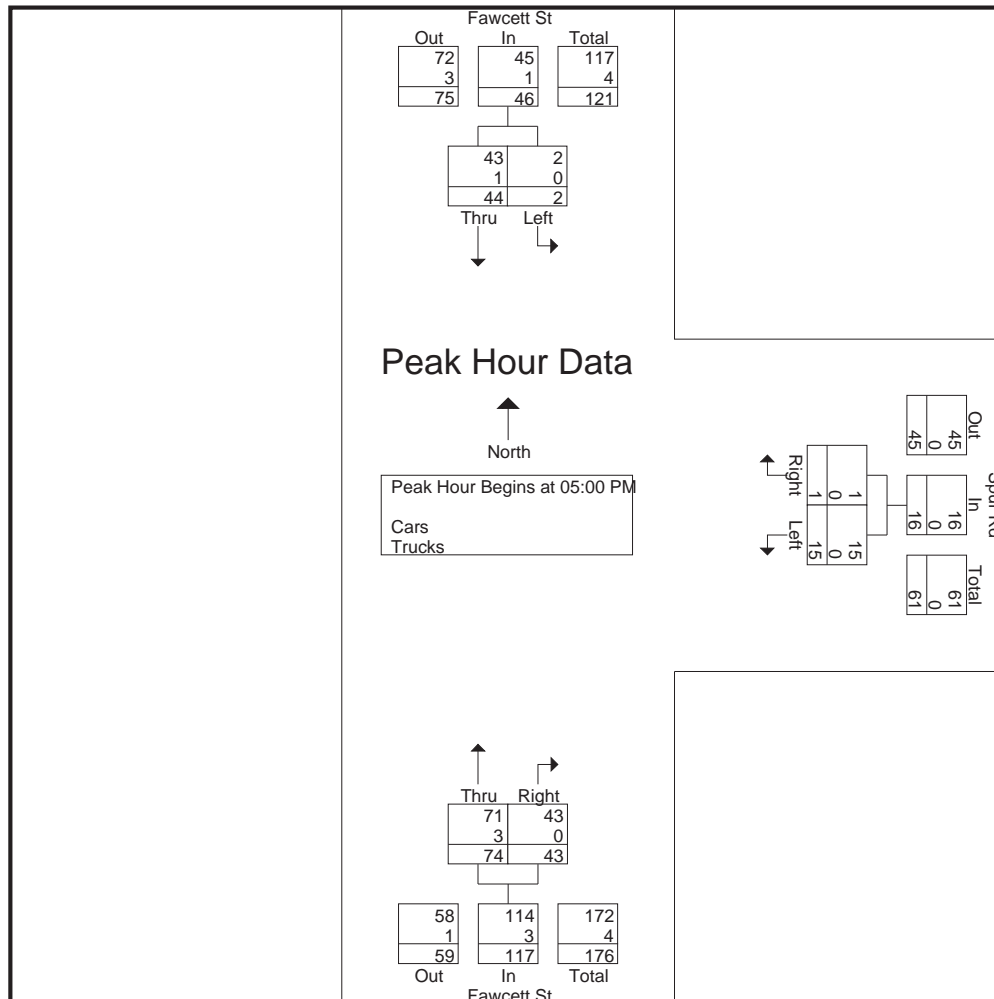
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 2

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	15	15	0	0	0	13	11	24	39
05:15 PM	0	10	10	4	1	5	21	6	27	42
05:30 PM	2	14	16	8	0	8	24	9	33	57
05:45 PM	0	5	5	3	0	3	16	17	33	41
Total Volume	2	44	46	15	1	16	74	43	117	179
% App. Total	4.3	95.7		93.8	6.2		63.2	36.8		
PHF	.250	.733	.719	.469	.250	.500	.771	.632	.886	.785
Cars	2	43	45	15	1	16	71	43	114	175
% Cars	100	97.7	97.8	100	100	100	95.9	100	97.4	97.8
Trucks	0	1	1	0	0	0	3	0	3	4
% Trucks	0	2.3	2.2	0	0	0	4.1	0	2.6	2.2



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

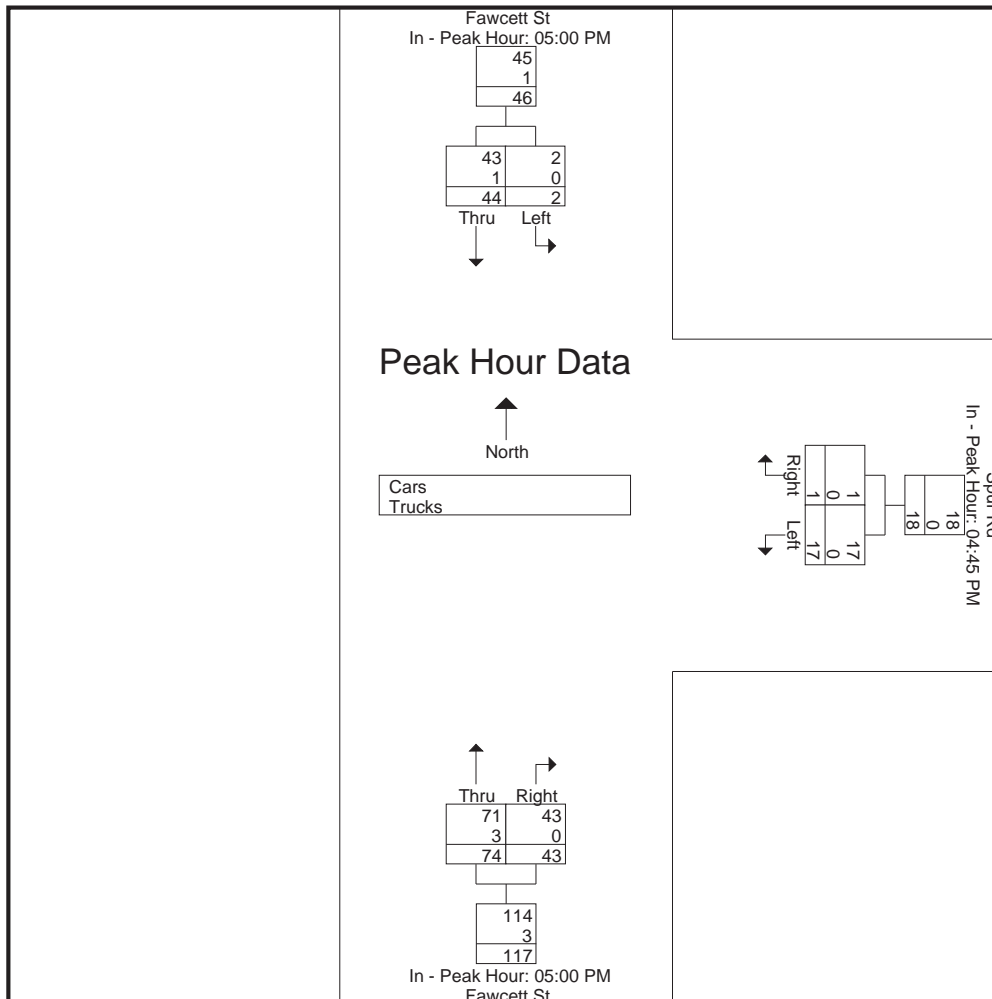
File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			04:45 PM			05:00 PM		
+0 mins.	0	15	15	5	0	5	13	11	24
+15 mins.	0	10	10	0	0	0	21	6	27
+30 mins.	2	14	16	4	1	5	24	9	33
+45 mins.	0	5	5	8	0	8	16	17	33
Total Volume	2	44	46	17	1	18	74	43	117
% App. Total	4.3	95.7		94.4	5.6		63.2	36.8	
PHF	.250	.733	.719	.531	.250	.563	.771	.632	.886
Cars	2	43	45	17	1	18	71	43	114
% Cars	100	97.7	97.8	100	100	100	95.9	100	97.4
Trucks	0	1	1	0	0	0	3	0	3
% Trucks	0	2.3	2.2	0	0	0	4.1	0	2.6



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	1	16	4	0	11	4	36
04:15 PM	0	7	4	0	9	7	27
04:30 PM	1	16	1	0	7	4	29
04:45 PM	0	3	5	0	17	12	37
Total	2	42	14	0	44	27	129
05:00 PM	0	14	0	0	12	11	37
05:15 PM	0	10	4	1	20	6	41
05:30 PM	2	14	8	0	23	9	56
05:45 PM	0	5	3	0	16	17	41
Total	2	43	15	1	71	43	175
Grand Total	4	85	29	1	115	70	304
Apprch %	4.5	95.5	96.7	3.3	62.2	37.8	
Total %	1.3	28	9.5	0.3	37.8	23	

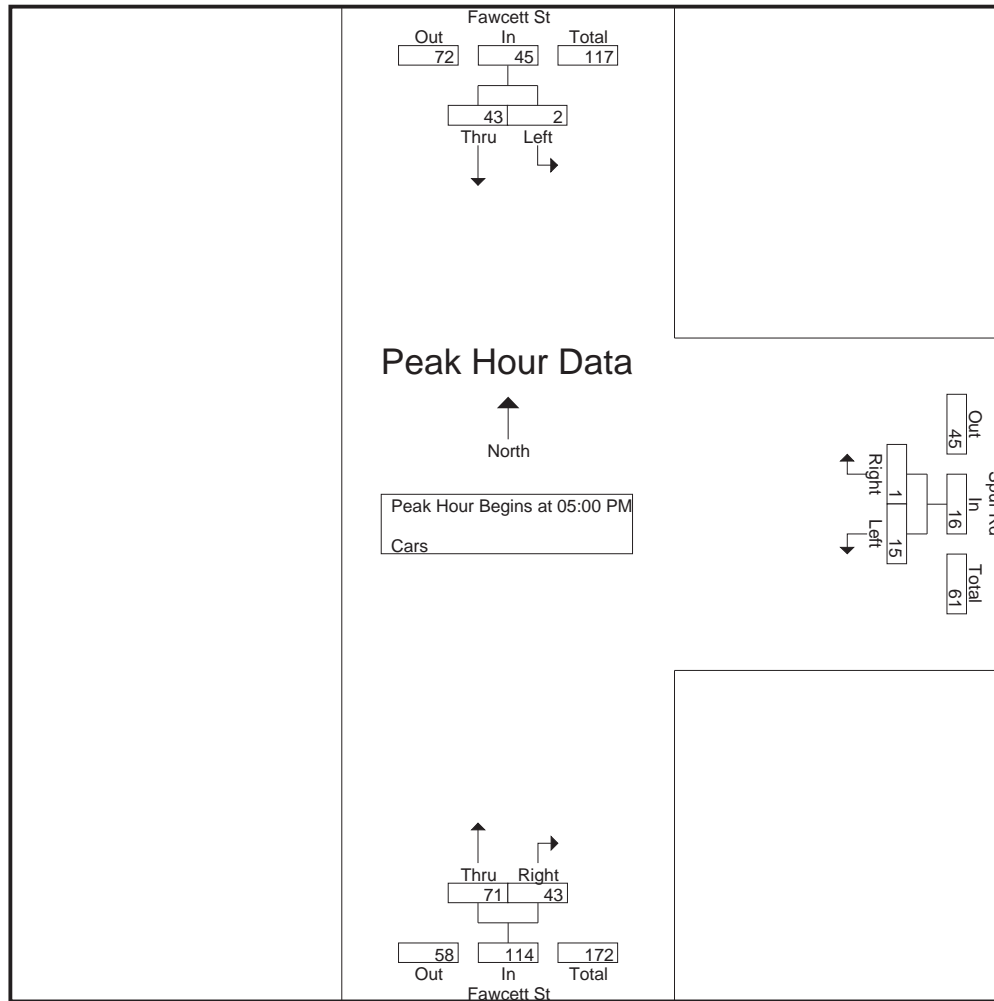
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	14	14	0	0	0	12	11	23	37
05:15 PM	0	10	10	4	1	5	20	6	26	41
05:30 PM	2	14	16	8	0	8	23	9	32	56
05:45 PM	0	5	5	3	0	3	16	17	33	41
Total Volume	2	43	45	15	1	16	71	43	114	175
% App. Total	4.4	95.6		93.8	6.2		62.3	37.7		
PHF	.250	.768	.703	.469	.250	.500	.772	.632	.864	.781



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

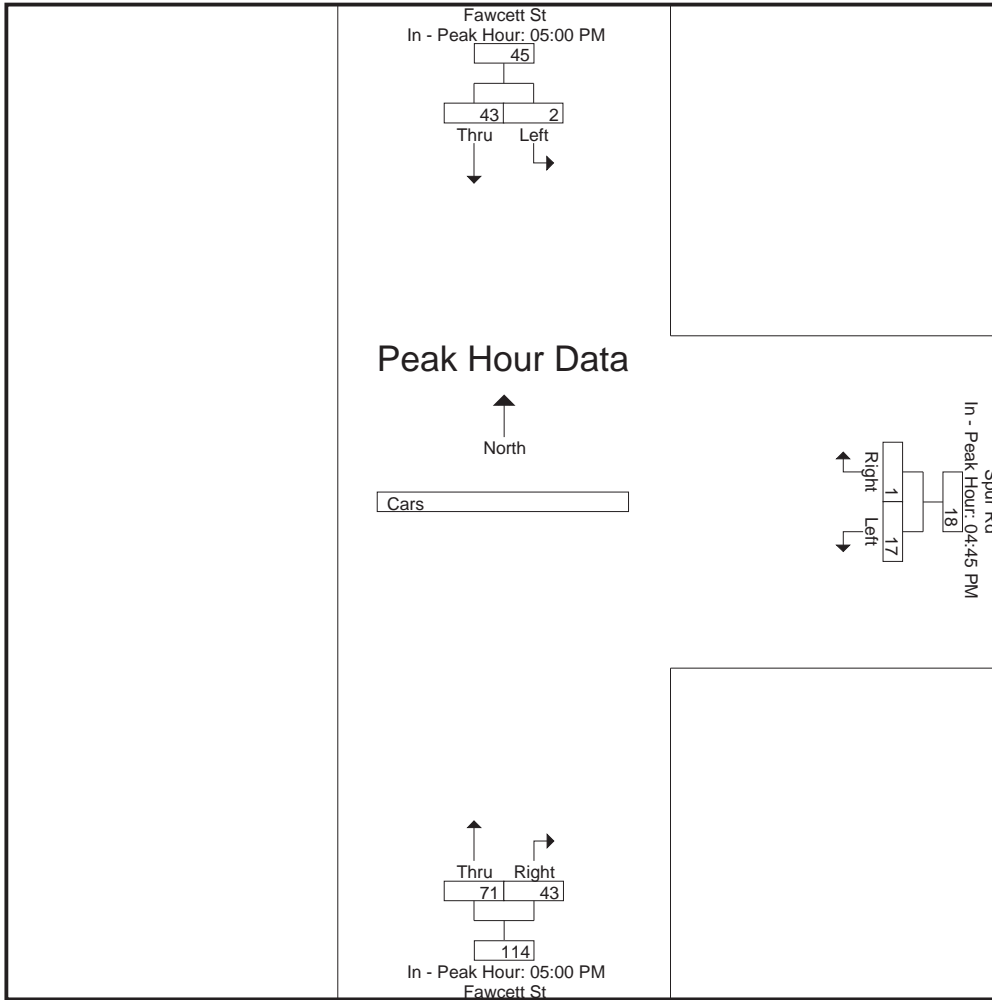
	05:00 PM			04:45 PM			05:00 PM		
+0 mins.	0	14	14	5	0	5	12	11	23
+15 mins.	0	10	10	0	0	0	20	6	26
+30 mins.	2	14	16	4	1	5	23	9	32
+45 mins.	0	5	5	8	0	8	16	17	33
Total Volume	2	43	45	17	1	18	71	43	114
% App. Total	4.4	95.6		94.4	5.6		62.3	37.7	
PHF	.250	.768	.703	.531	.250	.563	.772	.632	.864

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Spur Road
City/State : Cambridge, MA
Weather : Clear

File Name : 15009004
Site Code : 15009004
Start Date : 9/9/2015
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Fawcett St From North		Spur Rd From East		Fawcett St From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	1	0	1
04:15 PM	0	0	0	0	3	0	3
04:30 PM	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	1	0	1
Total	0	0	0	0	6	0	6
05:00 PM	0	1	0	0	1	0	2
05:15 PM	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0
Total	0	1	0	0	3	0	4
Grand Total	0	1	0	0	9	0	10
Apprch %	0	100	0	0	100	0	
Total %	0	10	0	0	90	0	

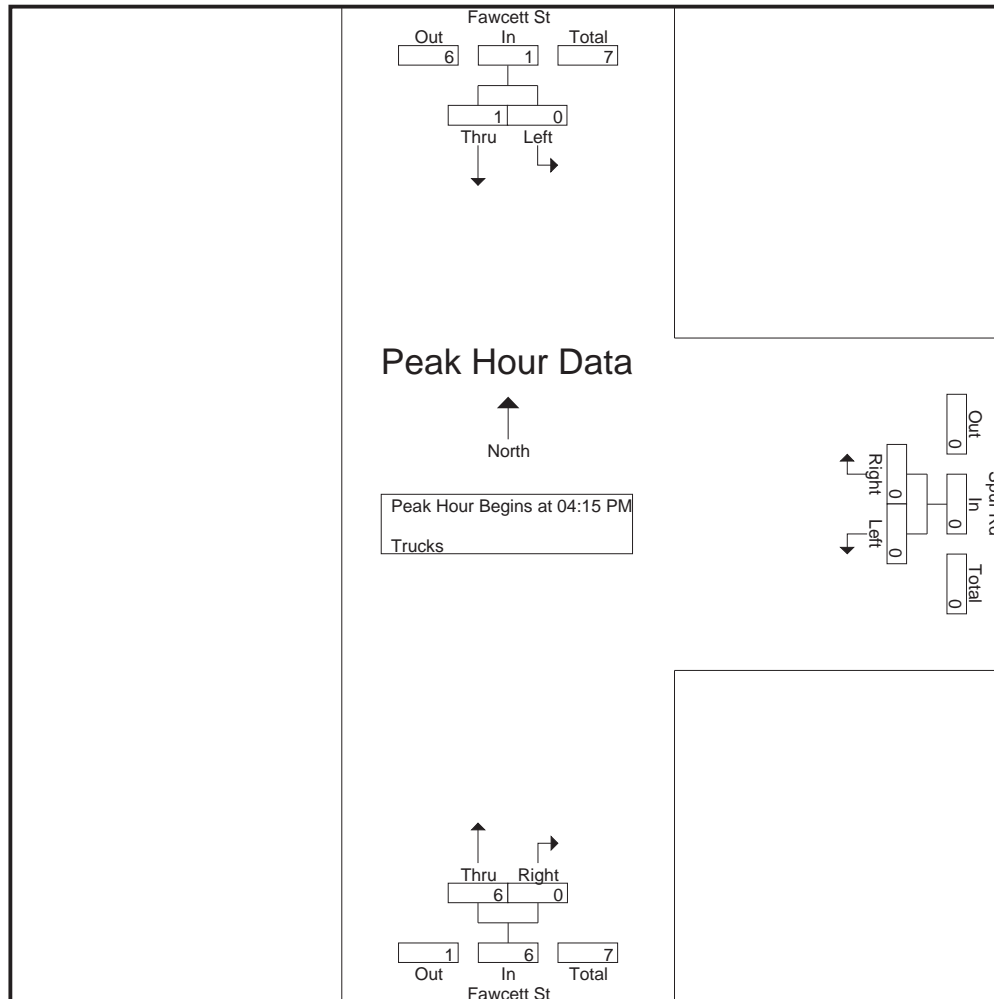
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 8

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	0	0	0	0	0	3	0	3	3
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	1	1	0	0	0	1	0	1	2
Total Volume	0	1	1	0	0	0	6	0	6	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.583



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

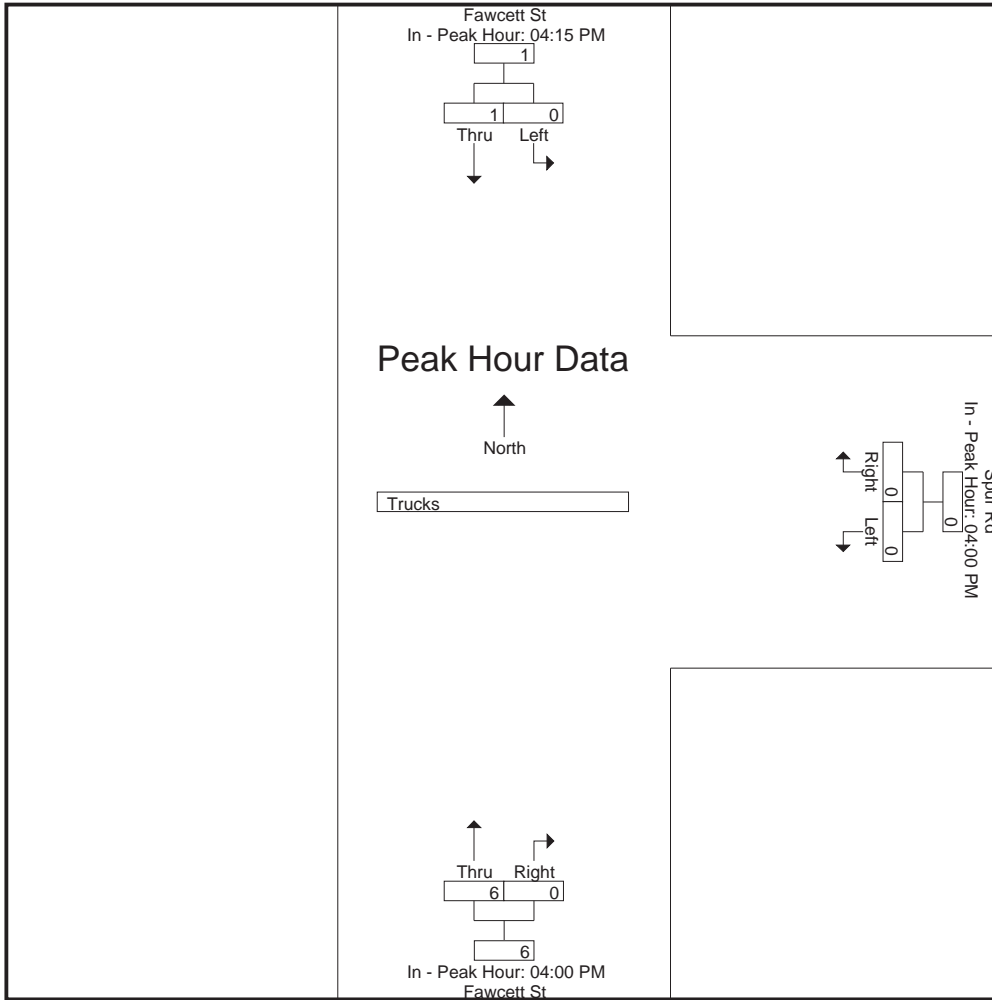
	04:15 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	3	0	3
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	1	1	0	0	0	1	0	1
Total Volume	0	1	1	0	0	0	6	0	6
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
E/W Street : Spur Road
City/State : Cambridge, MA
Weather : Clear

File Name : 15009004
Site Code : 15009004
Start Date : 9/9/2015
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	2	0	0	8	0	0	1	11	0	11
04:15 PM	0	1	0	0	0	8	0	0	2	10	1	11
04:30 PM	0	0	1	2	0	6	1	0	0	7	3	10
04:45 PM	0	1	0	0	0	8	0	0	2	10	1	11
Total	0	2	3	2	0	30	1	0	5	38	5	43
05:00 PM	0	1	0	0	0	13	1	0	0	13	2	15
05:15 PM	0	1	0	0	0	8	0	1	0	8	2	10
05:30 PM	0	0	1	0	0	9	0	0	2	12	0	12
05:45 PM	0	0	2	0	0	7	1	0	2	11	1	12
Total	0	2	3	0	0	37	2	1	4	44	5	49
Grand Total	0	4	6	2	0	67	3	1	9	82	10	92
Apprch %	0	100		100	0		75	25				
Total %	0	40		20	0		30	10		89.1	10.9	

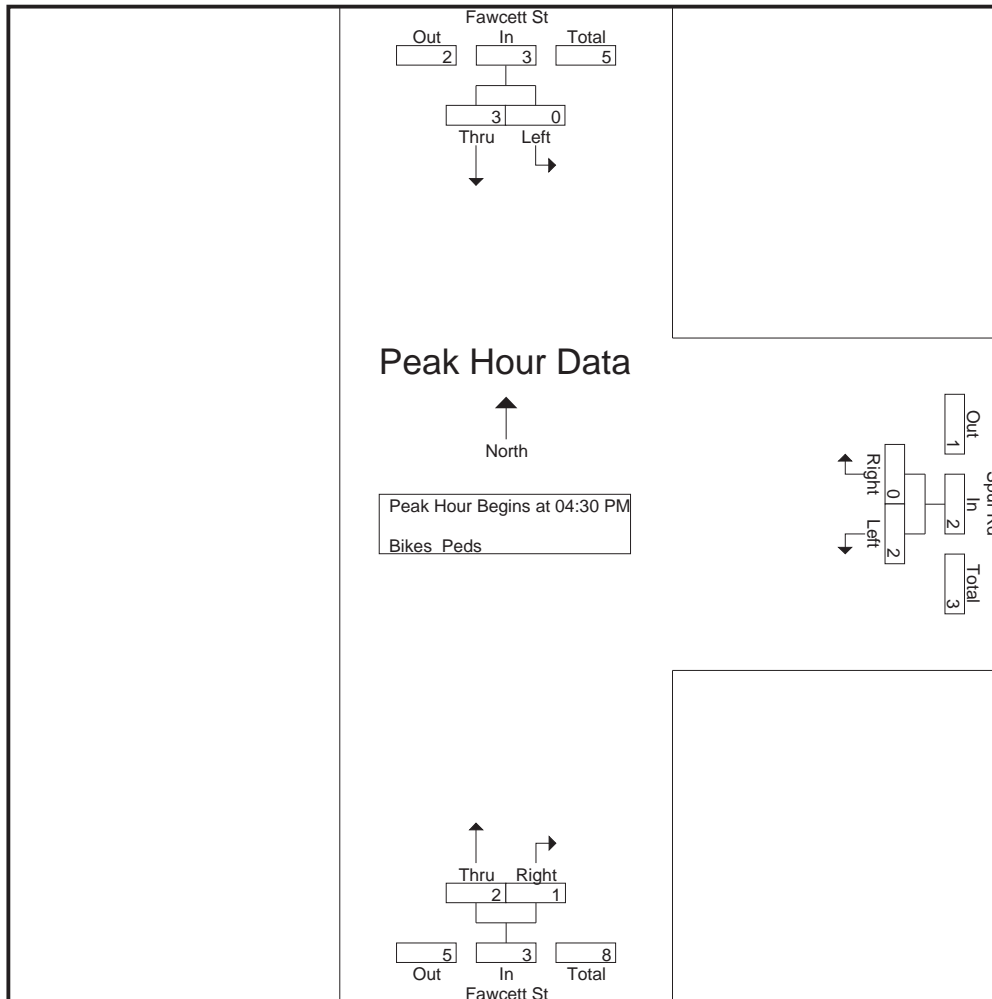
Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 11

Start Time	Fawcett St From North			Spur Rd From East			Fawcett St From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	2	0	2	1	0	1	3
04:45 PM	0	1	1	0	0	0	0	0	0	1
05:00 PM	0	1	1	0	0	0	1	0	1	2
05:15 PM	0	1	1	0	0	0	0	1	1	2
Total Volume	0	3	3	2	0	2	2	1	3	8
% App. Total	0	100		100	0		66.7	33.3		
PHF	.000	.750	.750	.250	.000	.250	.500	.250	.750	.667



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

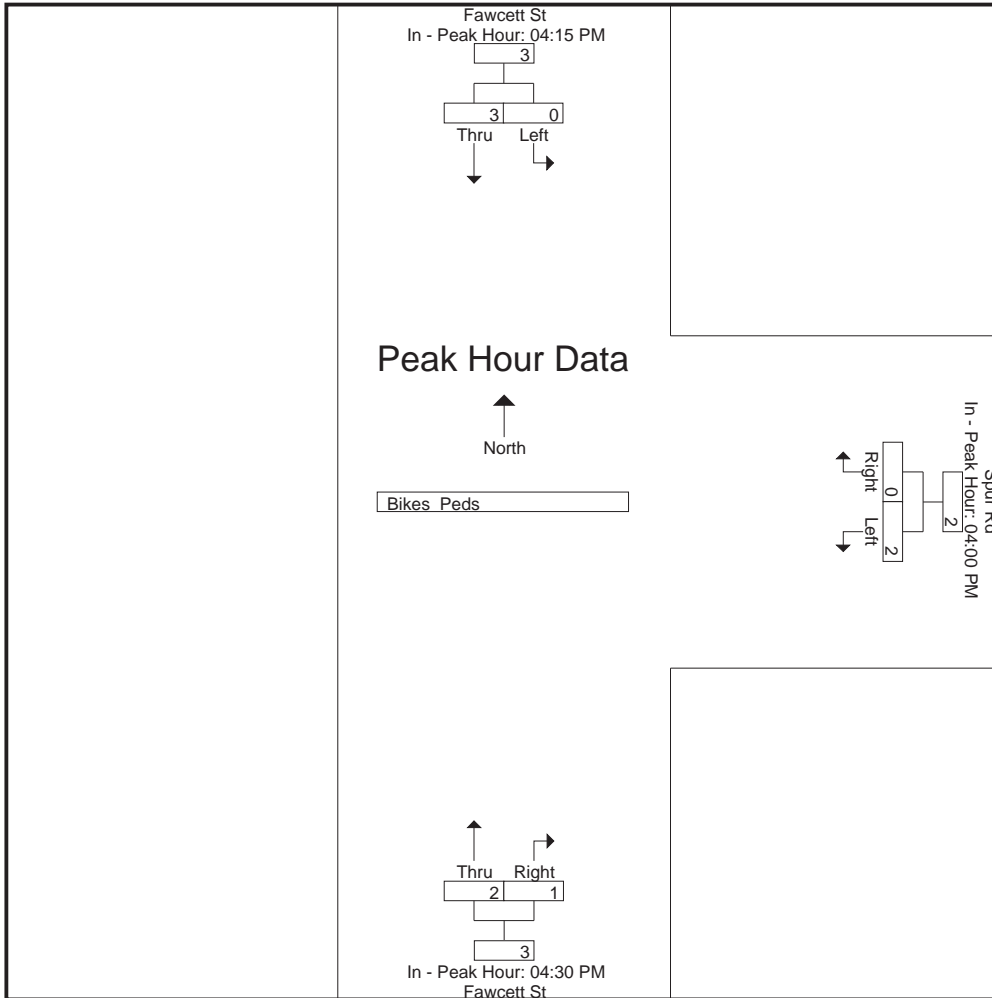
	04:15 PM			04:00 PM			04:30 PM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	2	0	2	1	0	1
+45 mins.	0	1	1	0	0	0	0	1	1
Total Volume	0	3	3	2	0	2	2	1	3
% App. Total	0	100		100	0		66.7	33.3	
PHF	.000	.750	.750	.250	.000	.250	.500	.250	.750

Accurate Counts

978-664-2565

N/S Street : Fawcett Street
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009004
 Site Code : 15009004
 Start Date : 9/9/2015
 Page No : 12



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00 AM	0	3	7	0	0	1	11
07:15 AM	0	9	11	0	0	1	21
07:30 AM	0	4	12	0	0	0	16
07:45 AM	0	6	10	0	0	2	18
Total	0	22	40	0	0	4	66
08:00 AM	0	6	8	0	0	0	14
08:15 AM	0	4	10	0	2	0	16
08:30 AM	0	7	10	0	0	1	18
08:45 AM	0	1	5	0	1	1	8
Total	0	18	33	0	3	2	56
Grand Total	0	40	73	0	3	6	122
Apprch %	0	100	100	0	33.3	66.7	
Total %	0	32.8	59.8	0	2.5	4.9	
Cars	0	40	73	0	3	6	122
% Cars	0	100	100	0	100	100	100
Trucks	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0

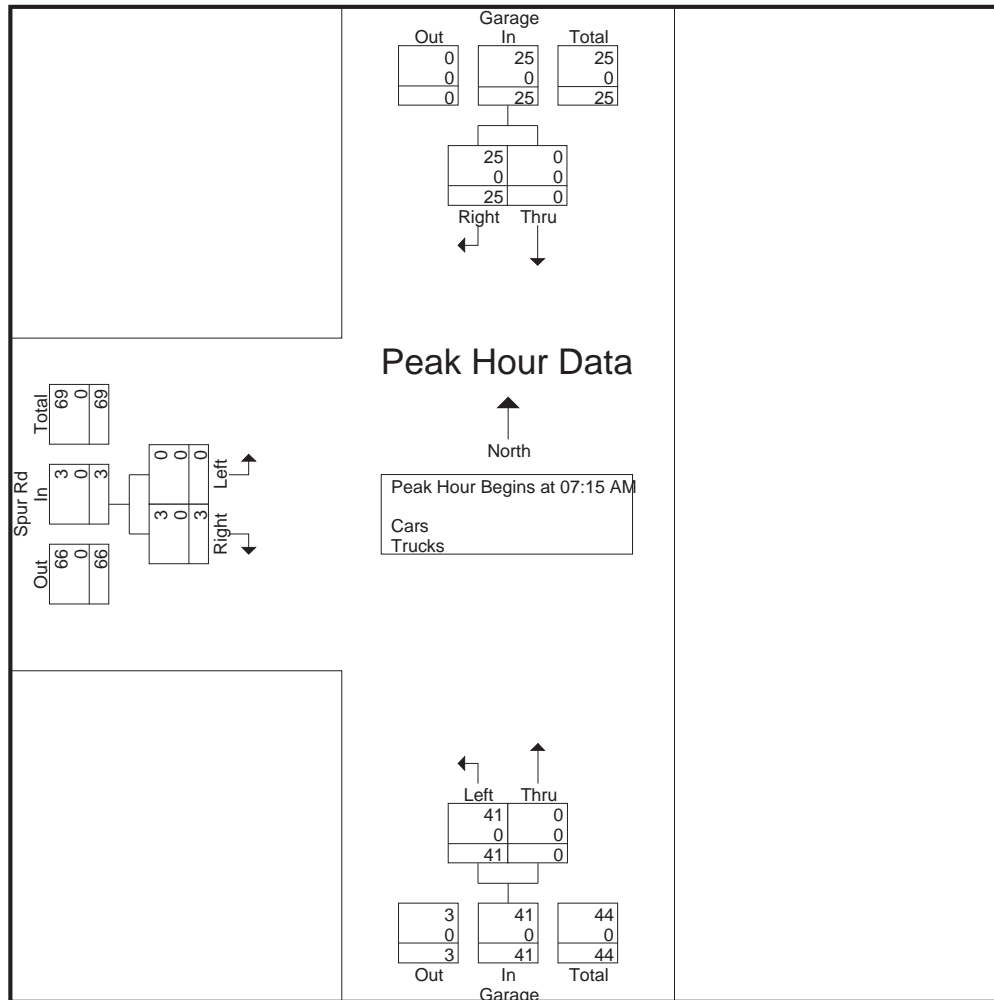
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 2

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	9	9	11	0	11	0	1	1	21
07:30 AM	0	4	4	12	0	12	0	0	0	16
07:45 AM	0	6	6	10	0	10	0	2	2	18
08:00 AM	0	6	6	8	0	8	0	0	0	14
Total Volume	0	25	25	41	0	41	0	3	3	69
% App. Total	0	100		100	0	100	0	100	100	100
PHF	.000	.694	.694	.854	.000	.854	.000	.375	.375	.821
Cars	0	25	25	41	0	41	0	3	3	69
% Cars	0	100	100	100	0	100	0	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

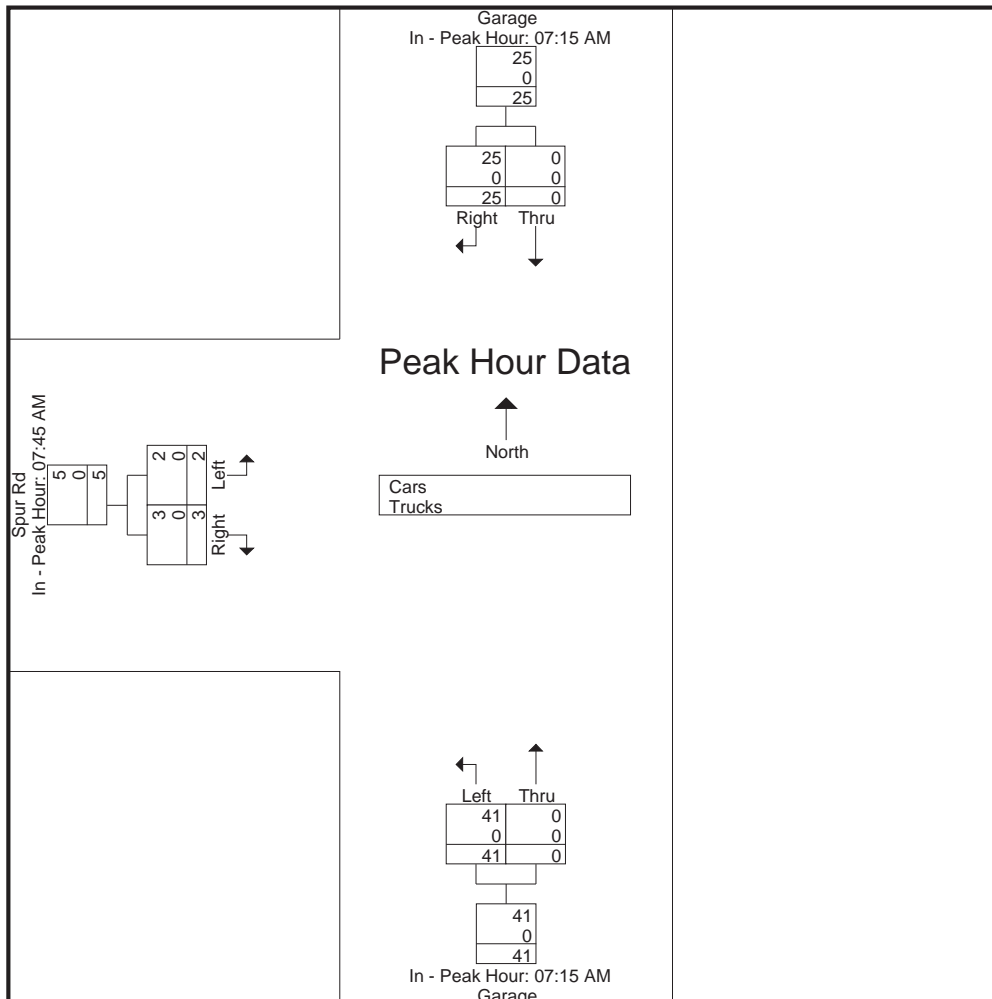
File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 3

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:45 AM		
+0 mins.	0	9	9	11	0	11	0	2	2
+15 mins.	0	4	4	12	0	12	0	0	0
+30 mins.	0	6	6	10	0	10	2	0	2
+45 mins.	0	6	6	8	0	8	0	1	1
Total Volume	0	25	25	41	0	41	2	3	5
% App. Total	0	100		100	0	100	40	60	
PHF	.000	.694	.694	.854	.000	.854	.250	.375	.625
Cars	0	25	25	41	0	41	2	3	5
% Cars	0	100	100	100	0	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00 AM	0	3	7	0	0	1	11
07:15 AM	0	9	11	0	0	1	21
07:30 AM	0	4	12	0	0	0	16
07:45 AM	0	6	10	0	0	2	18
Total	0	22	40	0	0	4	66
08:00 AM	0	6	8	0	0	0	14
08:15 AM	0	4	10	0	2	0	16
08:30 AM	0	7	10	0	0	1	18
08:45 AM	0	1	5	0	1	1	8
Total	0	18	33	0	3	2	56
Grand Total	0	40	73	0	3	6	122
Apprch %	0	100	100	0	33.3	66.7	
Total %	0	32.8	59.8	0	2.5	4.9	

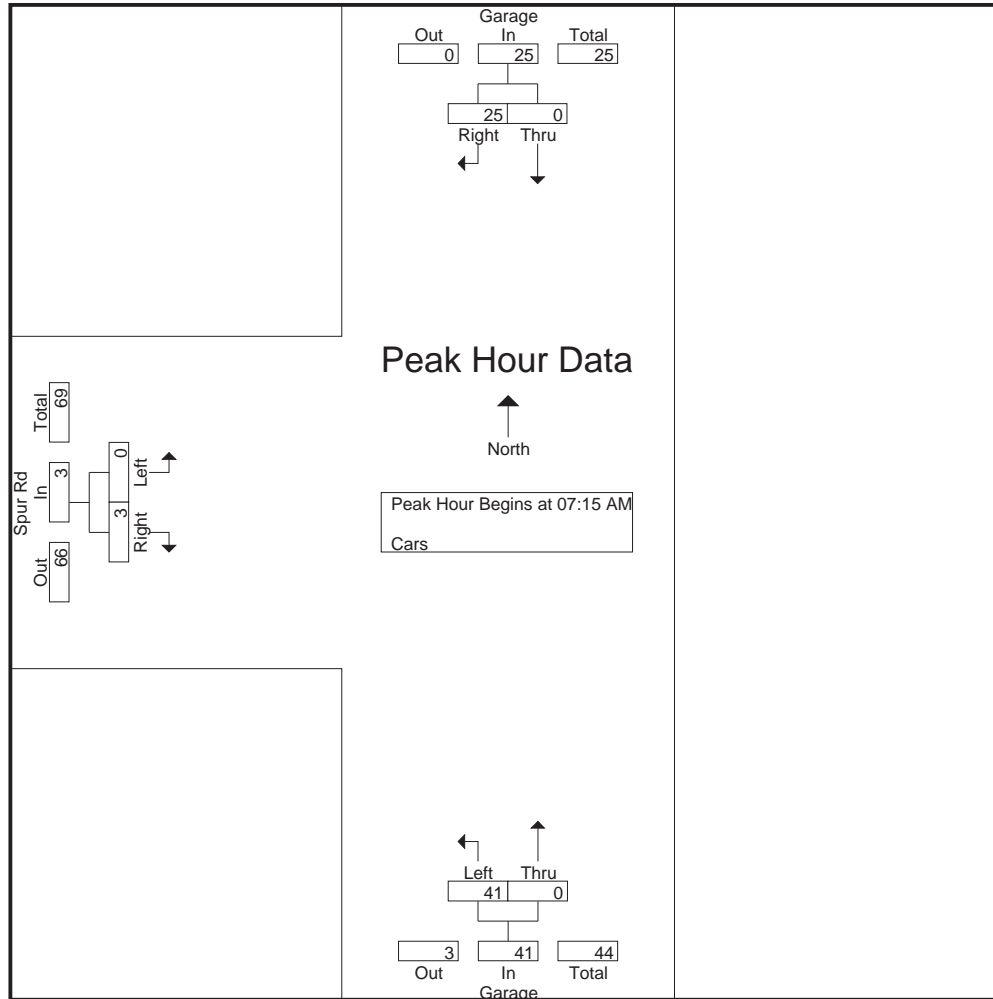
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 5

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	9	9	11	0	11	0	1	1	21
07:30 AM	0	4	4	12	0	12	0	0	0	16
07:45 AM	0	6	6	10	0	10	0	2	2	18
08:00 AM	0	6	6	8	0	8	0	0	0	14
Total Volume	0	25	25	41	0	41	0	3	3	69
% App. Total	0	100		100	0		0	100		
PHF	.000	.694	.694	.854	.000	.854	.000	.375	.375	.821



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

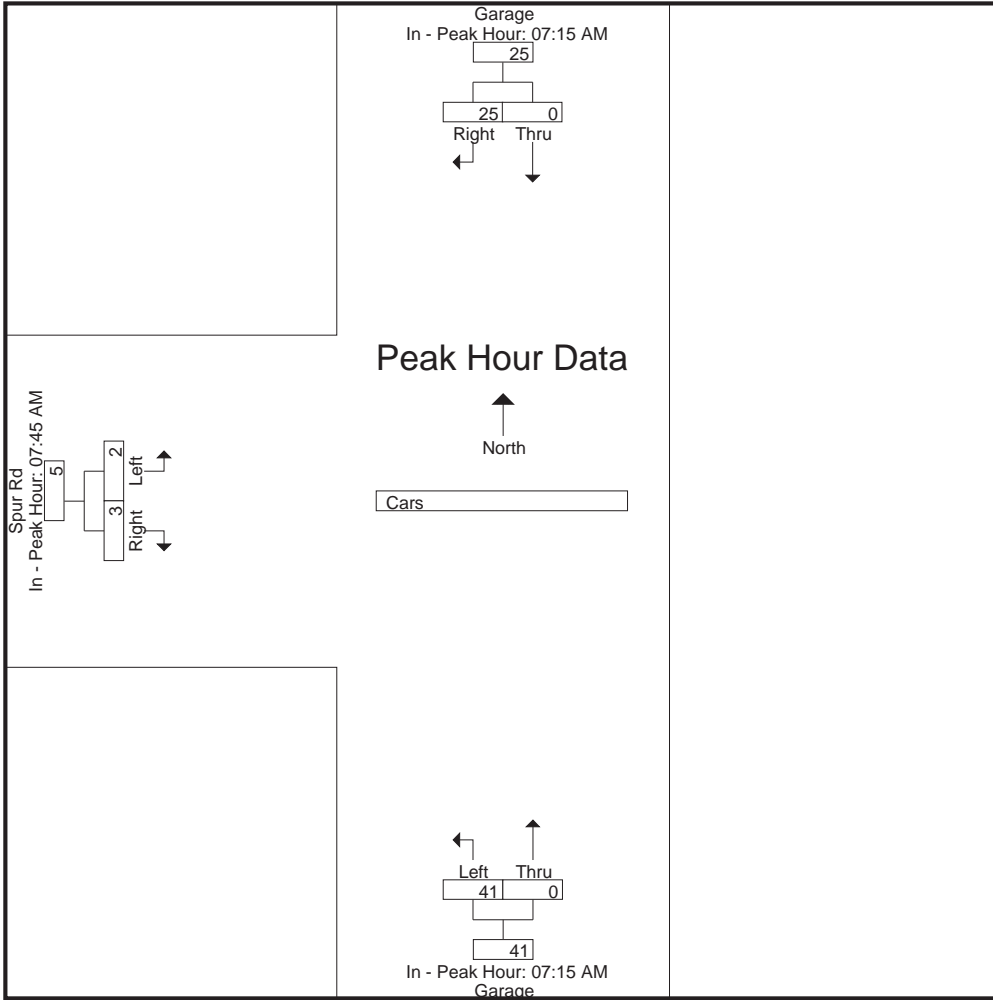
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:45 AM		
+0 mins.	0	9	9	11	0	11	0	2	2
+15 mins.	0	4	4	12	0	12	0	0	0
+30 mins.	0	6	6	10	0	10	2	0	2
+45 mins.	0	6	6	8	0	8	0	1	1
Total Volume	0	25	25	41	0	41	2	3	5
% App. Total	0	100		100	0		40	60	

Accurate Counts

978-664-2565

PHF | .000 | .694 | .694 | .854 | .000 | .854 | .250 | .375 | .625



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00 AM	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
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	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	
Total %							

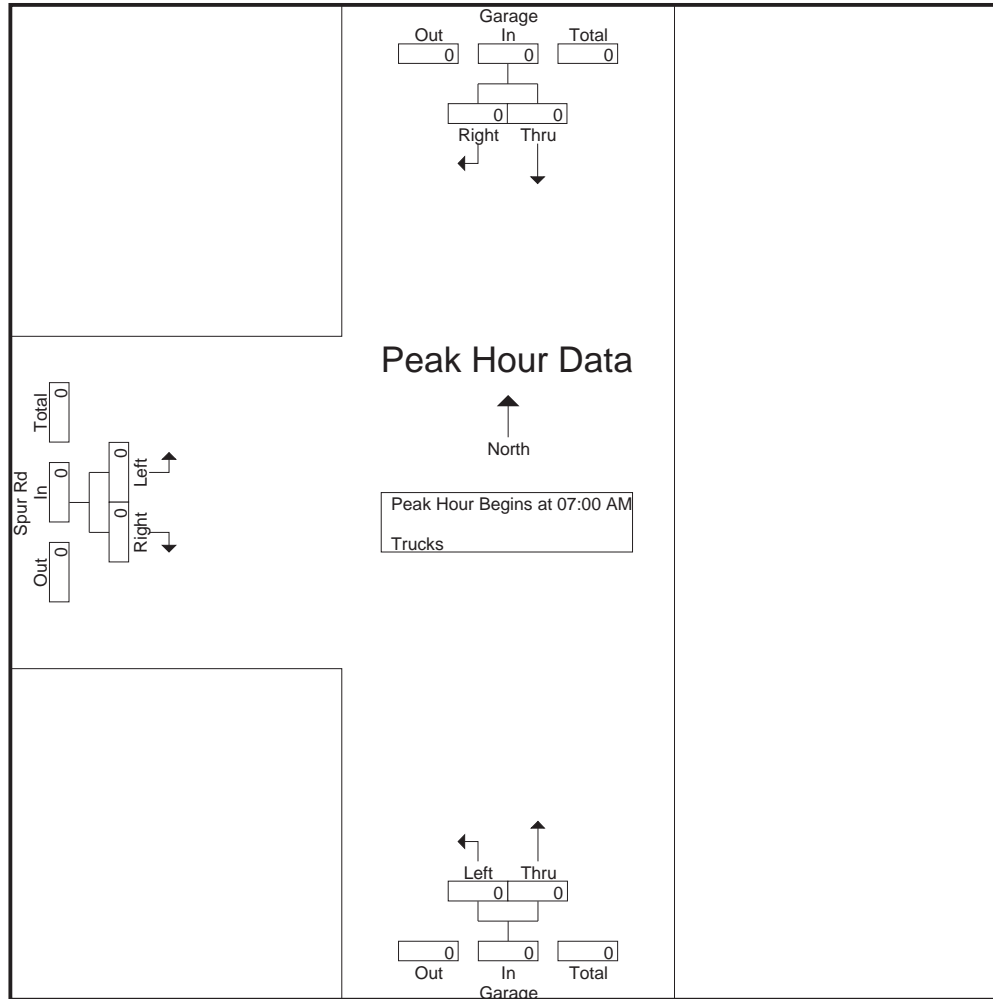
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 8

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

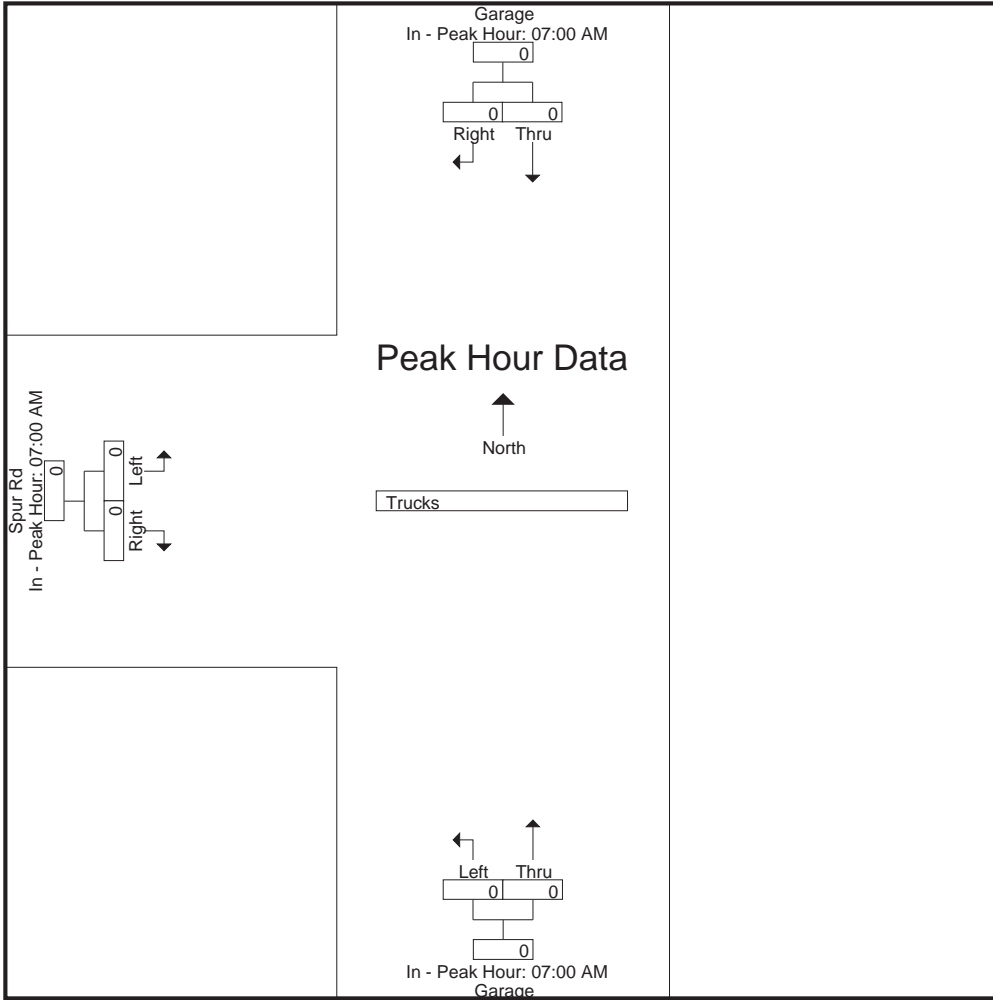
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+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	0	0		0	0		0	0	

Accurate Counts

978-664-2565

PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Garage From North			Garage From South			Spur Rd From West			Exclu. Total	Inclu. Total	Int. Total
	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds			
07:00 AM	0	0	0	0	0	1	0	0	3	4	0	4
07:15 AM	0	0	0	0	0	2	0	0	4	6	0	6
07:30 AM	0	0	0	0	0	0	0	0	6	6	0	6
07:45 AM	0	0	0	0	0	5	0	0	8	13	0	13
Total	0	0	0	0	0	8	0	0	21	29	0	29
08:00 AM	0	0	0	0	0	0	0	0	4	4	0	4
08:15 AM	0	0	0	0	0	3	0	0	2	5	0	5
08:30 AM	0	0	0	1	0	1	0	0	2	3	1	4
08:45 AM	0	0	0	0	0	1	0	0	1	2	0	2
Total	0	0	0	1	0	5	0	0	9	14	1	15
Grand Total	0	0	0	1	0	13	0	0	30	43	1	44
Apprch %	0	0		100	0		0	0				
Total %	0	0		100	0		0	0		97.7	2.3	

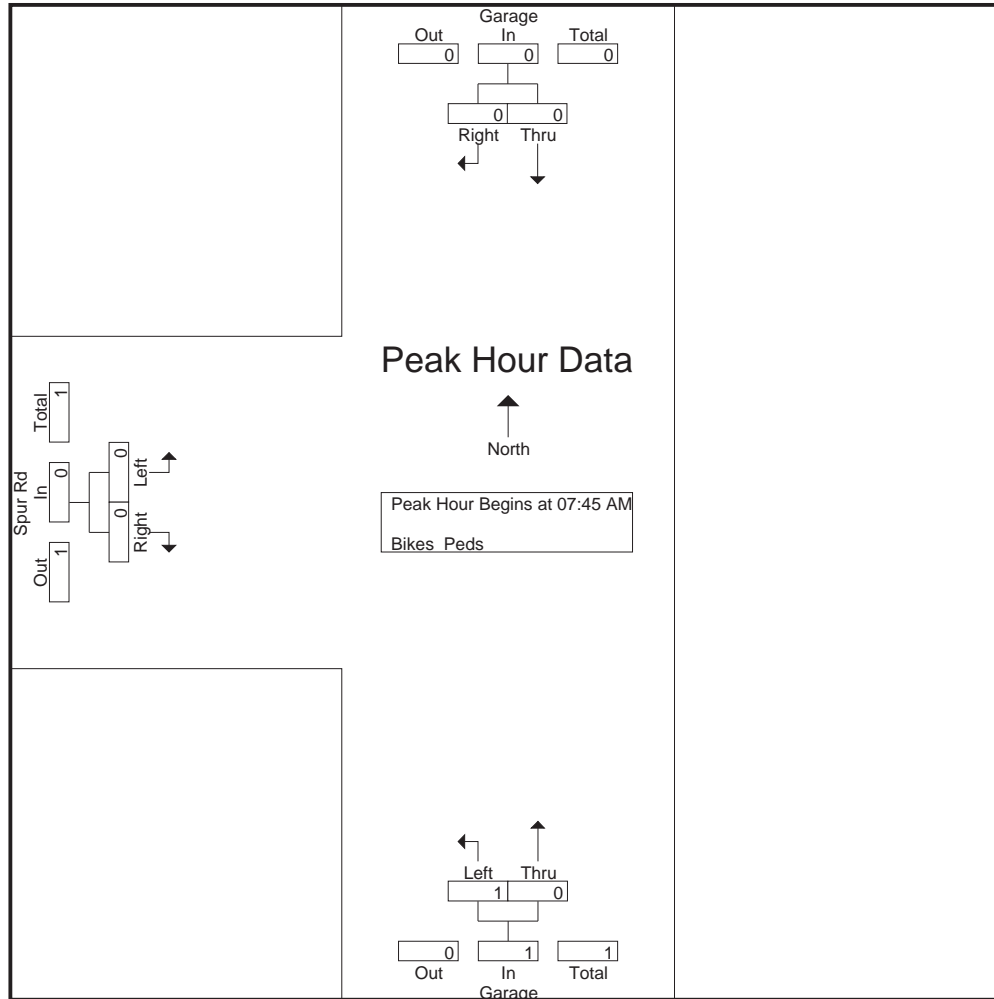
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 11

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	1	0	1	0	0	0	1
Total Volume	0	0	0	1	0	1	0	0	0	1
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000	.250



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

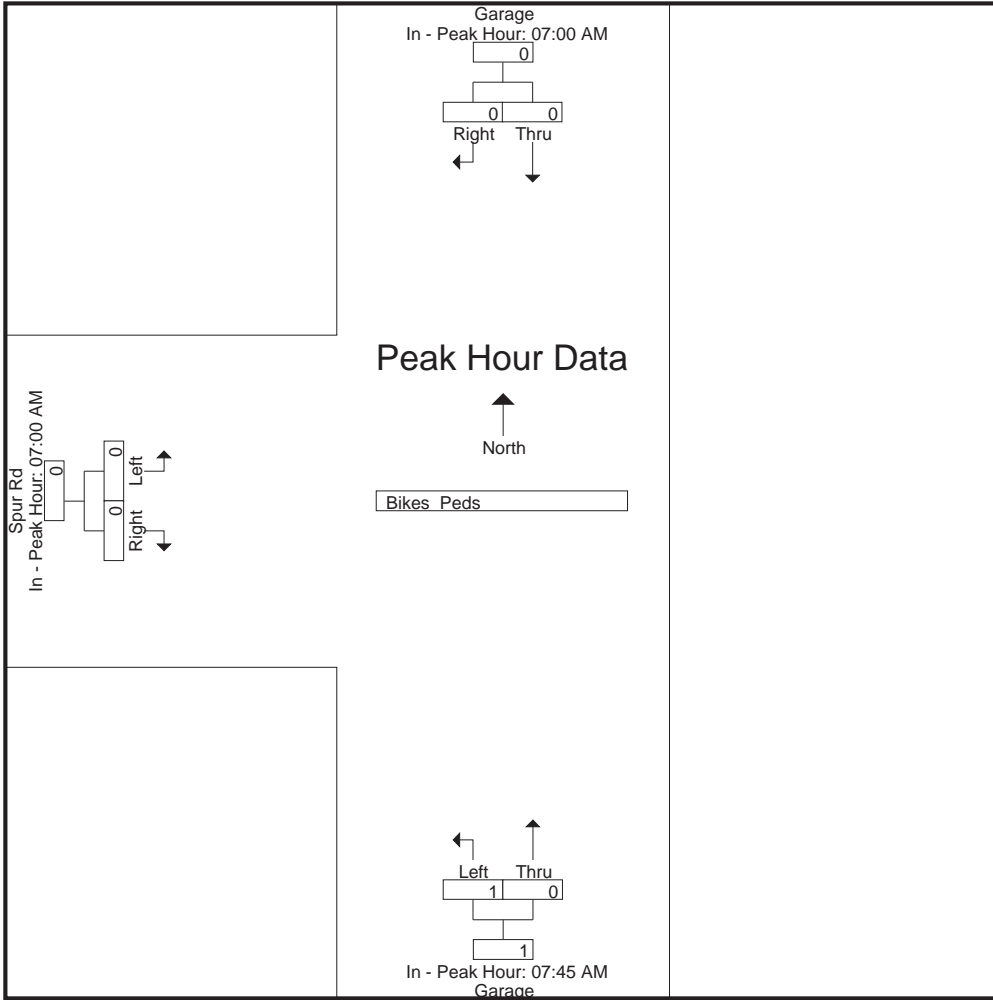
Peak Hour for Each Approach Begins at:

	07:00 AM			07:45 AM			07:00 AM		
+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	1	0	1	0	0	0
Total Volume	0	0	0	1	0	1	0	0	0
% App. Total	0	0		100	0		0	0	

Accurate Counts

978-664-2565

PHF | .000 | .000 | .000 | .250 | .000 | .250 | .000 | .000 | .000



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
04:00 PM	0	2	3	0	1	3	9
04:15 PM	0	2	1	0	2	6	11
04:30 PM	0	1	1	0	3	2	7
04:45 PM	0	2	3	0	4	6	15
Total	0	7	8	0	10	17	42
05:00 PM	0	0	0	0	4	8	12
05:15 PM	0	2	3	0	5	0	10
05:30 PM	0	3	4	0	4	9	20
05:45 PM	0	2	1	0	7	9	19
Total	0	7	8	0	20	26	61
Grand Total	0	14	16	0	30	43	103
Apprch %	0	100	100	0	41.1	58.9	
Total %	0	13.6	15.5	0	29.1	41.7	
Cars	0	14	16	0	30	43	103
% Cars	0	100	100	0	100	100	100
Trucks	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0

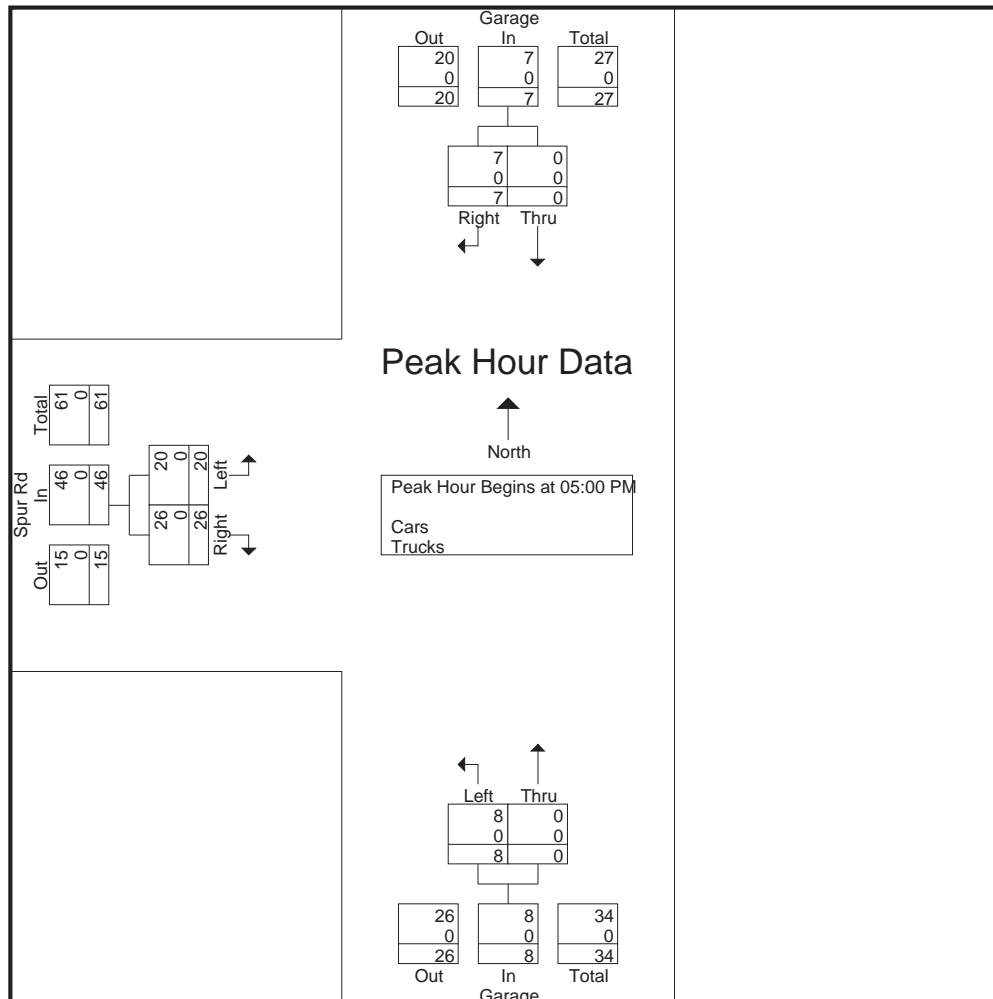
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 2

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	4	8	12	12
05:15 PM	0	2	2	3	0	3	5	0	5	10
05:30 PM	0	3	3	4	0	4	4	9	13	20
05:45 PM	0	2	2	1	0	1	7	9	16	19
Total Volume	0	7	7	8	0	8	20	26	46	61
% App. Total	0	100		100	0		43.5	56.5		
PHF	.000	.583	.583	.500	.000	.500	.714	.722	.719	.763
Cars	0	7	7	8	0	8	20	26	46	61
% Cars	0	100	100	100	0	100	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

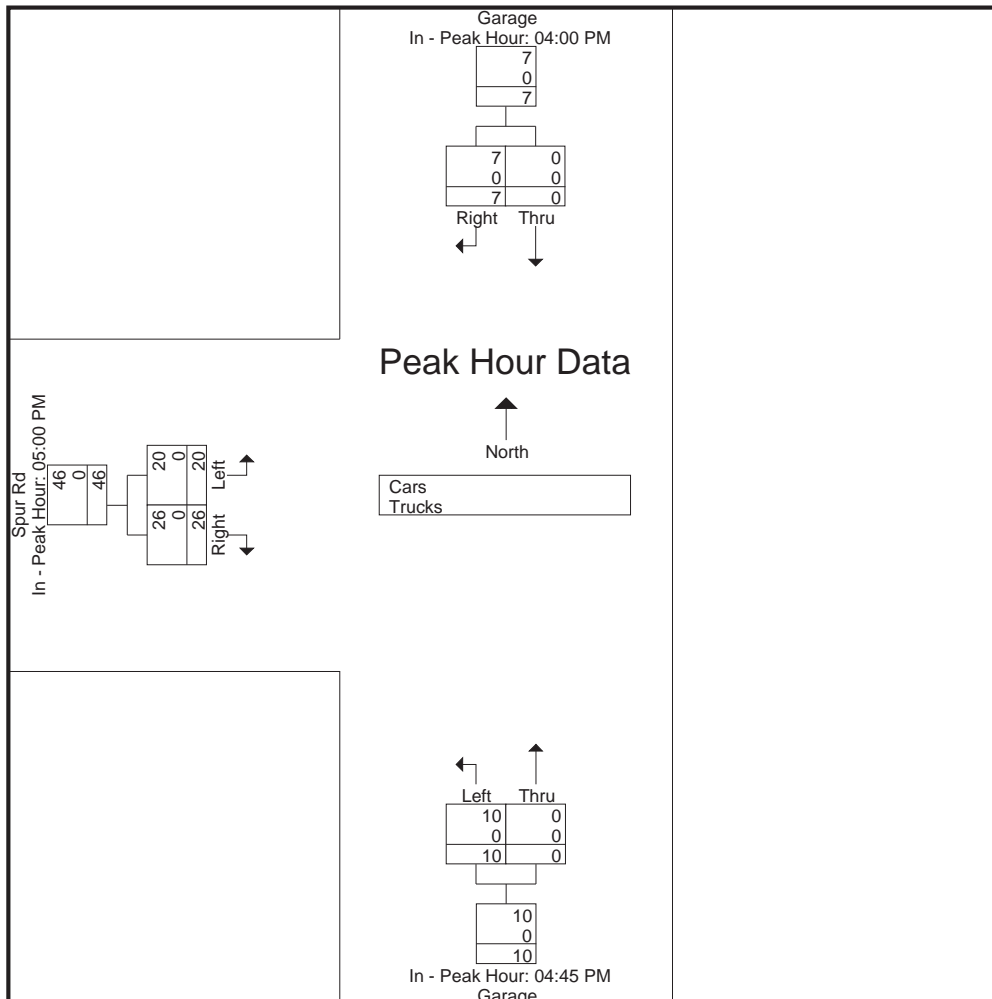
File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 3

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:45 PM			05:00 PM		
+0 mins.	0	2	2	3	0	3	4	8	12
+15 mins.	0	2	2	0	0	0	5	0	5
+30 mins.	0	1	1	3	0	3	4	9	13
+45 mins.	0	2	2	4	0	4	7	9	16
Total Volume	0	7	7	10	0	10	20	26	46
% App. Total	0	100		100	0		43.5	56.5	
PHF	.000	.875	.875	.625	.000	.625	.714	.722	.719
Cars	0	7	7	10	0	10	20	26	46
% Cars	0	100	100	100	0	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 4

Groups Printed- Cars

Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
04:00 PM	0	2	3	0	1	3	9
04:15 PM	0	2	1	0	2	6	11
04:30 PM	0	1	1	0	3	2	7
04:45 PM	0	2	3	0	4	6	15
Total	0	7	8	0	10	17	42
05:00 PM	0	0	0	0	4	8	12
05:15 PM	0	2	3	0	5	0	10
05:30 PM	0	3	4	0	4	9	20
05:45 PM	0	2	1	0	7	9	19
Total	0	7	8	0	20	26	61
Grand Total	0	14	16	0	30	43	103
Apprch %	0	100	100	0	41.1	58.9	
Total %	0	13.6	15.5	0	29.1	41.7	

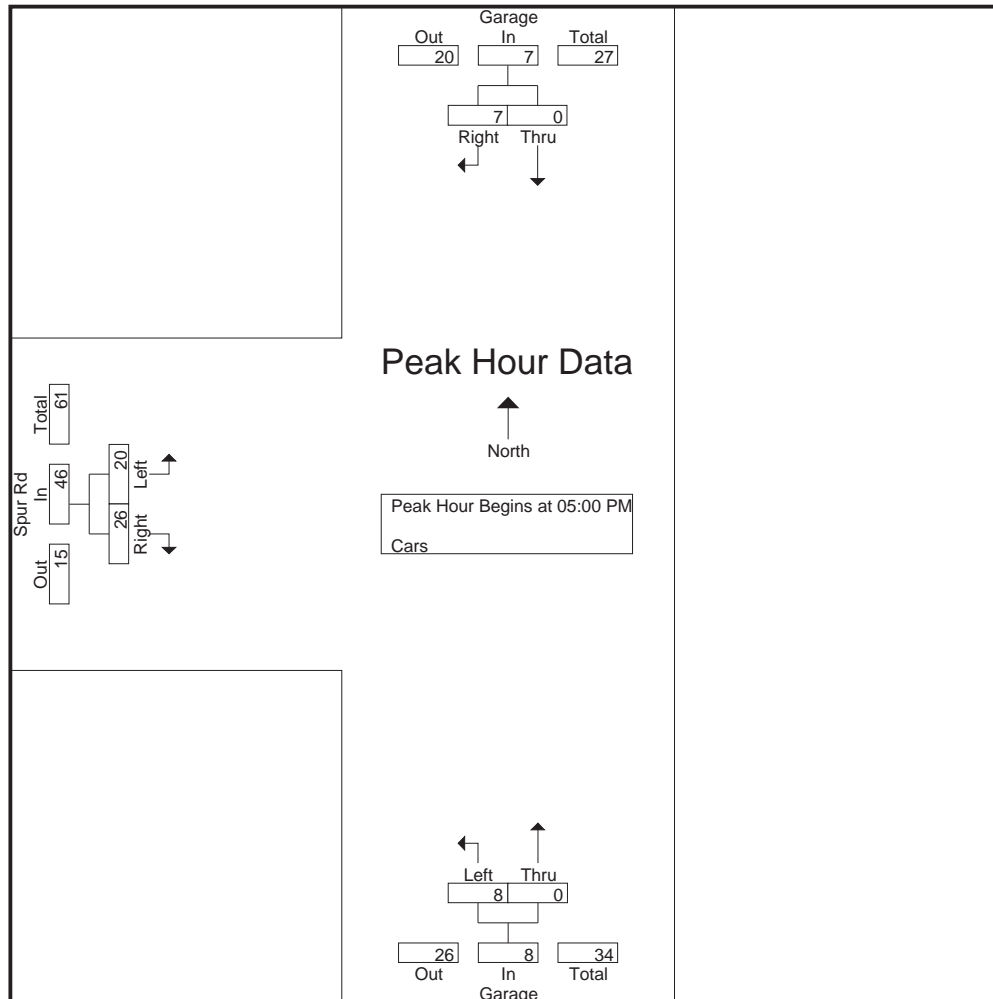
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 5

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	4	8	12	12
05:15 PM	0	2	2	3	0	3	5	0	5	10
05:30 PM	0	3	3	4	0	4	4	9	13	20
05:45 PM	0	2	2	1	0	1	7	9	16	19
Total Volume	0	7	7	8	0	8	20	26	46	61
% App. Total	0	100		100	0		43.5	56.5		
PHF	.000	.583	.583	.500	.000	.500	.714	.722	.719	.763



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

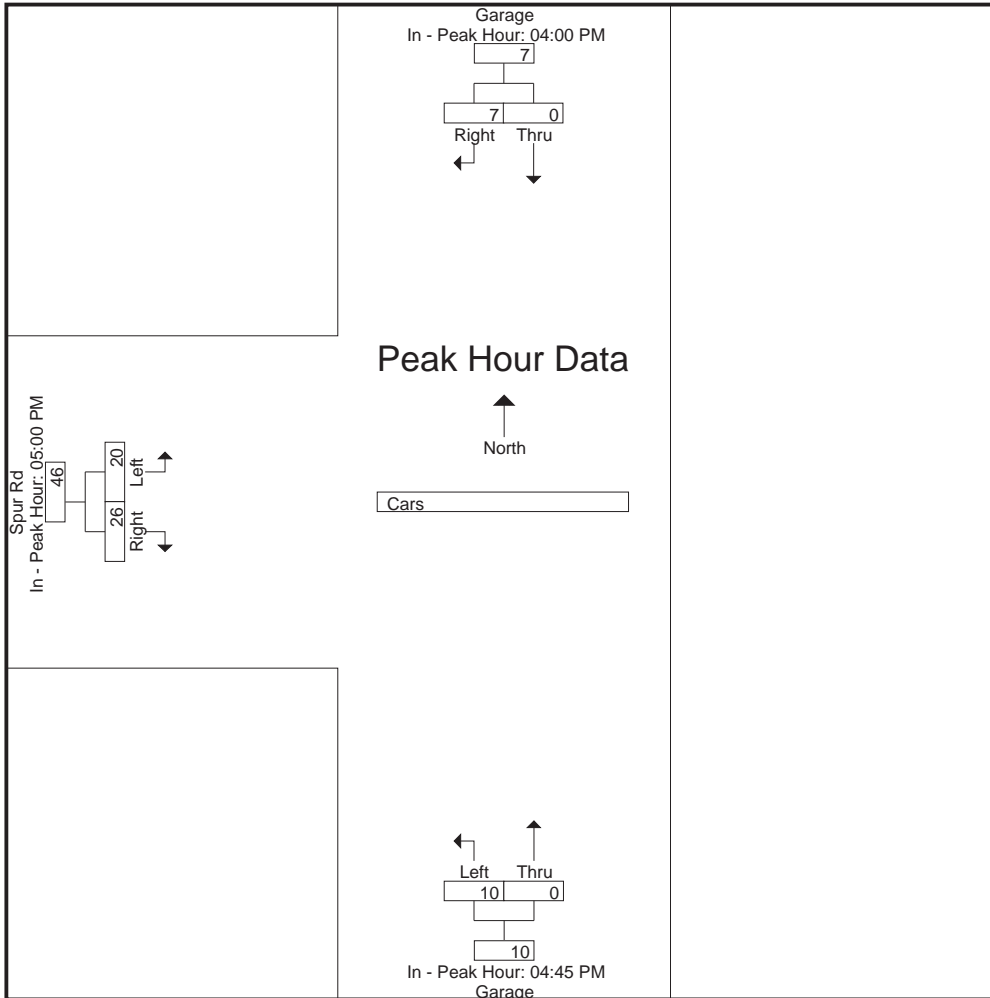
	04:00 PM			04:45 PM			05:00 PM		
+0 mins.	0	2	2	3	0	3	4	8	12
+15 mins.	0	2	2	0	0	0	5	0	5
+30 mins.	0	1	1	3	0	3	4	9	13
+45 mins.	0	2	2	4	0	4	7	9	16
Total Volume	0	7	7	10	0	10	20	26	46
% App. Total	0	100		100	0		43.5	56.5	
PHF	.000	.875	.875	.625	.000	.625	.714	.722	.719

Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
E/W Street : Spur Road
City/State : Cambridge, MA
Weather : Clear

File Name : 15009005
Site Code : 15009005
Start Date : 9/9/2015
Page No : 6



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 7

Groups Printed- Trucks

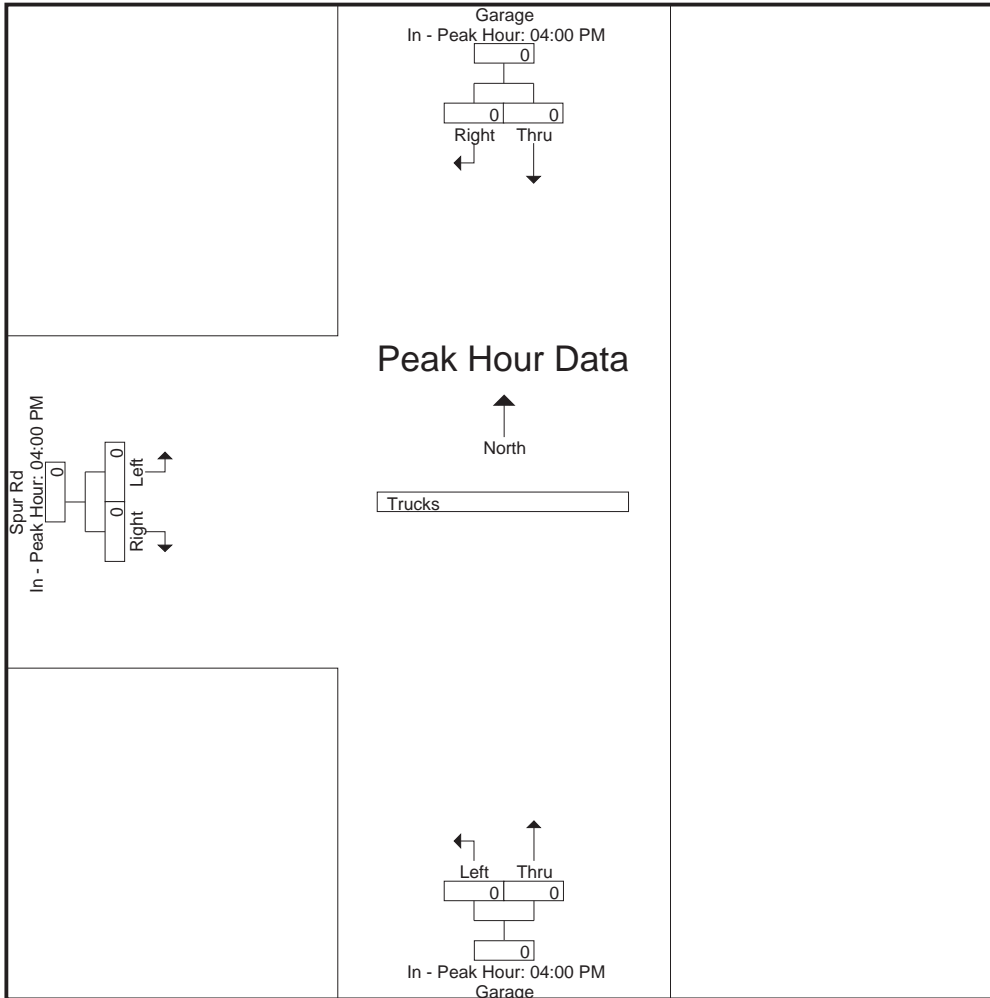
Start Time	Garage From North		Garage From South		Spur Rd From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
04:00 PM	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	
Total %							

Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
E/W Street : Spur Road
City/State : Cambridge, MA
Weather : Clear

File Name : 15009005
Site Code : 15009005
Start Date : 9/9/2015
Page No : 9



Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 10

Groups Printed- Bikes Peds

Start Time	Garage From North			Garage From South			Spur Rd From West			Exclu. Total	Inclu. Total	Int. Total
	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds			
04:00 PM	0	0	0	0	0	3	0	0	5	8	0	8
04:15 PM	0	0	0	0	0	1	0	0	2	3	0	3
04:30 PM	0	0	0	0	0	0	0	0	5	5	0	5
04:45 PM	0	2	0	0	0	0	0	0	1	1	2	3
Total	0	2	0	0	0	4	0	0	13	17	2	19
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	2
05:15 PM	0	0	0	0	0	3	2	0	1	4	2	6
05:30 PM	0	0	0	0	0	0	0	0	2	2	0	2
05:45 PM	0	0	0	0	0	0	0	0	2	2	0	2
Total	0	0	0	0	0	3	2	0	7	10	2	12
Grand Total	0	2	0	0	0	7	2	0	20	27	4	31
Apprch %	0	100		0	0		100	0				
Total %	0	50		0	0		50	0		87.1	12.9	

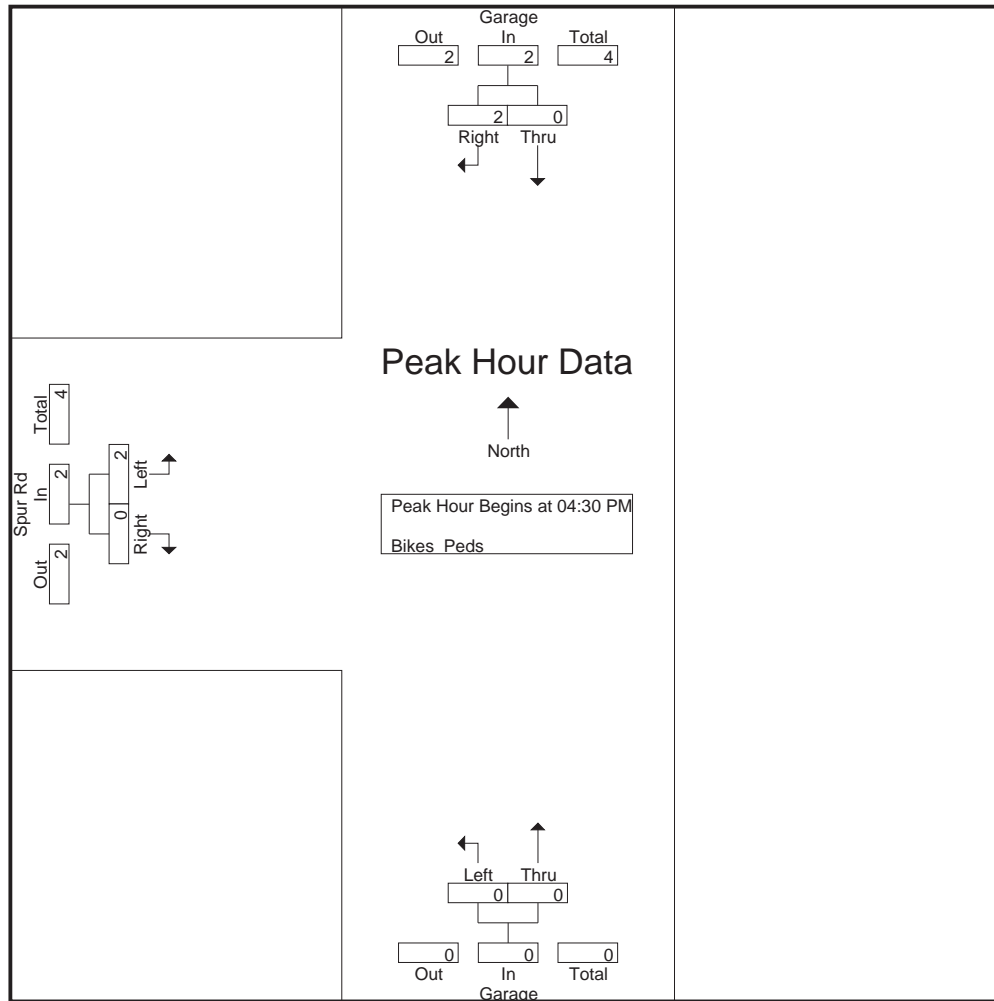
Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
 E/W Street : Spur Road
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009005
 Site Code : 15009005
 Start Date : 9/9/2015
 Page No : 11

Start Time	Garage From North			Garage From South			Spur Rd From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	2	2	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	2	0	2	2
Total Volume	0	2	2	0	0	0	2	0	2	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

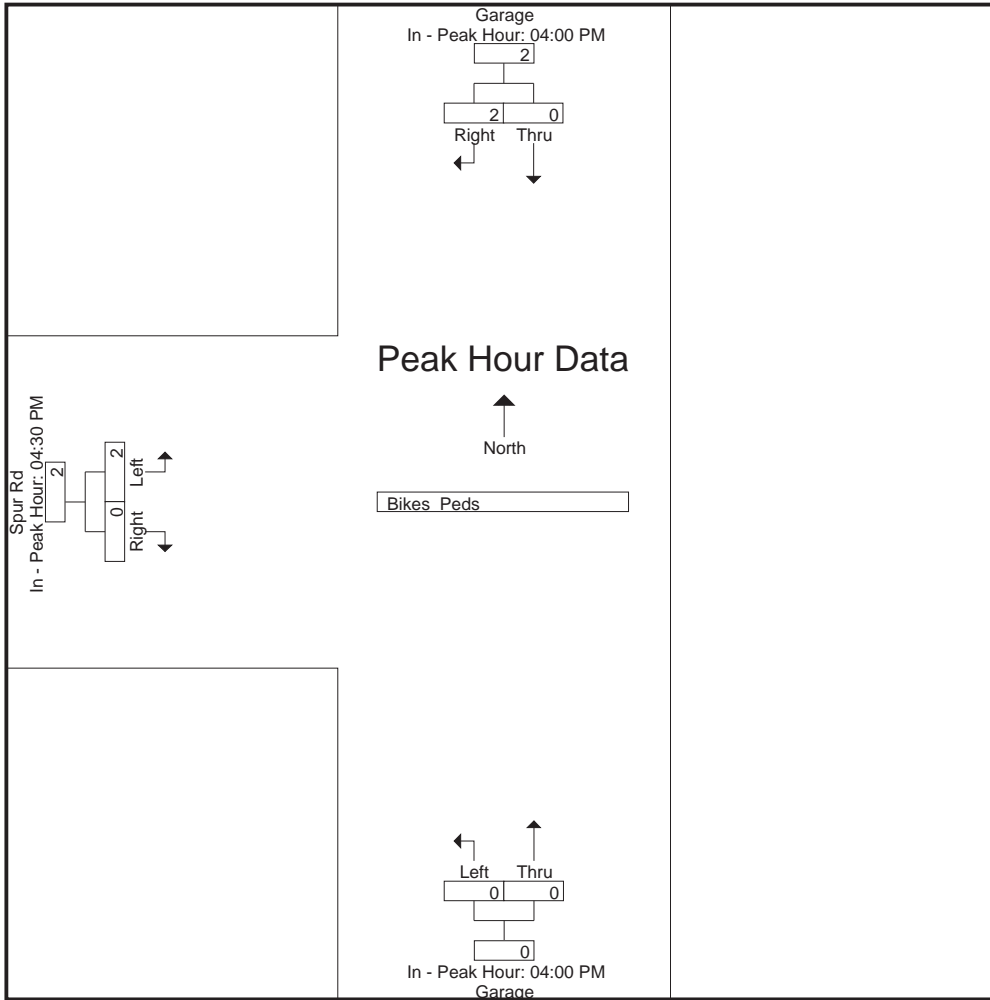
	04:00 PM			04:00 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	2	0	2
Total Volume	0	2	2	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : 80/90 Fawcett St Garages
E/W Street : Spur Road
City/State : Cambridge, MA
Weather : Clear

File Name : 15009005
Site Code : 15009005
Start Date : 9/9/2015
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Street - Peds Street - Bikes Sidewalk - Peds Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	4	0	7	11
06:45 AM	0	13	0	11	24
Total	0	17	0	18	35
07:00 AM	0	15	0	13	28
07:15 AM	0	19	0	18	37
07:30 AM	0	12	0	23	35
07:45 AM	0	17	1	22	40
Total	0	63	1	76	140
08:00 AM	0	26	0	20	46
08:15 AM	0	18	0	13	31
08:30 AM	0	24	0	20	44
08:45 AM	0	30	0	15	45
Total	0	98	0	68	166
09:00 AM	0	25	0	16	41
09:15 AM	0	20	0	11	31
09:30 AM	0	10	0	21	31
09:45 AM	0	11	0	10	21
Total	0	66	0	58	124
10:00 AM	0	6	0	7	13
10:15 AM	0	12	0	11	23
10:30 AM	0	11	0	12	23
10:45 AM	0	9	0	7	16
Total	0	38	0	37	75
11:00 AM	0	6	0	12	18
11:15 AM	0	16	0	14	30
11:30 AM	0	16	0	11	27
11:45 AM	0	14	0	8	22
Total	0	52	0	45	97
12:00 PM	0	24	0	22	46
12:15 PM	0	13	0	14	27
12:30 PM	0	22	0	13	35
12:45 PM	0	8	0	6	14
Total	0	67	0	55	122

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Bikes Street - Peds Street - Bikes Sidewalk - Peds Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	13	0	4	17
01:15 PM	0	10	0	7	17
01:30 PM	0	7	0	5	12
01:45 PM	0	8	0	10	18
Total	0	38	0	26	64
02:00 PM	0	7	0	7	14
02:15 PM	0	7	0	10	17
02:30 PM	0	20	0	10	30
02:45 PM	0	12	0	11	23
Total	0	46	0	38	84
03:00 PM	0	8	0	2	10
03:15 PM	0	11	0	9	20
03:30 PM	0	6	0	14	20
03:45 PM	0	2	0	14	16
Total	0	27	0	39	66
04:00 PM	0	6	0	11	17
04:15 PM	0	13	0	14	27
04:30 PM	0	5	0	16	21
04:45 PM	0	21	0	20	41
Total	0	45	0	61	106
05:00 PM	0	22	0	27	49
05:15 PM	0	24	0	20	44
05:30 PM	0	28	0	20	48
05:45 PM	0	21	0	11	32
Total	0	95	0	78	173
06:00 PM	0	23	0	14	37
06:15 PM	0	24	0	23	47
Grand Total	0	699	1	636	1336
Apprch %	0	100	100	100	
Total %	0	52.3	0.1	47.6	
Bikes Street	0	208	0	180	388
% Bikes Street	0	29.8	0	28.3	29
Peds Street	0	8	1	9	18
% Peds Street	0	1.1	100	1.4	1.3
Bikes Sidewalk	0	15	0	30	45
% Bikes Sidewalk	0	2.1	0	4.7	3.4
Peds Sidewalk	0	468	0	417	885
% Peds Sidewalk	0	67	0	65.6	66.2

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

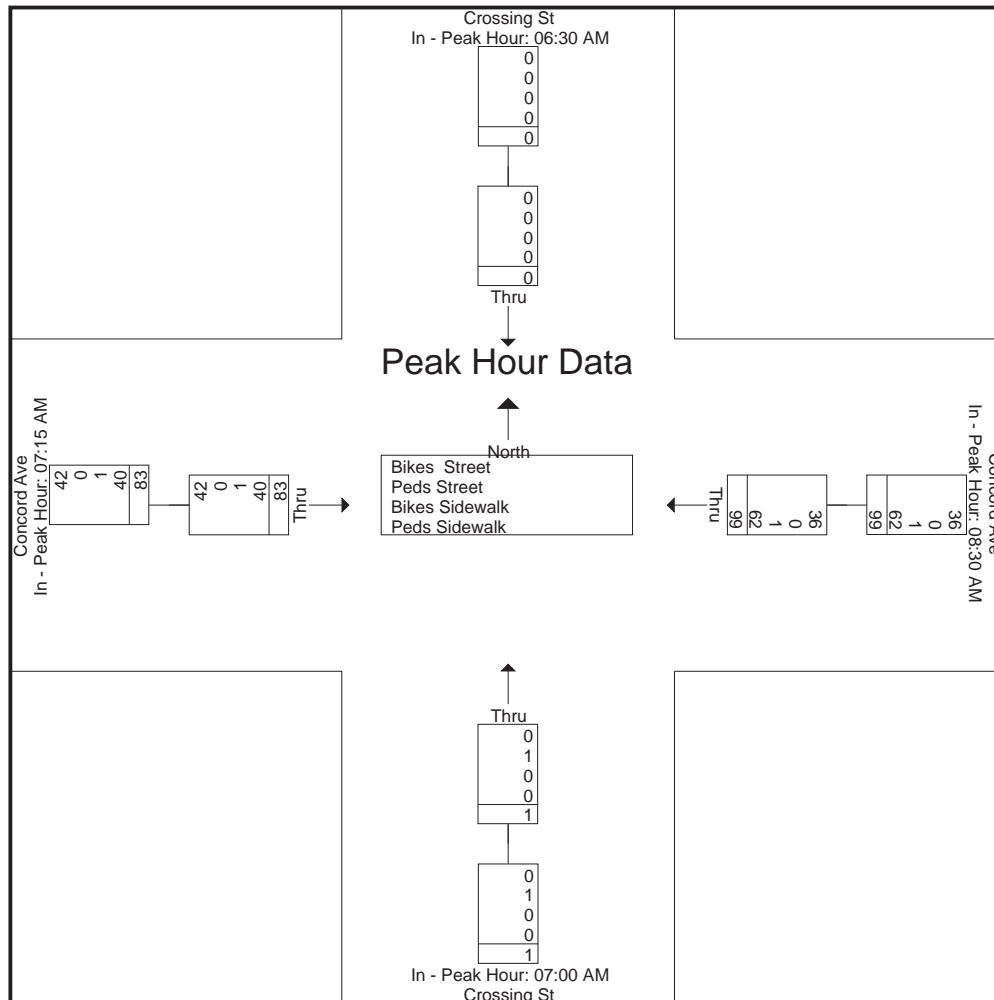
File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 4

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	06:30 AM		08:30 AM		07:00 AM		07:15 AM	
+0 mins.	0	0	24	24	0	0	18	18
+15 mins.	0	0	30	30	0	0	23	23
+30 mins.	0	0	25	25	0	0	22	22
+45 mins.	0	0	20	20	1	1	20	20
Total Volume	0	0	99	99	1	1	83	83
% App. Total	0		100		100		100	
PHF	.000	.000	.825	.825	.250	.250	.902	.902
Bikes Street	0	0	36	36	0	0	42	42
% Bikes Street	0	0	36.4	36.4	0	0	50.6	50.6
Peds Street	0	0	0	0	1	1	0	0
% Peds Street	0	0	0	0	100	100	0	0
Bikes Sidewalk	0	0	1	1	0	0	1	1
% Bikes Sidewalk	0	0	1	1	0	0	1.2	1.2
Peds Sidewalk	0	0	62	62	0	0	40	40
% Peds Sidewalk	0	0	62.6	62.6	0	0	48.2	48.2



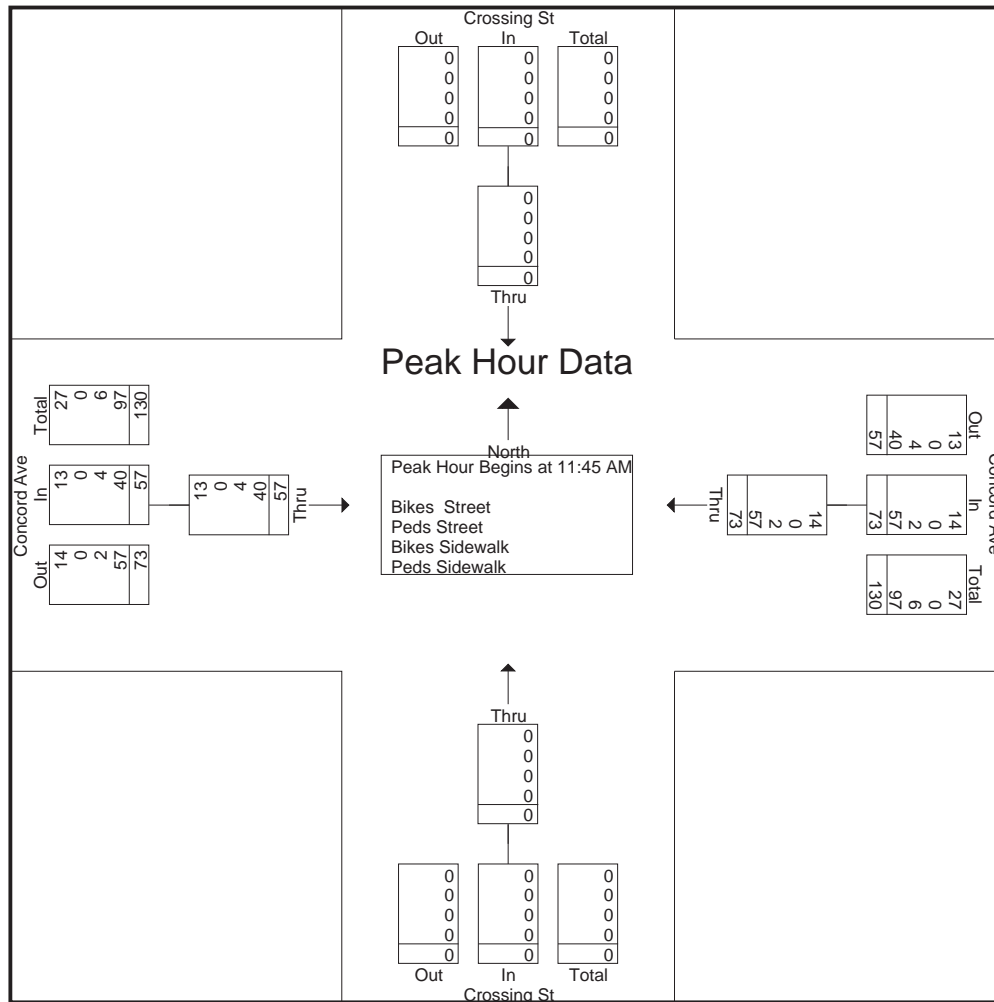
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 5

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 11:45 AM									
11:45 AM	0	0	14	14	0	0	8	8	22
12:00 PM	0	0	24	24	0	0	22	22	46
12:15 PM	0	0	13	13	0	0	14	14	27
12:30 PM	0	0	22	22	0	0	13	13	35
Total Volume	0	0	73	73	0	0	57	57	130
% App. Total	0		100		0		100		
PHF	.000	.000	.760	.760	.000	.000	.648	.648	.707
Bikes Street	0	0	14	14	0	0	13	13	27
% Bikes Street	0	0	19.2	19.2	0	0	22.8	22.8	20.8
Peds Street	0	0	0	0	0	0	0	0	0
% Peds Street	0	0	0	0	0	0	0	0	0
Bikes Sidewalk	0	0	2	2	0	0	4	4	6
% Bikes Sidewalk	0	0	2.7	2.7	0	0	7.0	7.0	4.6
Peds Sidewalk	0	0	57	57	0	0	40	40	97
% Peds Sidewalk	0	0	78.1	78.1	0	0	70.2	70.2	74.6



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

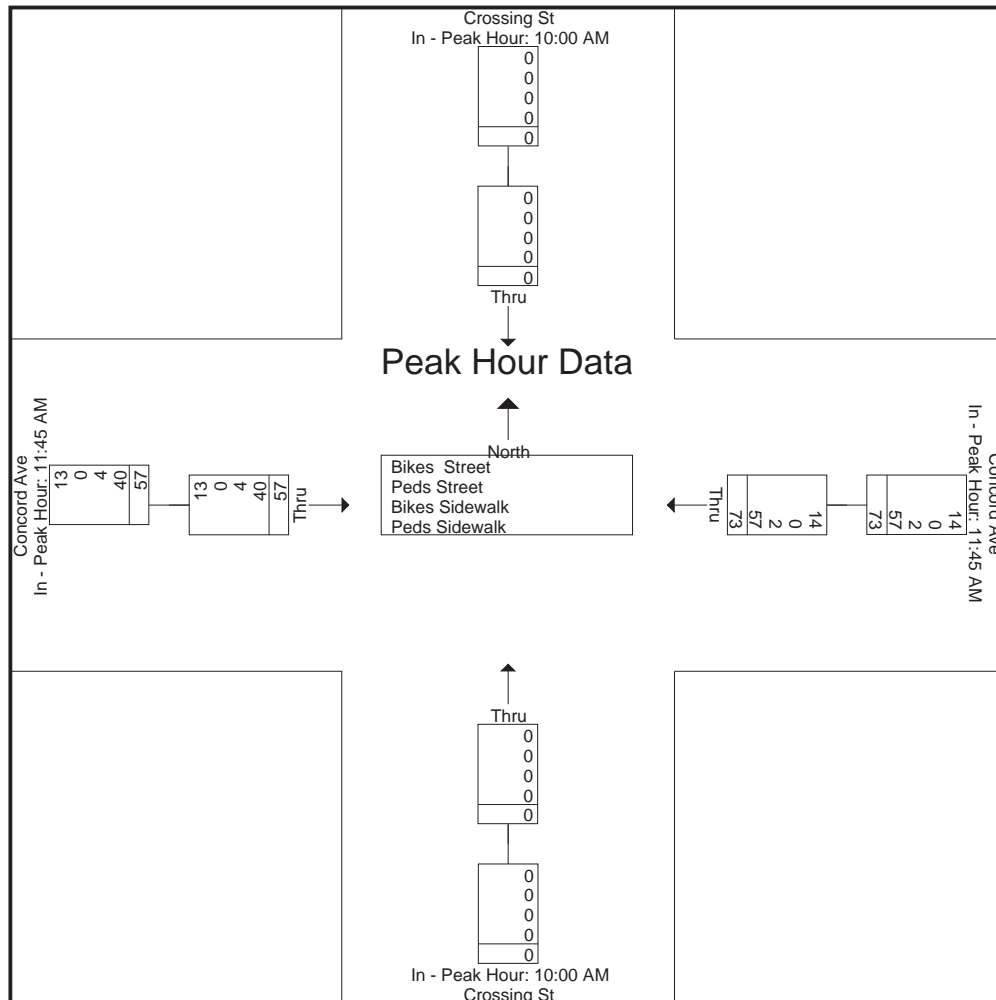
File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 6

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	10:00 AM		11:45 AM		10:00 AM		11:45 AM	
+0 mins.	0	0	14	14	0	0	8	8
+15 mins.	0	0	24	24	0	0	22	22
+30 mins.	0	0	13	13	0	0	14	14
+45 mins.	0	0	22	22	0	0	13	13
Total Volume	0	0	73	73	0	0	57	57
% App. Total	0		100		0		100	
PHF	.000	.000	.760	.760	.000	.000	.648	.648
Bikes Street	0	0	14	14	0	0	13	13
% Bikes Street	0	0	19.2	19.2	0	0	22.8	22.8
Peds Street	0	0	0	0	0	0	0	0
% Peds Street	0	0	0	0	0	0	0	0
Bikes Sidewalk	0	0	2	2	0	0	4	4
% Bikes Sidewalk	0	0	2.7	2.7	0	0	7	7
Peds Sidewalk	0	0	57	57	0	0	40	40
% Peds Sidewalk	0	0	78.1	78.1	0	0	70.2	70.2



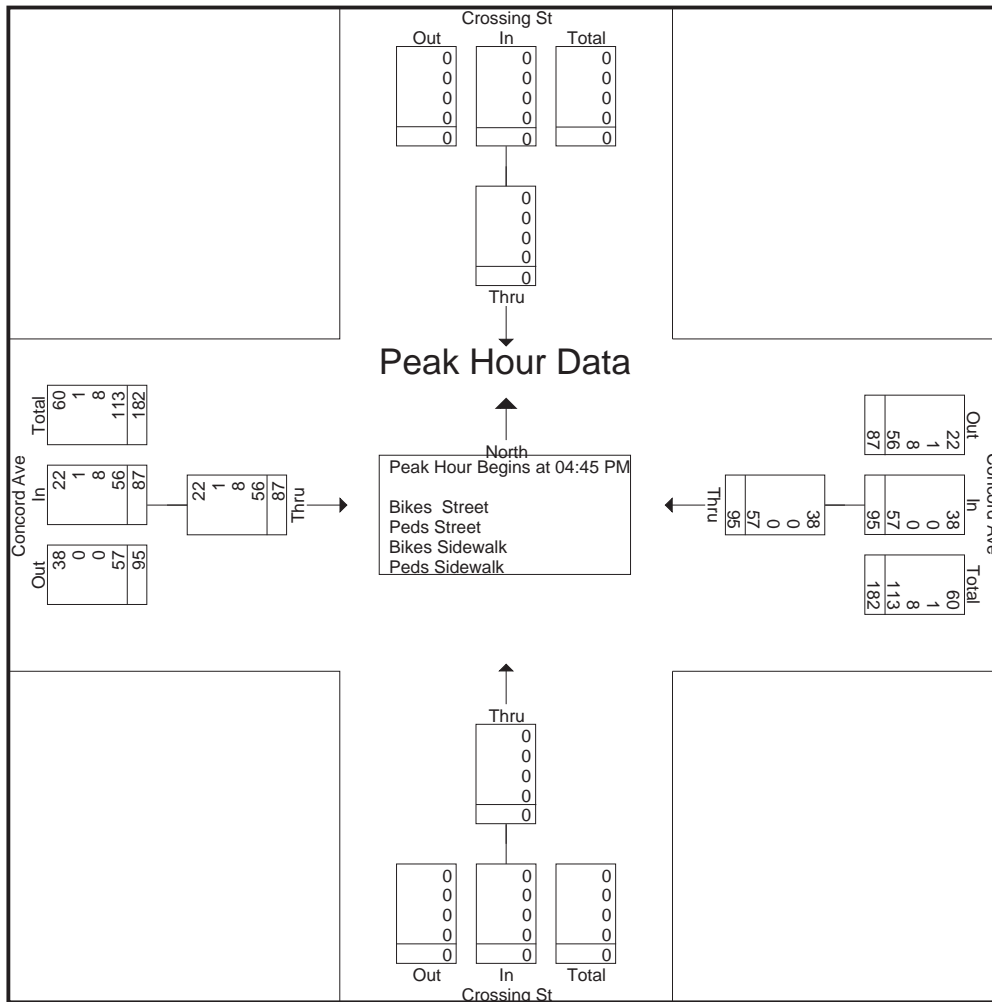
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 7

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 04:45 PM									
04:45 PM	0	0	21	21	0	0	20	20	41
05:00 PM	0	0	22	22	0	0	27	27	49
05:15 PM	0	0	24	24	0	0	20	20	44
05:30 PM	0	0	28	28	0	0	20	20	48
Total Volume	0	0	95	95	0	0	87	87	182
% App. Total	0		100		0		100		
PHF	.000	.000	.848	.848	.000	.000	.806	.806	.929
Bikes Street	0	0	38	38	0	0	22	22	60
% Bikes Street	0	0	40.0	40.0	0	0	25.3	25.3	33.0
Peds Street	0	0	0	0	0	0	1	1	1
% Peds Street	0	0	0	0	0	0	1.1	1.1	0.5
Bikes Sidewalk	0	0	0	0	0	0	8	8	8
% Bikes Sidewalk	0	0	0	0	0	0	9.2	9.2	4.4
Peds Sidewalk	0	0	57	57	0	0	56	56	113
% Peds Sidewalk	0	0	60.0	60.0	0	0	64.4	64.4	62.1



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

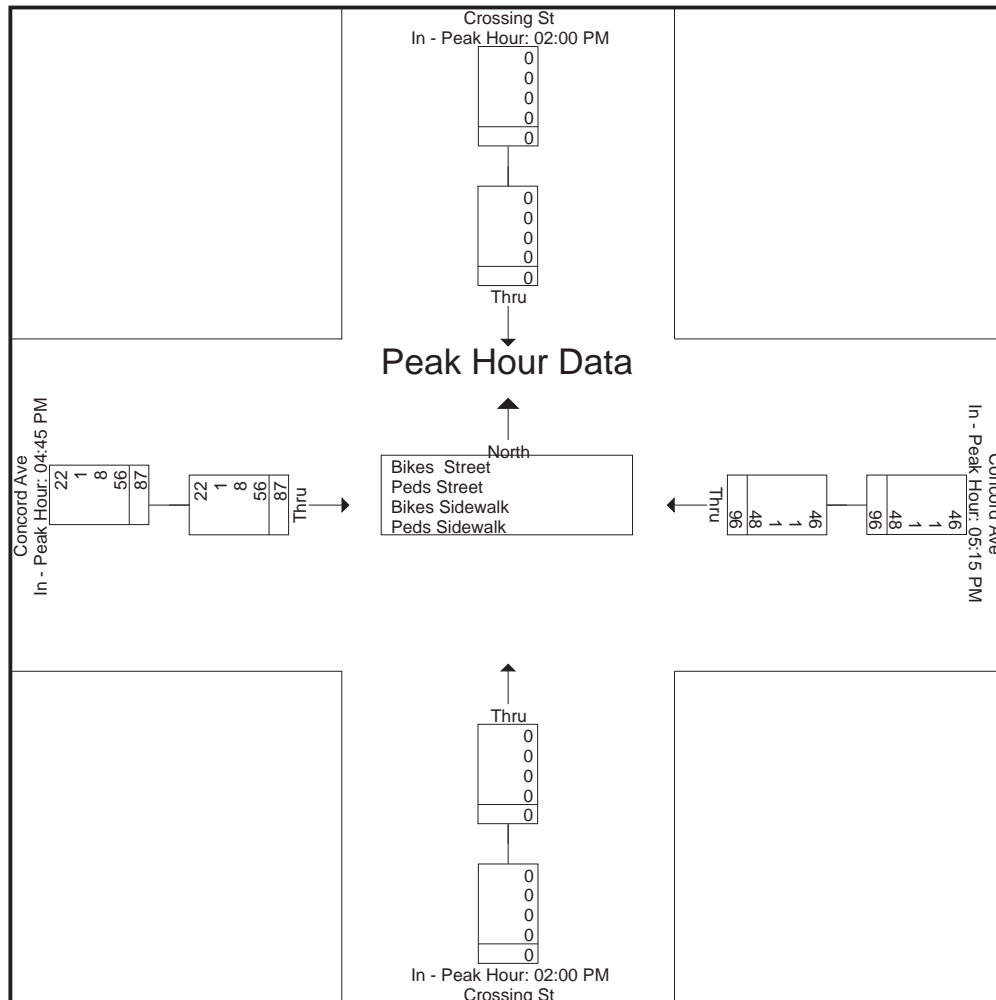
File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 8

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:00 PM		05:15 PM		02:00 PM		04:45 PM	
+0 mins.	0	0	24	24	0	0	20	20
+15 mins.	0	0	28	28	0	0	27	27
+30 mins.	0	0	21	21	0	0	20	20
+45 mins.	0	0	23	23	0	0	20	20
Total Volume	0	0	96	96	0	0	87	87
% App. Total	0		100		0		100	
PHF	.000	.000	.857	.857	.000	.000	.806	.806
Bikes Street	0	0	46	46	0	0	22	22
% Bikes Street	0	0	47.9	47.9	0	0	25.3	25.3
Peds Street	0	0	1	1	0	0	1	1
% Peds Street	0	0	1	1	0	0	1.1	1.1
Bikes Sidewalk	0	0	1	1	0	0	8	8
% Bikes Sidewalk	0	0	1	1	0	0	9.2	9.2
Peds Sidewalk	0	0	48	48	0	0	56	56
% Peds Sidewalk	0	0	50	50	0	0	64.4	64.4



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Street

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	2	0	0	2
06:45 AM	0	2	0	4	6
Total	0	4	0	4	8
07:00 AM	0	5	0	6	11
07:15 AM	0	0	0	10	10
07:30 AM	0	3	0	14	17
07:45 AM	0	4	0	7	11
Total	0	12	0	37	49
08:00 AM	0	13	0	11	24
08:15 AM	0	6	0	6	12
08:30 AM	0	8	0	11	19
08:45 AM	0	11	0	5	16
Total	0	38	0	33	71
09:00 AM	0	11	0	3	14
09:15 AM	0	6	0	0	6
09:30 AM	0	3	0	9	12
09:45 AM	0	3	0	2	5
Total	0	23	0	14	37
10:00 AM	0	3	0	2	5
10:15 AM	0	3	0	6	9
10:30 AM	0	3	0	2	5
10:45 AM	0	1	0	3	4
Total	0	10	0	13	23
11:00 AM	0	4	0	2	6
11:15 AM	0	3	0	2	5
11:30 AM	0	5	0	1	6
11:45 AM	0	1	0	1	2
Total	0	13	0	6	19
12:00 PM	0	6	0	1	7
12:15 PM	0	1	0	5	6
12:30 PM	0	6	0	6	12
12:45 PM	0	1	0	1	2
Total	0	14	0	13	27

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Bikes Street

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	2	0	0	2
01:15 PM	0	1	0	1	2
01:30 PM	0	1	0	1	2
01:45 PM	0	2	0	2	4
Total	0	6	0	4	10
02:00 PM	0	1	0	1	2
02:15 PM	0	2	0	2	4
02:30 PM	0	2	0	3	5
02:45 PM	0	4	0	0	4
Total	0	9	0	6	15
03:00 PM	0	1	0	0	1
03:15 PM	0	3	0	3	6
03:30 PM	0	2	0	3	5
03:45 PM	0	2	0	1	3
Total	0	8	0	7	15
04:00 PM	0	3	0	2	5
04:15 PM	0	1	0	3	4
04:30 PM	0	0	0	2	2
04:45 PM	0	4	0	4	8
Total	0	8	0	11	19
05:00 PM	0	7	0	8	15
05:15 PM	0	10	0	7	17
05:30 PM	0	17	0	3	20
05:45 PM	0	10	0	4	14
Total	0	44	0	22	66
06:00 PM	0	9	0	4	13
06:15 PM	0	10	0	6	16
Grand Total	0	208	0	180	388
Apprch %	0	100	0	100	
Total %	0	53.6	0	46.4	

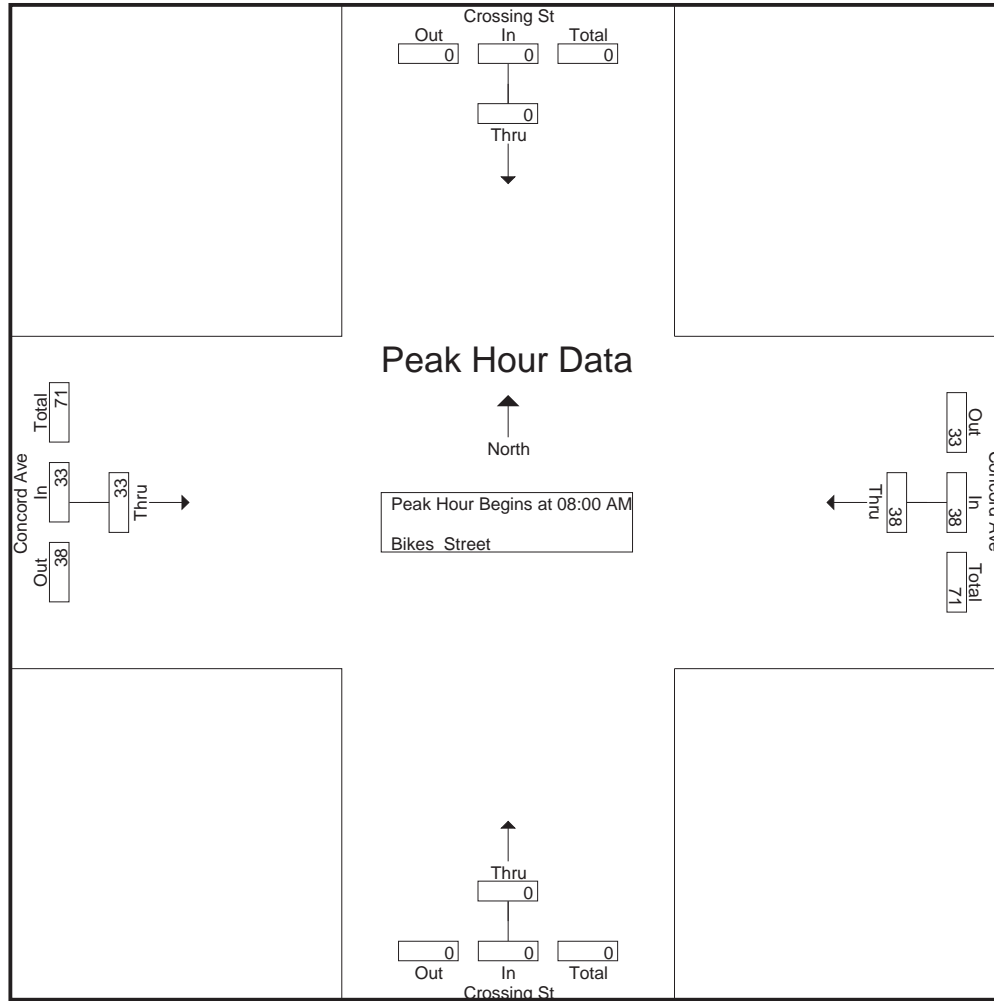
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 3

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:00 AM									
08:00 AM	0	0	13	13	0	0	11	11	24
08:15 AM	0	0	6	6	0	0	6	6	12
08:30 AM	0	0	8	8	0	0	11	11	19
08:45 AM	0	0	11	11	0	0	5	5	16
Total Volume	0	0	38	38	0	0	33	33	71
% App. Total	0		100		0		100		
PHF	.000	.000	.731	.731	.000	.000	.750	.750	.740



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

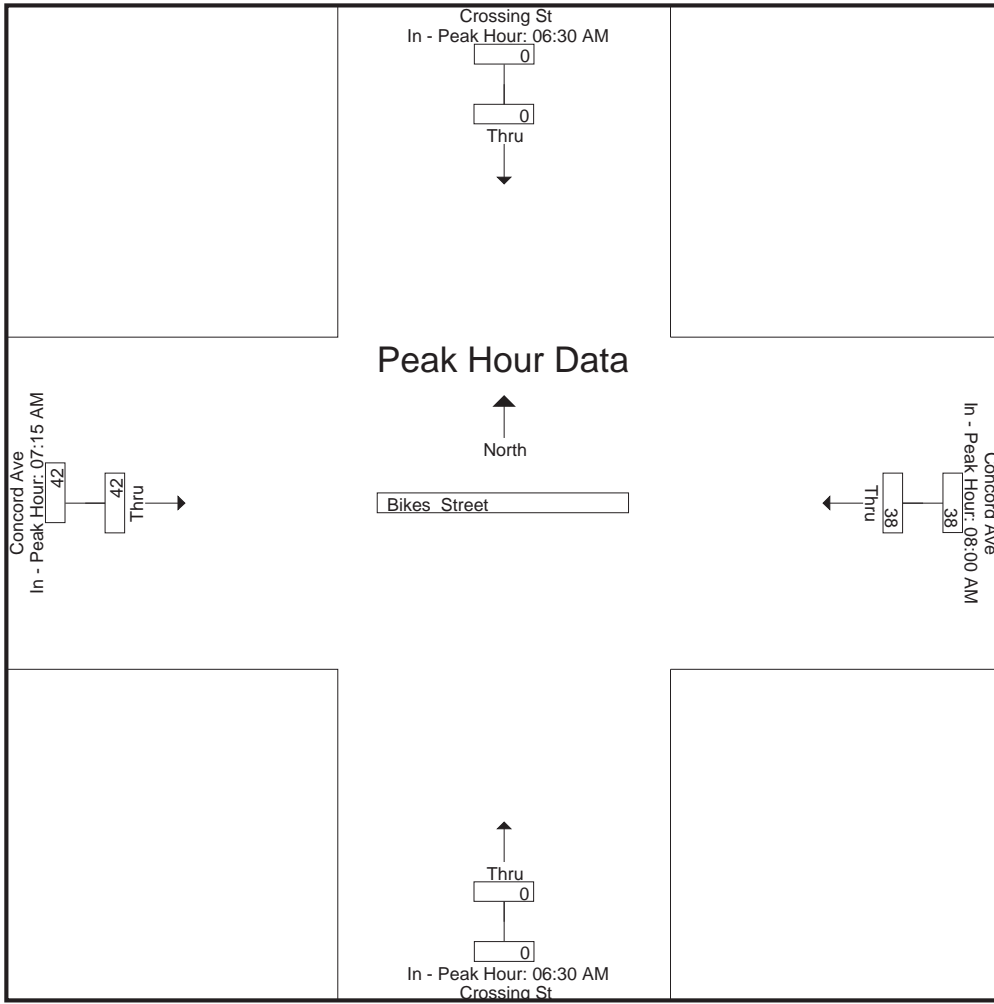
Peak Hour for Each Approach Begins at:

	06:30 AM	08:00 AM	06:30 AM	07:15 AM
+0 mins.	0	0	0	10
+15 mins.	0	0	0	14
+30 mins.	0	0	0	7
+45 mins.	0	0	0	11
Total Volume	0	0	0	42
% App. Total	0	100	0	100

Accurate Counts

978-664-2565

PHF | .000 | .000 | .731 | .731 | .000 | .000 | .750 | .750



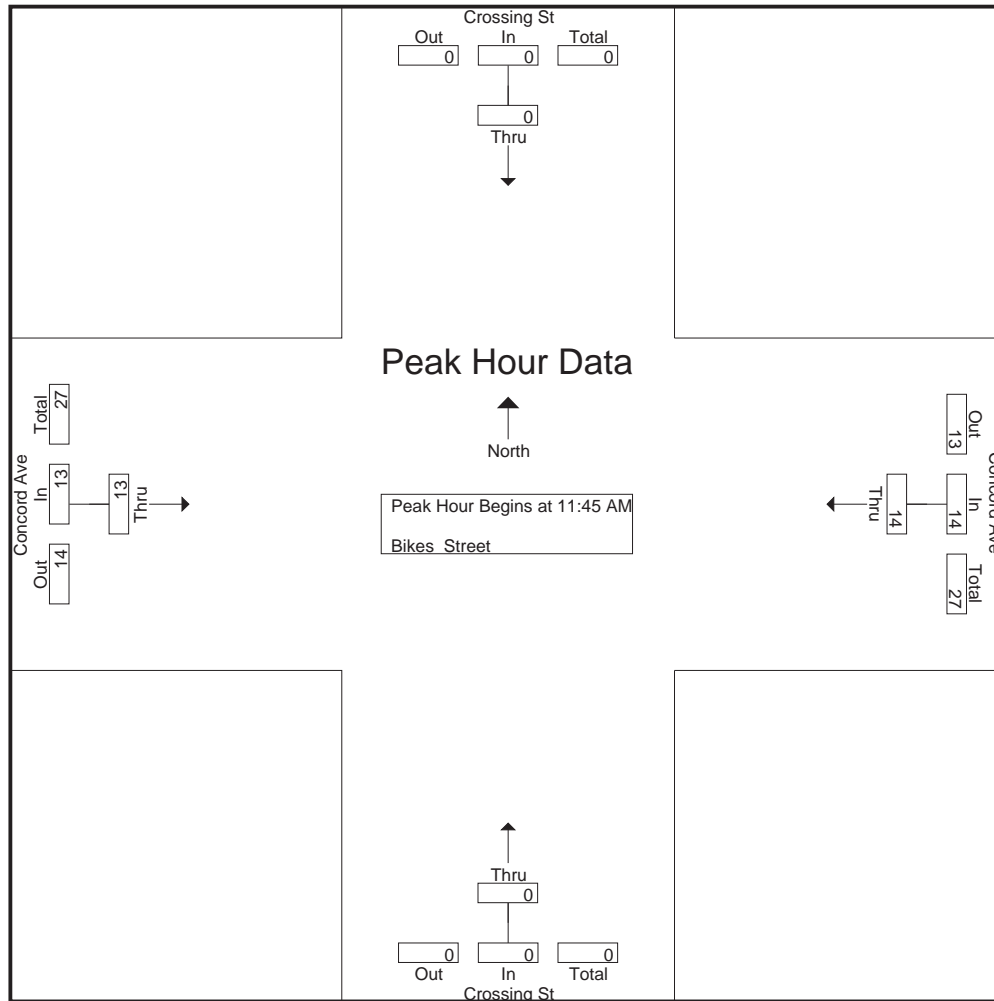
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 5

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 11:45 AM									
11:45 AM	0	0	1	1	0	0	1	1	2
12:00 PM	0	0	6	6	0	0	1	1	7
12:15 PM	0	0	1	1	0	0	5	5	6
12:30 PM	0	0	6	6	0	0	6	6	12
Total Volume	0	0	14	14	0	0	13	13	27
% App. Total	0		100		0		100		
PHF	.000	.000	.583	.583	.000	.000	.542	.542	.563



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

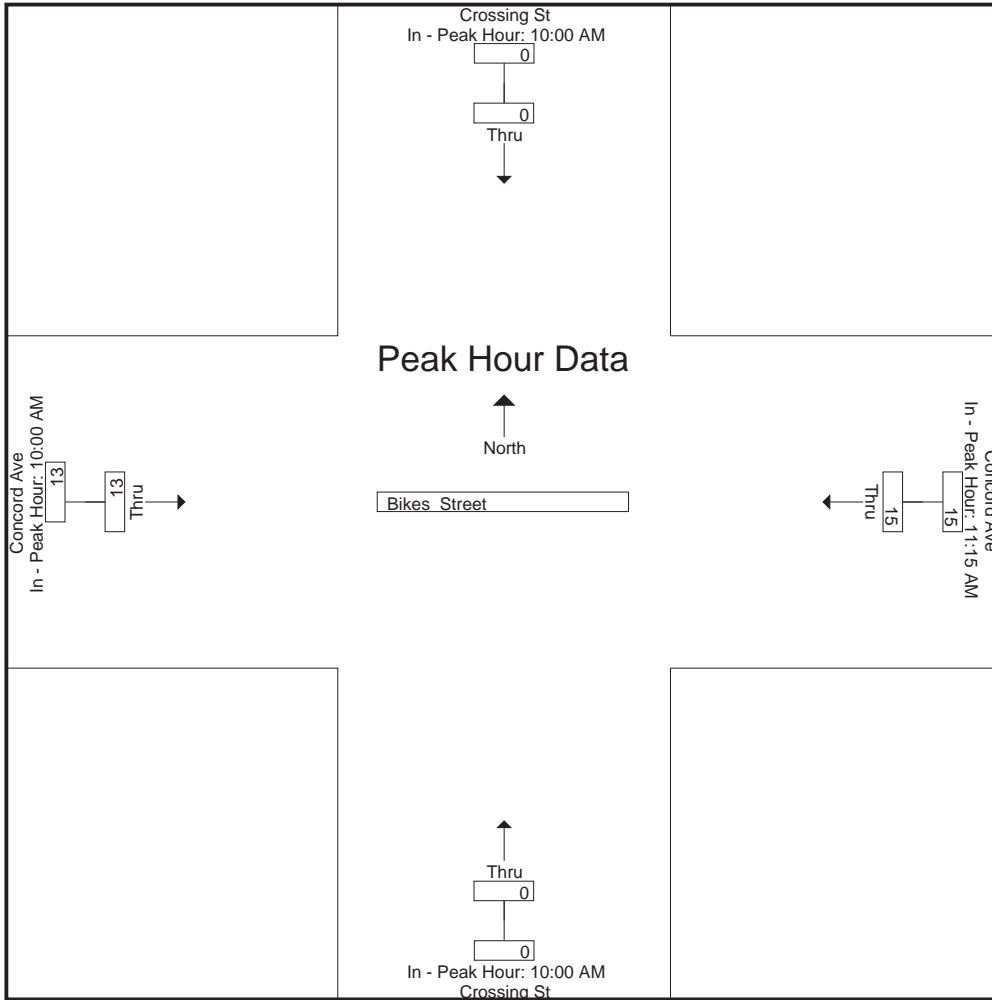
	10:00 AM		11:15 AM		10:00 AM		10:00 AM	
+0 mins.	0	0	3	3	0	0	2	2
+15 mins.	0	0	5	5	0	0	6	6
+30 mins.	0	0	1	1	0	0	2	2
+45 mins.	0	0	6	6	0	0	3	3
Total Volume	0	0	15	15	0	0	13	13
% App. Total	0		100		0		100	
PHF	.000	.000	.625	.625	.000	.000	.542	.542

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 6



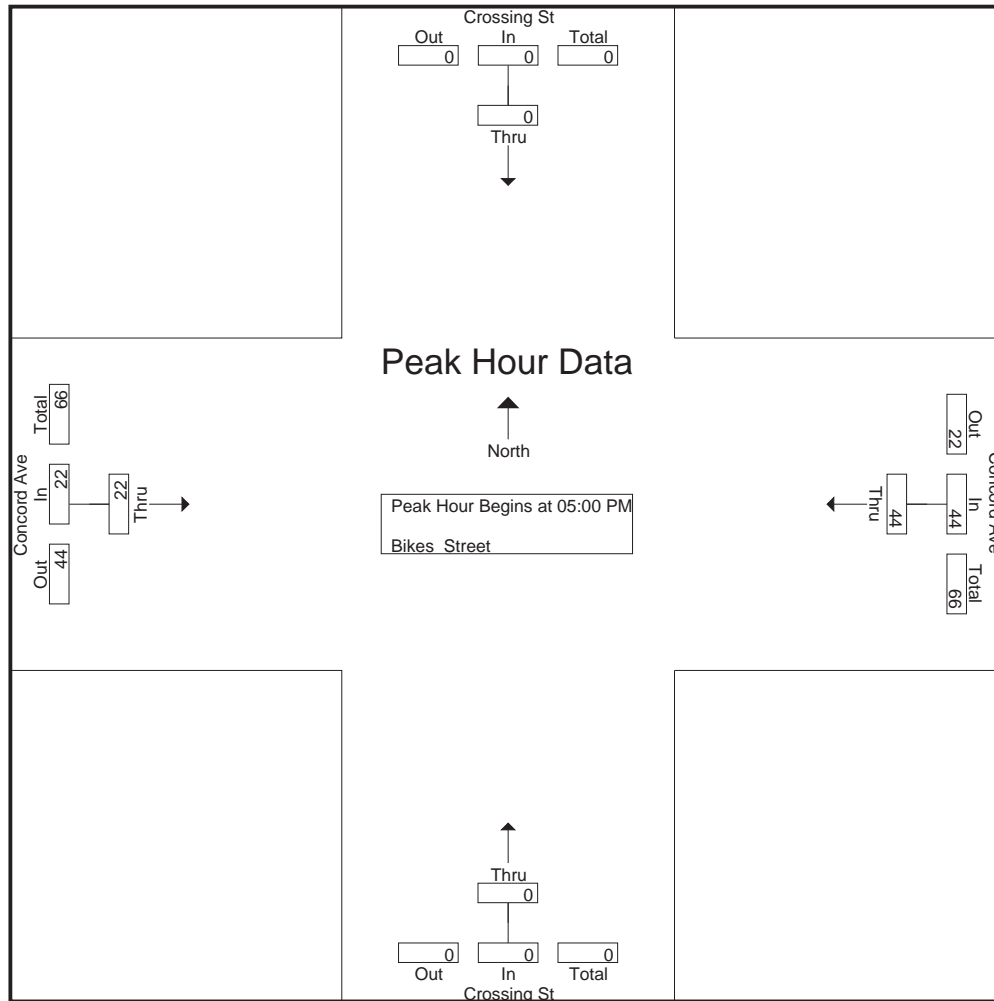
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 7

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:00 PM									
05:00 PM	0	0	7	7	0	0	8	8	15
05:15 PM	0	0	10	10	0	0	7	7	17
05:30 PM	0	0	17	17	0	0	3	3	20
05:45 PM	0	0	10	10	0	0	4	4	14
Total Volume	0	0	44	44	0	0	22	22	66
% App. Total	0		100		0		100		
PHF	.000	.000	.647	.647	.000	.000	.688	.688	.825



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

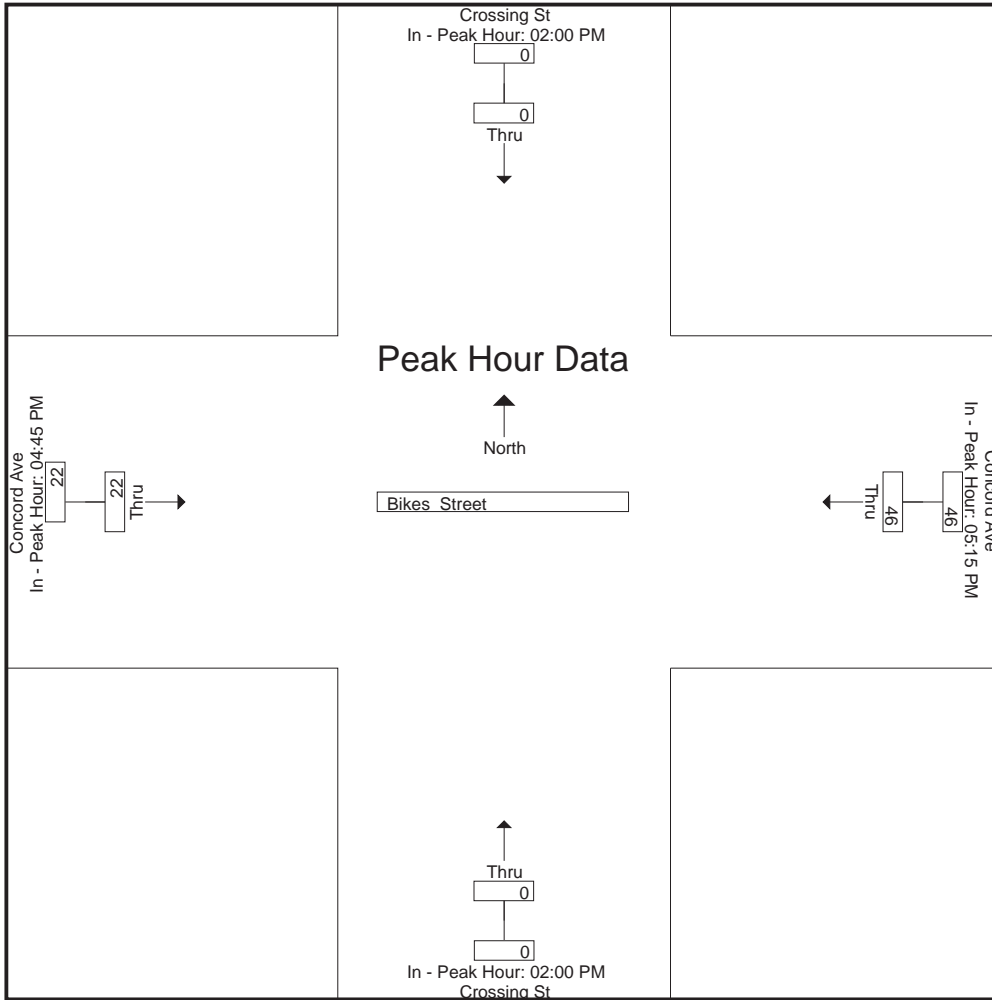
	02:00 PM		05:15 PM		02:00 PM		04:45 PM	
+0 mins.	0	0	10	10	0	0	4	4
+15 mins.	0	0	17	17	0	0	8	8
+30 mins.	0	0	10	10	0	0	7	7
+45 mins.	0	0	9	9	0	0	3	3
Total Volume	0	0	46	46	0	0	22	22
% App. Total	0		100		0		100	
PHF	.000	.000	.676	.676	.000	.000	.688	.688

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Peds Street

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	0	0	0	0
06:45 AM	0	0	0	0	0
Total	0	0	0	0	0
07:00 AM	0	1	0	0	1
07:15 AM	0	4	0	0	4
07:30 AM	0	0	0	0	0
07:45 AM	0	0	1	0	1
Total	0	5	1	0	6
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
09:00 AM	0	0	0	0	0
09:15 AM	0	0	0	0	0
09:30 AM	0	0	0	0	0
09:45 AM	0	0	0	0	0
Total	0	0	0	0	0
10:00 AM	0	0	0	0	0
10:15 AM	0	0	0	0	0
10:30 AM	0	0	0	0	0
10:45 AM	0	0	0	0	0
Total	0	0	0	0	0
11:00 AM	0	1	0	0	1
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
Total	0	1	0	0	1
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
Total	0	0	0	0	0

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Peds Street

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	0	0	1	1
01:15 PM	0	0	0	0	0
01:30 PM	0	0	0	0	0
01:45 PM	0	0	0	0	0
Total	0	0	0	1	1
02:00 PM	0	0	0	1	1
02:15 PM	0	0	0	0	0
02:30 PM	0	0	0	0	0
02:45 PM	0	0	0	0	0
Total	0	0	0	1	1
03:00 PM	0	0	0	1	1
03:15 PM	0	0	0	0	0
03:30 PM	0	0	0	2	2
03:45 PM	0	0	0	2	2
Total	0	0	0	5	5
04:00 PM	0	0	0	0	0
04:15 PM	0	0	0	0	0
04:30 PM	0	0	0	0	0
04:45 PM	0	0	0	0	0
Total	0	0	0	0	0
05:00 PM	0	0	0	1	1
05:15 PM	0	0	0	0	0
05:30 PM	0	0	0	0	0
05:45 PM	0	0	0	1	1
Total	0	0	0	2	2
06:00 PM	0	1	0	0	1
06:15 PM	0	1	0	0	1
Grand Total	0	8	1	9	18
Apprch %	0	100	100	100	
Total %	0	44.4	5.6	50	

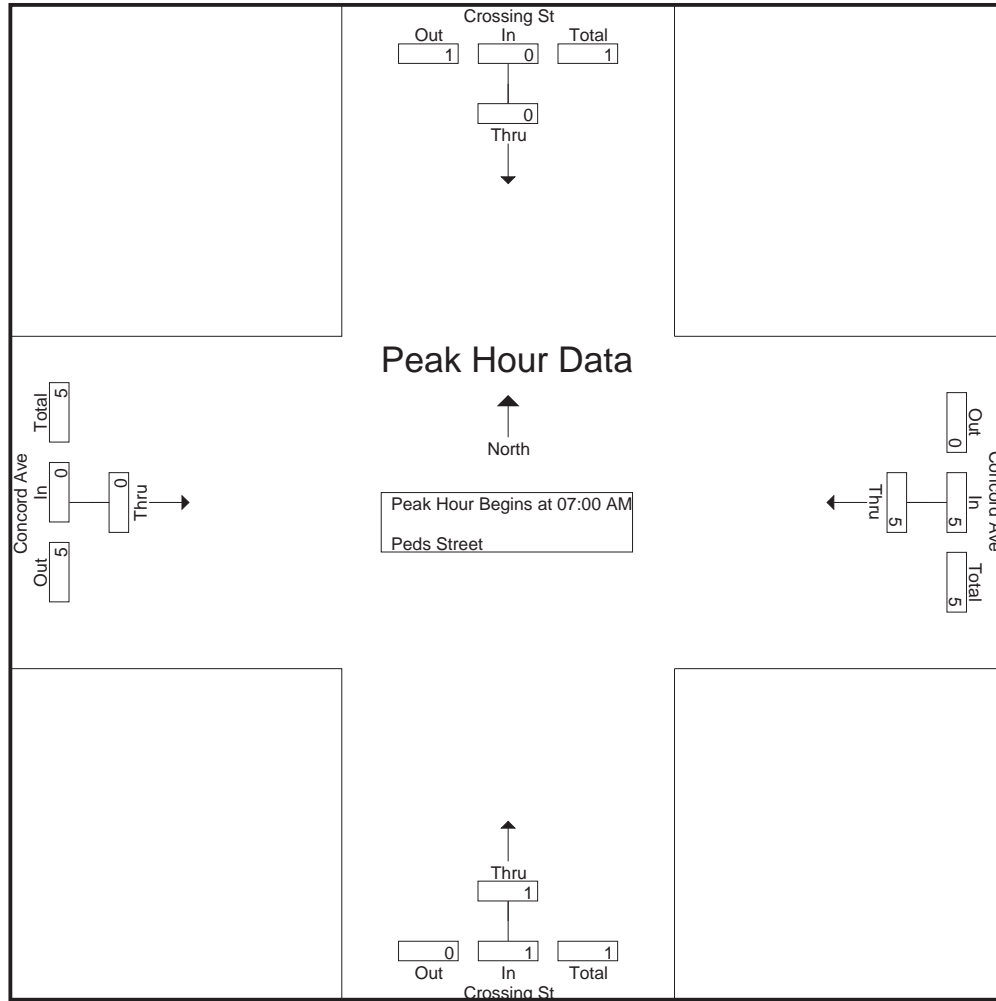
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 3

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 07:00 AM									
07:00 AM	0	0	1	1	0	0	0	0	1
07:15 AM	0	0	4	4	0	0	0	0	4
07:30 AM	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	1	0	0	1
Total Volume	0	0	5	5	1	1	0	0	6
% App. Total	0		100		100		0		
PHF	.000	.000	.313	.313	.250	.250	.000	.000	.375



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

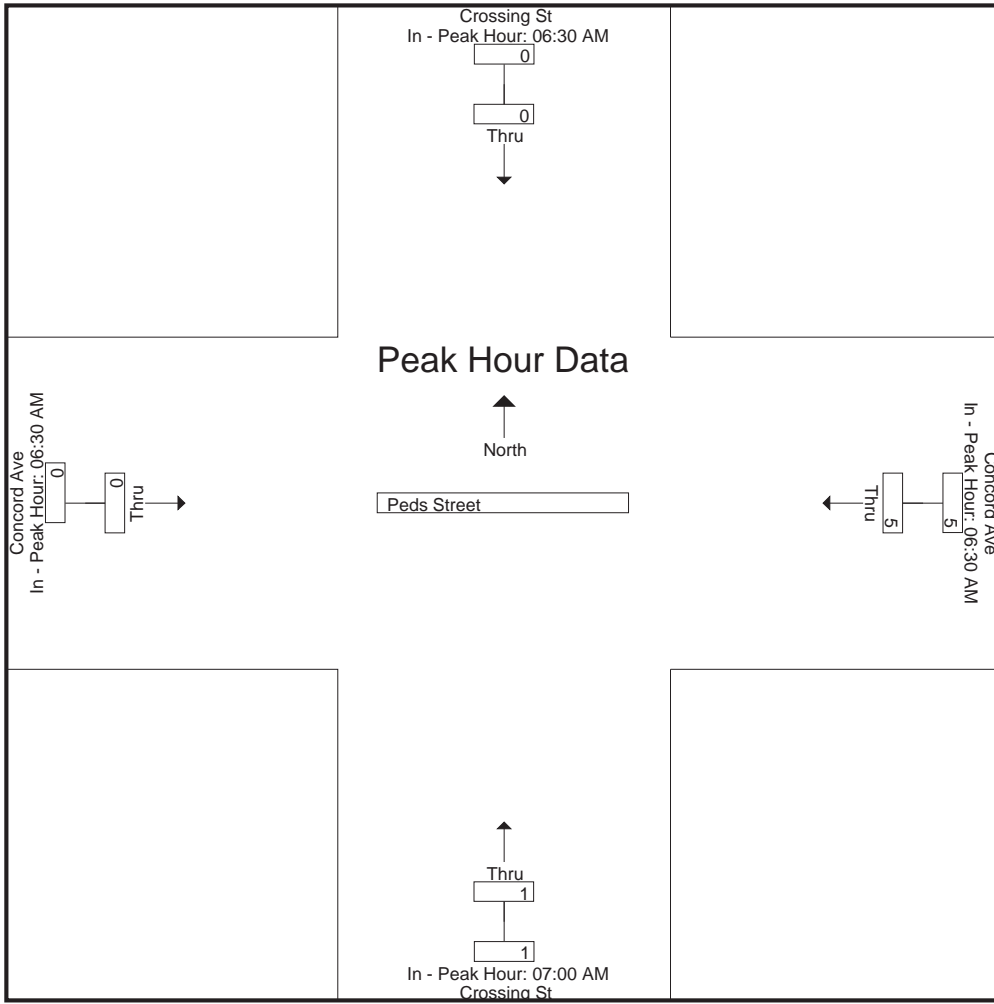
Peak Hour for Each Approach Begins at:

	06:30 AM		06:30 AM		07:00 AM		06:30 AM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	0	0	0
+45 mins.	0	0	4	4	1	1	0	0
Total Volume	0	0	5	5	1	1	0	0
% App. Total	0		100		100		0	

Accurate Counts

978-664-2565

PHF | .000 | .000 | .313 | .313 | .250 | .250 | .000 | .000



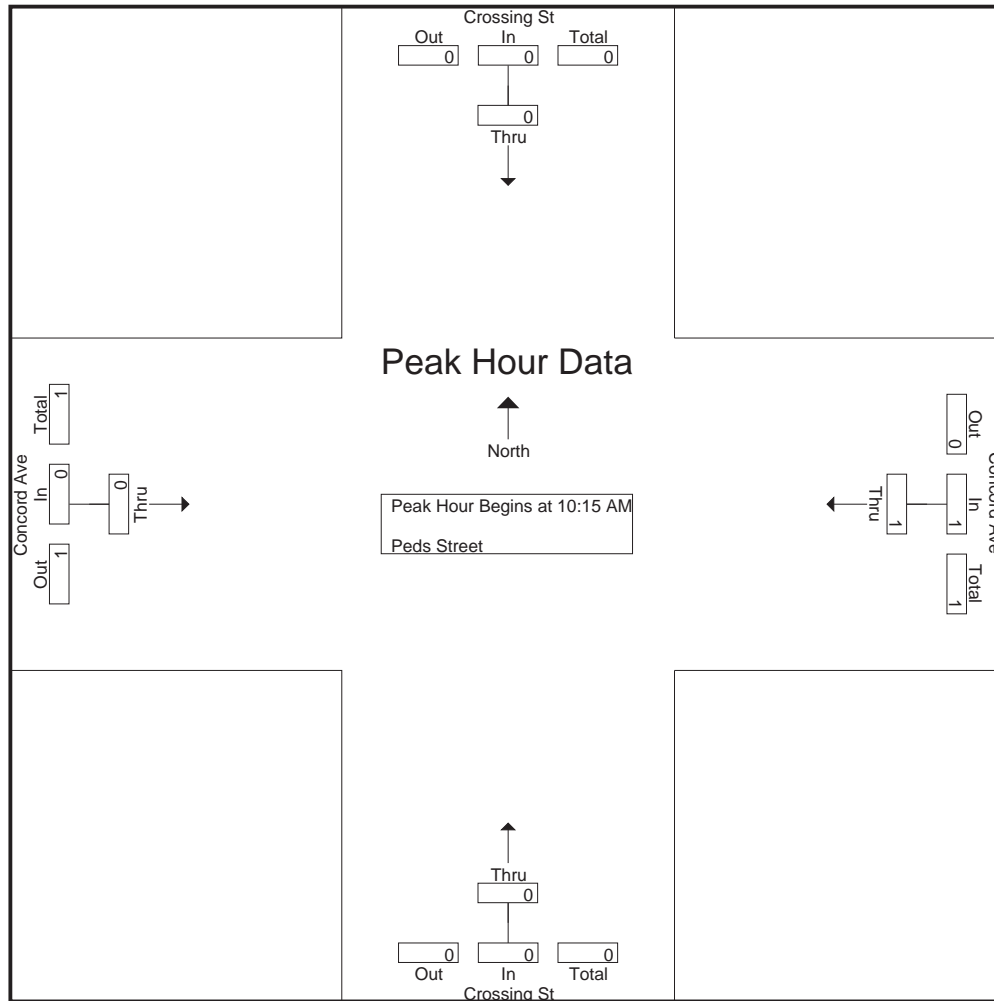
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 5

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 10:15 AM									
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	1	1	0	0	0	0	1
Total Volume	0	0	1	1	0	0	0	0	1
% App. Total	0		100		0		0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.250



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

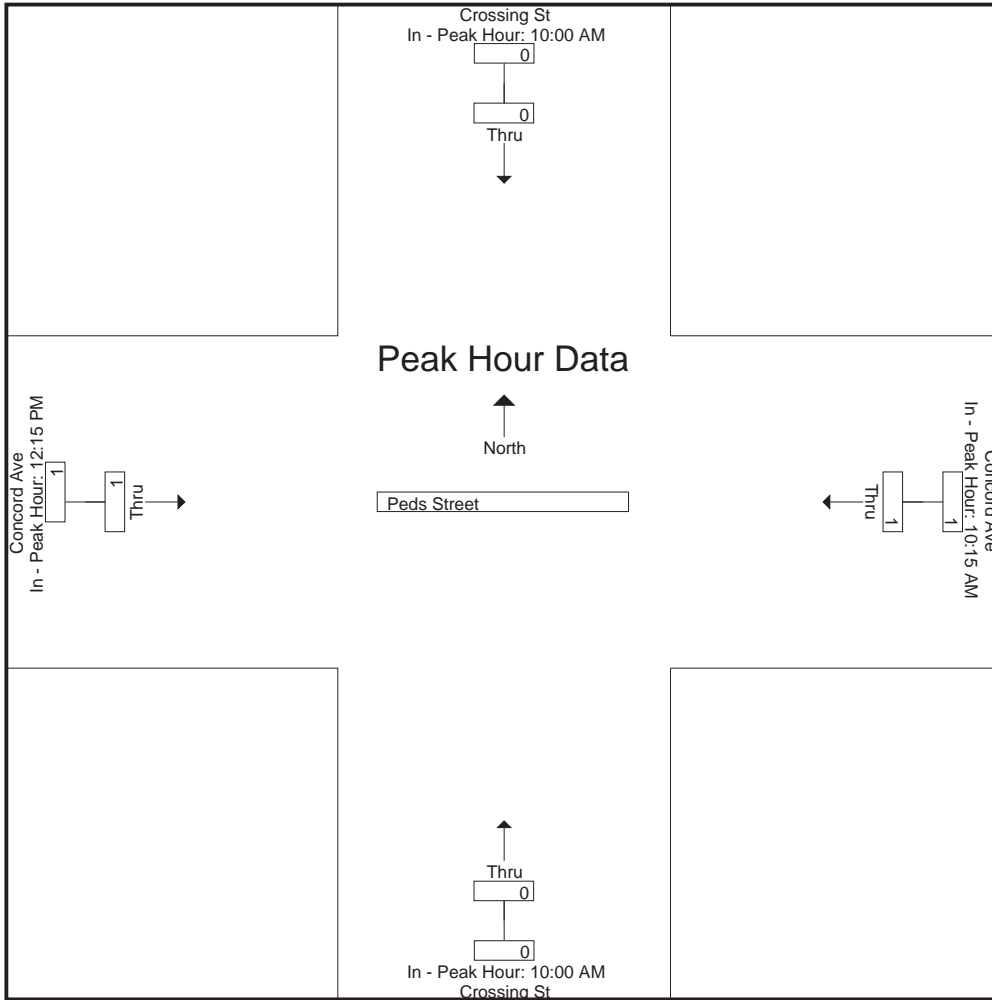
	10:00 AM		10:15 AM		10:00 AM		12:15 PM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	1	1
Total Volume	0	0	1	1	0	0	1	1
% App. Total	0		100		0		100	
PHF	.000	.000	.250	.250	.000	.000	.250	.250

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 6



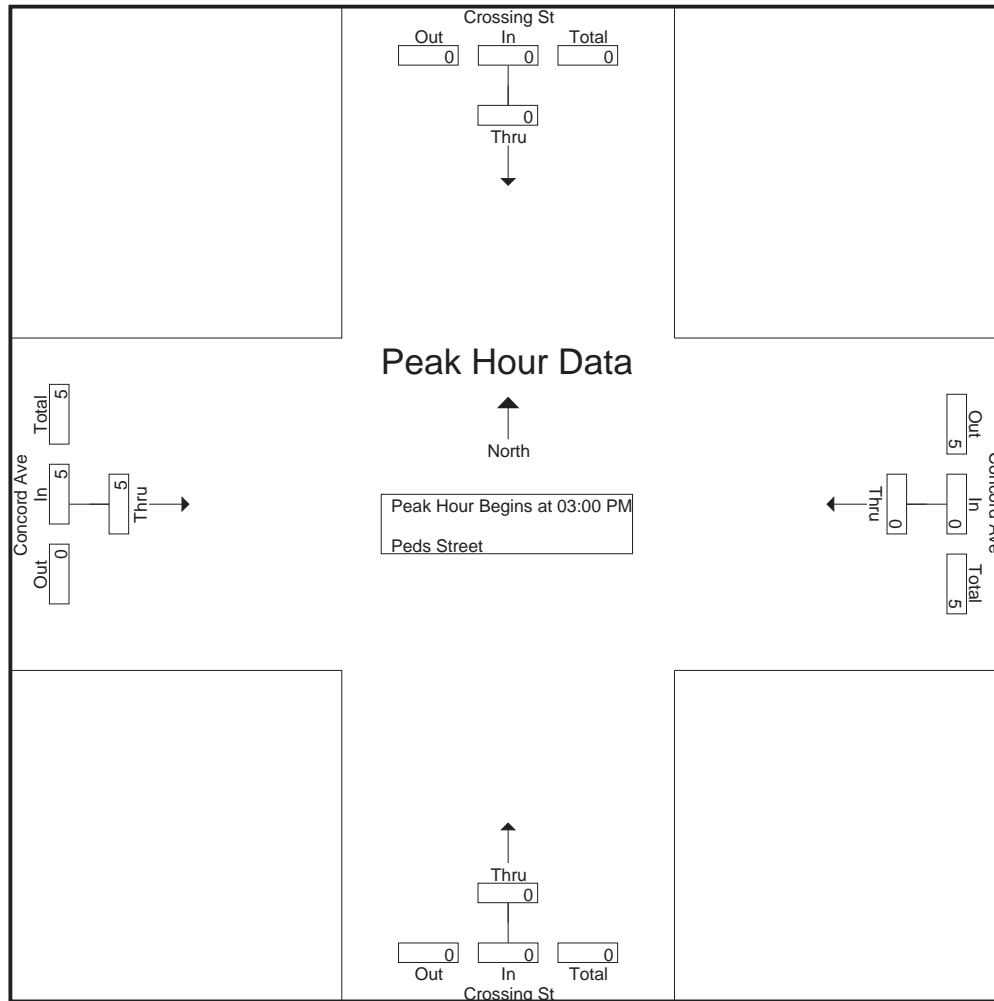
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 7

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 03:00 PM									
03:00 PM	0	0	0	0	0	0	1	1	1
03:15 PM	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	2	2	2
03:45 PM	0	0	0	0	0	0	2	2	2
Total Volume	0	0	0	0	0	0	5	5	5
% App. Total	0		0		0		100		
PHF	.000	.000	.000	.000	.000	.000	.625	.625	.625



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

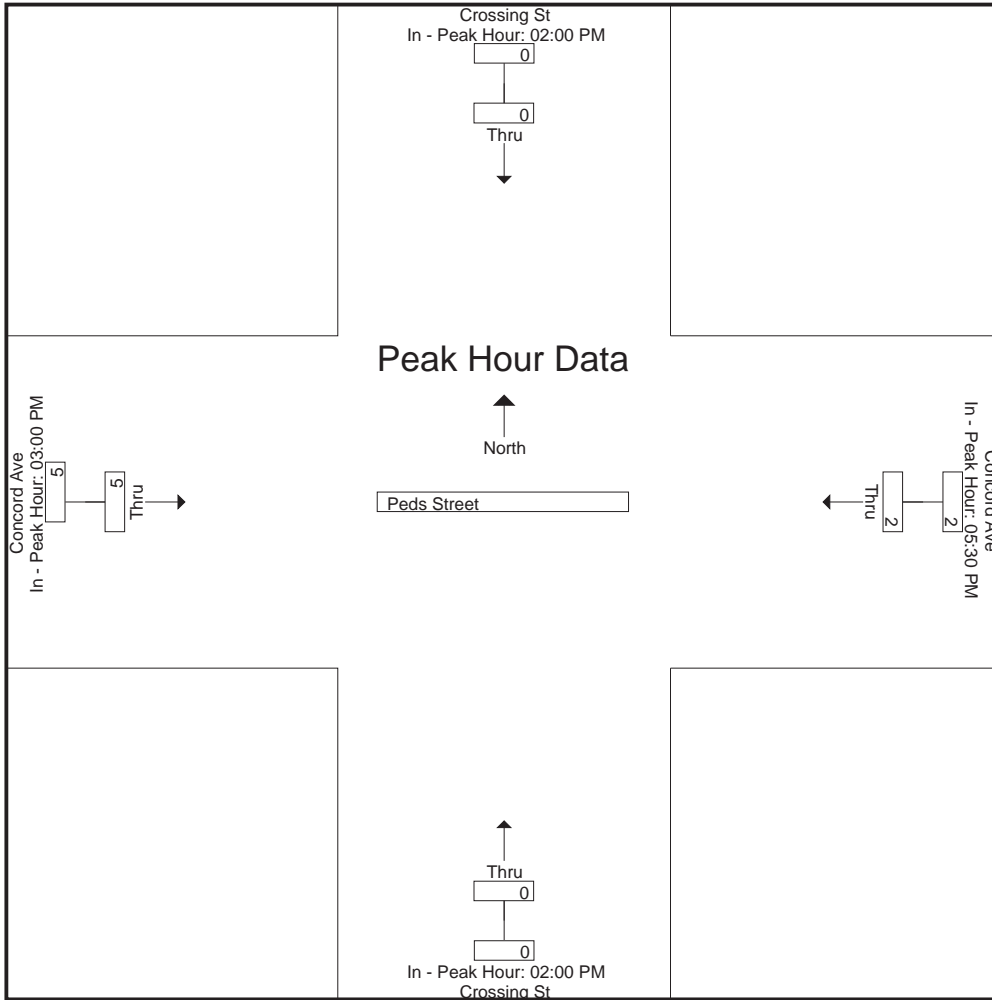
	02:00 PM		05:30 PM		02:00 PM		03:00 PM	
+0 mins.	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	0	2	2
+45 mins.	0	0	1	1	0	0	2	2
Total Volume	0	0	2	2	0	0	5	5
% App. Total	0		100		0		100	
PHF	.000	.000	.500	.500	.000	.000	.625	.625

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	0	0	0	0
06:45 AM	0	0	0	0	0
Total	0	0	0	0	0
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	1	1
07:30 AM	0	0	0	0	0
07:45 AM	0	2	0	0	2
Total	0	2	0	1	3
08:00 AM	0	0	0	0	0
08:15 AM	0	0	0	0	0
08:30 AM	0	0	0	1	1
08:45 AM	0	0	0	0	0
Total	0	0	0	1	1
09:00 AM	0	0	0	1	1
09:15 AM	0	1	0	0	1
09:30 AM	0	0	0	0	0
09:45 AM	0	0	0	1	1
Total	0	1	0	2	3
10:00 AM	0	0	0	0	0
10:15 AM	0	0	0	0	0
10:30 AM	0	0	0	0	0
10:45 AM	0	0	0	0	0
Total	0	0	0	0	0
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	1	1
11:30 AM	0	0	0	1	1
11:45 AM	0	0	0	0	0
Total	0	0	0	2	2
12:00 PM	0	0	0	0	0
12:15 PM	0	1	0	1	2
12:30 PM	0	1	0	3	4
12:45 PM	0	0	0	0	0
Total	0	2	0	4	6

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 2

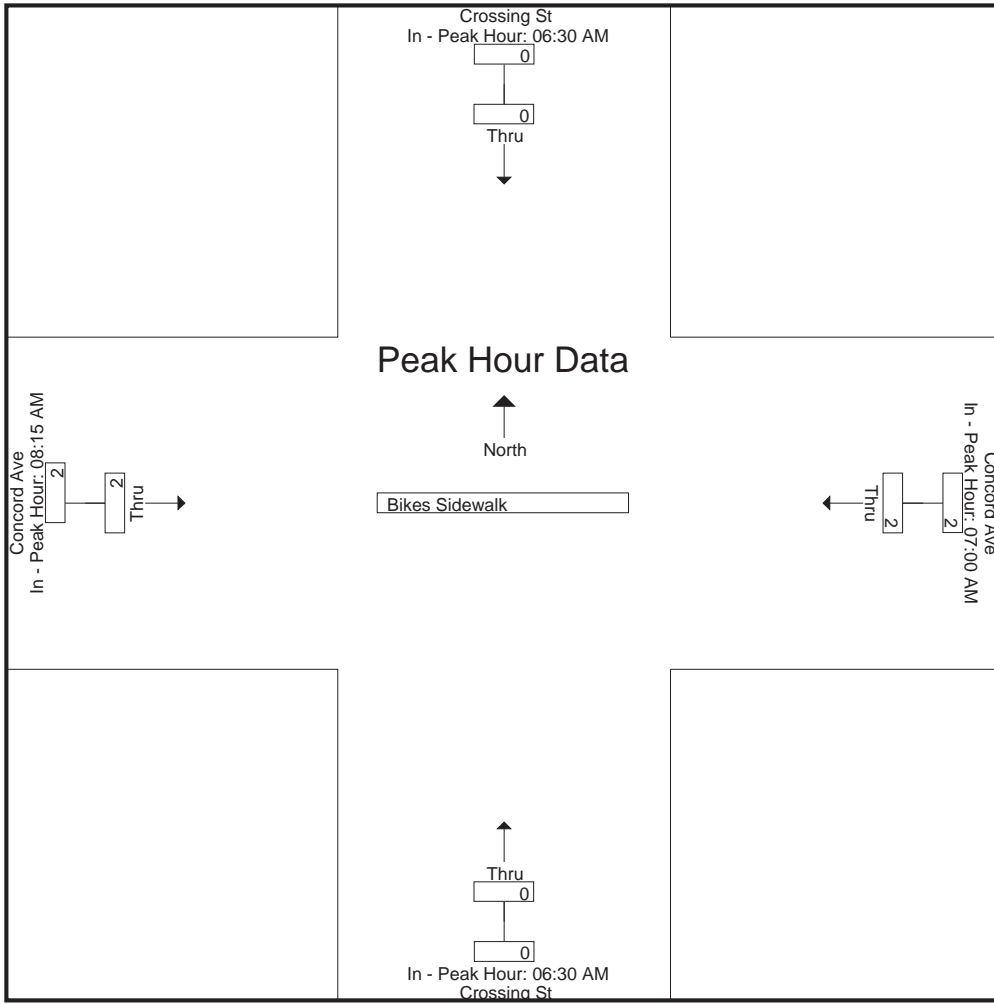
Groups Printed- Bikes Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	0	0	0	0
01:15 PM	0	1	0	0	1
01:30 PM	0	0	0	2	2
01:45 PM	0	0	0	0	0
Total	0	1	0	2	3
02:00 PM	0	1	0	1	2
02:15 PM	0	1	0	1	2
02:30 PM	0	3	0	0	3
02:45 PM	0	0	0	0	0
Total	0	5	0	2	7
03:00 PM	0	1	0	0	1
03:15 PM	0	0	0	1	1
03:30 PM	0	0	0	0	0
03:45 PM	0	0	0	1	1
Total	0	1	0	2	3
04:00 PM	0	0	0	1	1
04:15 PM	0	1	0	1	2
04:30 PM	0	1	0	3	4
04:45 PM	0	0	0	2	2
Total	0	2	0	7	9
05:00 PM	0	0	0	3	3
05:15 PM	0	0	0	2	2
05:30 PM	0	0	0	1	1
05:45 PM	0	0	0	0	0
Total	0	0	0	6	6
06:00 PM	0	1	0	0	1
06:15 PM	0	0	0	1	1
Grand Total	0	15	0	30	45
Apprch %	0	100	0	100	
Total %	0	33.3	0	66.7	

Accurate Counts

978-664-2565

PHF | .000 | .000 | .250 | .250 | .000 | .000 | .500 | .500



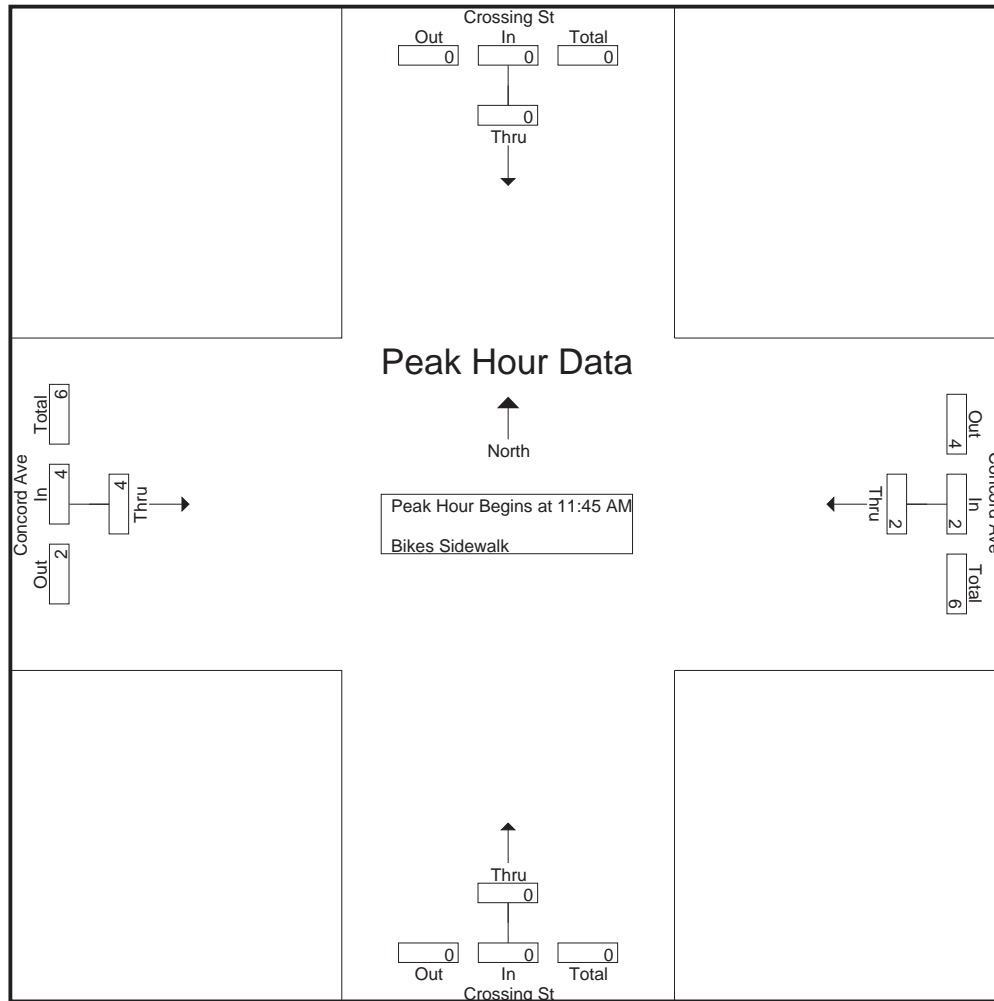
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 5

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 11:45 AM									
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	1	1	0	0	1	1	2
12:30 PM	0	0	1	1	0	0	3	3	4
Total Volume	0	0	2	2	0	0	4	4	6
% App. Total	0		100		0		100		
PHF	.000	.000	.500	.500	.000	.000	.333	.333	.375



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

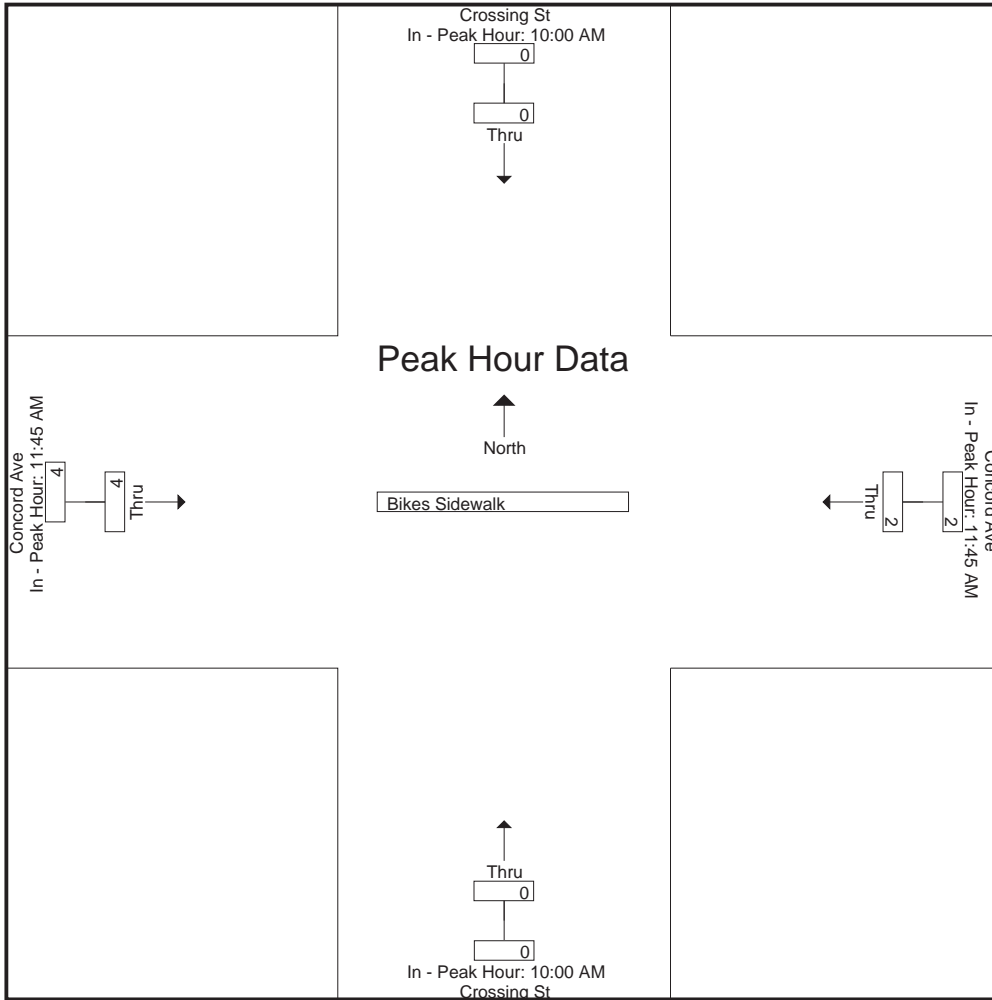
	10:00 AM		11:45 AM		10:00 AM		11:45 AM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	0	1	1
+45 mins.	0	0	1	1	0	0	3	3
Total Volume	0	0	2	2	0	0	4	4
% App. Total	0		100		0		100	
PHF	.000	.000	.500	.500	.000	.000	.333	.333

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 6



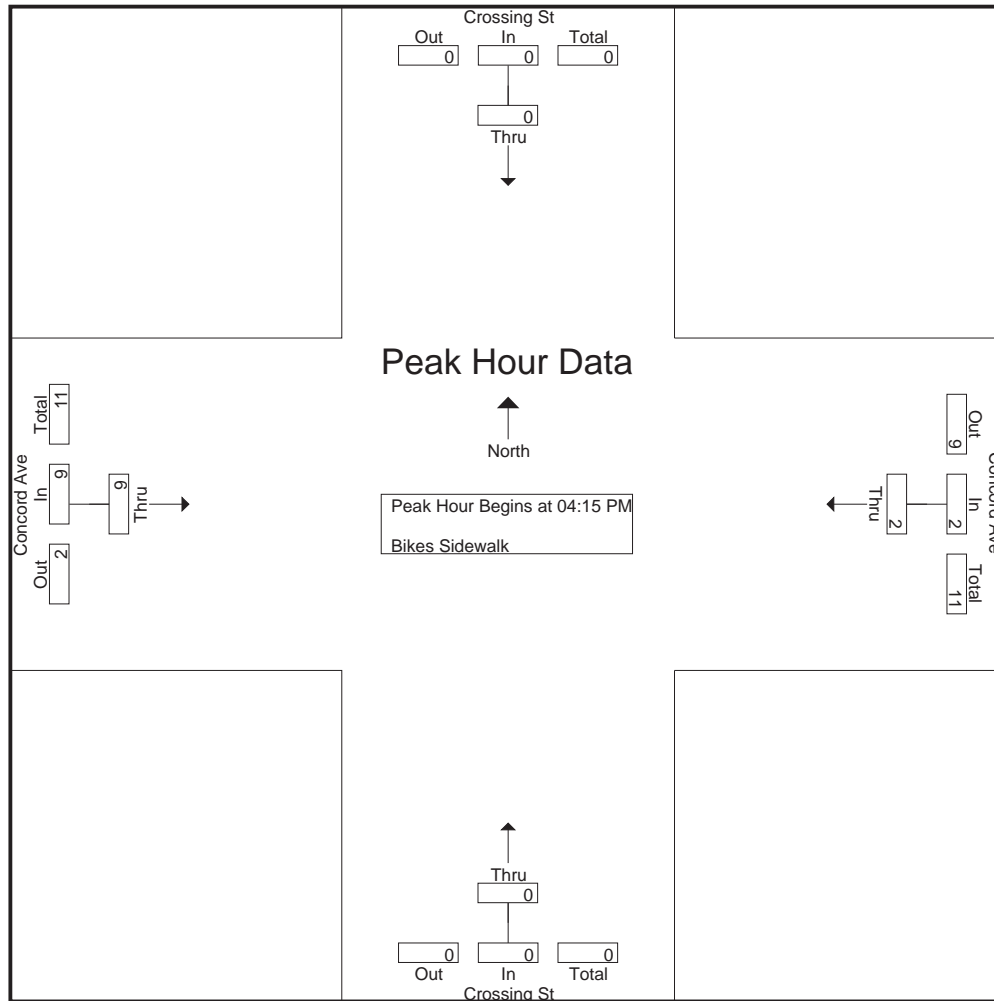
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 7

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 04:15 PM									
04:15 PM	0	0	1	1	0	0	1	1	2
04:30 PM	0	0	1	1	0	0	3	3	4
04:45 PM	0	0	0	0	0	0	2	2	2
05:00 PM	0	0	0	0	0	0	3	3	3
Total Volume	0	0	2	2	0	0	9	9	11
% App. Total	0		100		0		100		
PHF	.000	.000	.500	.500	.000	.000	.750	.750	.688



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

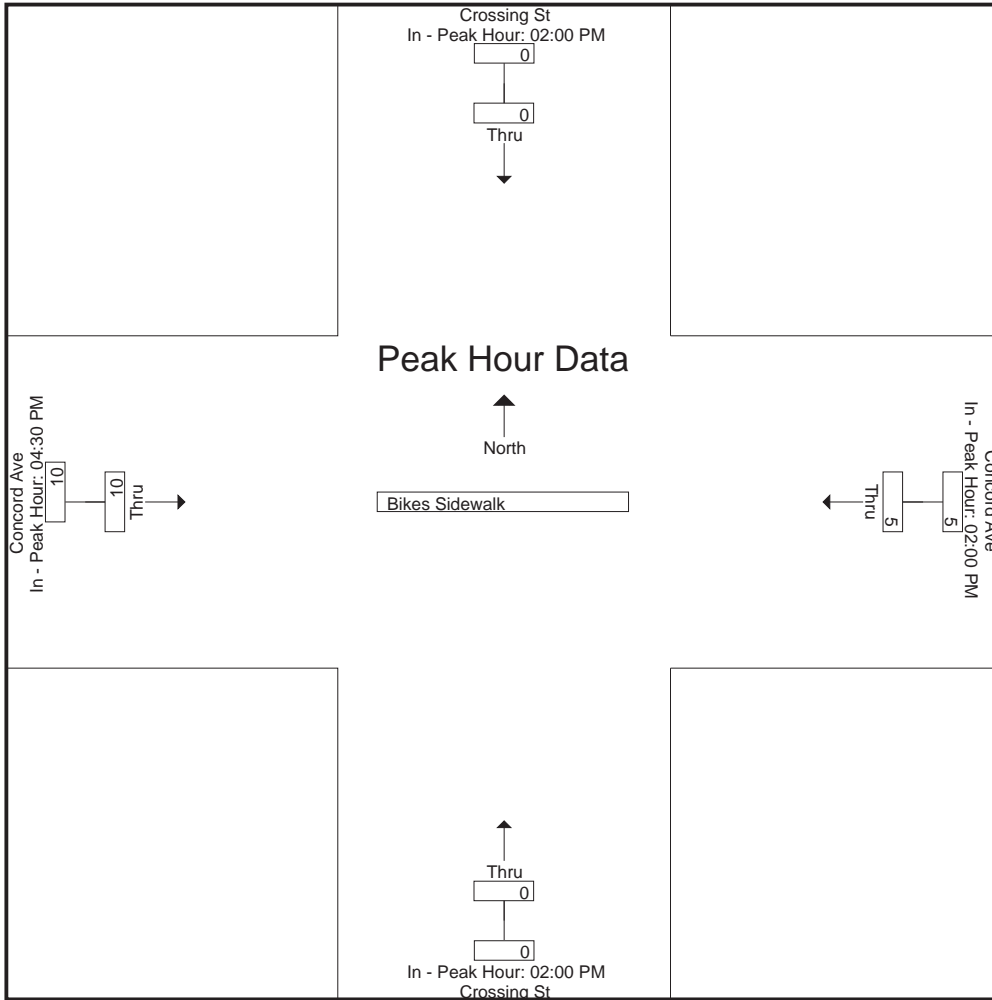
	02:00 PM		02:00 PM		02:00 PM		04:30 PM	
+0 mins.	0	0	1	1	0	0	3	3
+15 mins.	0	0	1	1	0	0	2	2
+30 mins.	0	0	3	3	0	0	3	3
+45 mins.	0	0	0	0	0	0	2	2
Total Volume	0	0	5	5	0	0	10	10
% App. Total	0		100		0		100	
PHF	.000	.000	.417	.417	.000	.000	.833	.833

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Peds Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	2	0	7	9
06:45 AM	0	11	0	7	18
Total	0	13	0	14	27
07:00 AM	0	9	0	7	16
07:15 AM	0	15	0	7	22
07:30 AM	0	9	0	9	18
07:45 AM	0	11	0	15	26
Total	0	44	0	38	82
08:00 AM	0	13	0	9	22
08:15 AM	0	12	0	7	19
08:30 AM	0	16	0	8	24
08:45 AM	0	19	0	10	29
Total	0	60	0	34	94
09:00 AM	0	14	0	12	26
09:15 AM	0	13	0	11	24
09:30 AM	0	7	0	12	19
09:45 AM	0	8	0	7	15
Total	0	42	0	42	84
10:00 AM	0	3	0	5	8
10:15 AM	0	9	0	5	14
10:30 AM	0	8	0	10	18
10:45 AM	0	8	0	4	12
Total	0	28	0	24	52
11:00 AM	0	1	0	10	11
11:15 AM	0	13	0	11	24
11:30 AM	0	11	0	9	20
11:45 AM	0	13	0	7	20
Total	0	38	0	37	75
12:00 PM	0	18	0	21	39
12:15 PM	0	11	0	8	19
12:30 PM	0	15	0	4	19
12:45 PM	0	7	0	5	12
Total	0	51	0	38	89

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Peds Sidewalk

Start Time	Crossing St From North	Concord Ave From East	Crossing St From South	Concord Ave From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	11	0	3	14
01:15 PM	0	8	0	6	14
01:30 PM	0	6	0	2	8
01:45 PM	0	6	0	8	14
Total	0	31	0	19	50
02:00 PM	0	5	0	4	9
02:15 PM	0	4	0	7	11
02:30 PM	0	15	0	7	22
02:45 PM	0	8	0	11	19
Total	0	32	0	29	61
03:00 PM	0	6	0	1	7
03:15 PM	0	8	0	5	13
03:30 PM	0	4	0	9	13
03:45 PM	0	0	0	10	10
Total	0	18	0	25	43
04:00 PM	0	3	0	8	11
04:15 PM	0	11	0	10	21
04:30 PM	0	4	0	11	15
04:45 PM	0	17	0	14	31
Total	0	35	0	43	78
05:00 PM	0	15	0	15	30
05:15 PM	0	14	0	11	25
05:30 PM	0	11	0	16	27
05:45 PM	0	11	0	6	17
Total	0	51	0	48	99
06:00 PM	0	12	0	10	22
06:15 PM	0	13	0	16	29
Grand Total	0	468	0	417	885
Apprch %	0	100	0	100	
Total %	0	52.9	0	47.1	

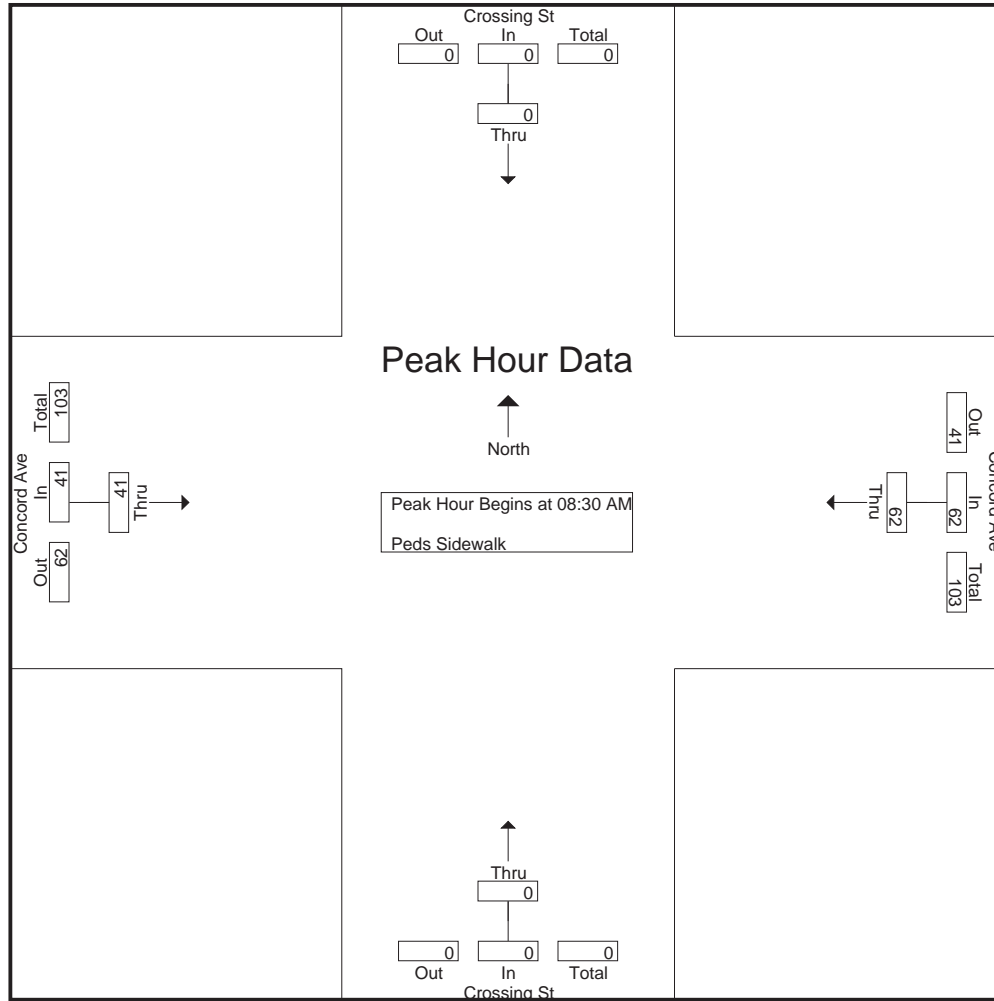
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 3

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:30 AM									
08:30 AM	0	0	16	16	0	0	8	8	24
08:45 AM	0	0	19	19	0	0	10	10	29
09:00 AM	0	0	14	14	0	0	12	12	26
09:15 AM	0	0	13	13	0	0	11	11	24
Total Volume	0	0	62	62	0	0	41	41	103
% App. Total	0		100		0		100		
PHF	.000	.000	.816	.816	.000	.000	.854	.854	.888



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

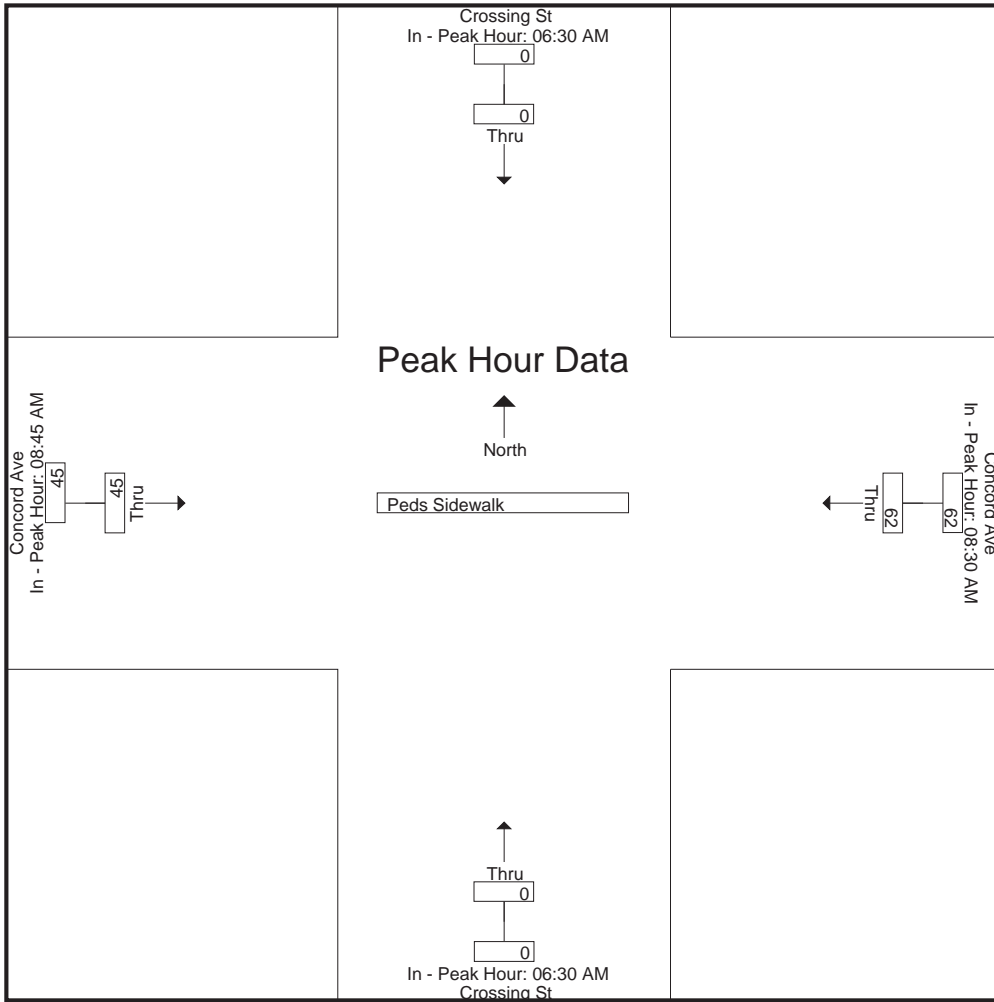
Peak Hour for Each Approach Begins at:

	06:30 AM		08:30 AM		06:30 AM		08:45 AM	
+0 mins.	0	0	16	16	0	0	10	10
+15 mins.	0	0	19	19	0	0	12	12
+30 mins.	0	0	14	14	0	0	11	11
+45 mins.	0	0	13	13	0	0	12	12
Total Volume	0	0	62	62	0	0	45	45
% App. Total	0		100		0		100	

Accurate Counts

978-664-2565

PHF | .000 | .000 | .816 | .816 | .000 | .000 | .938 | .938



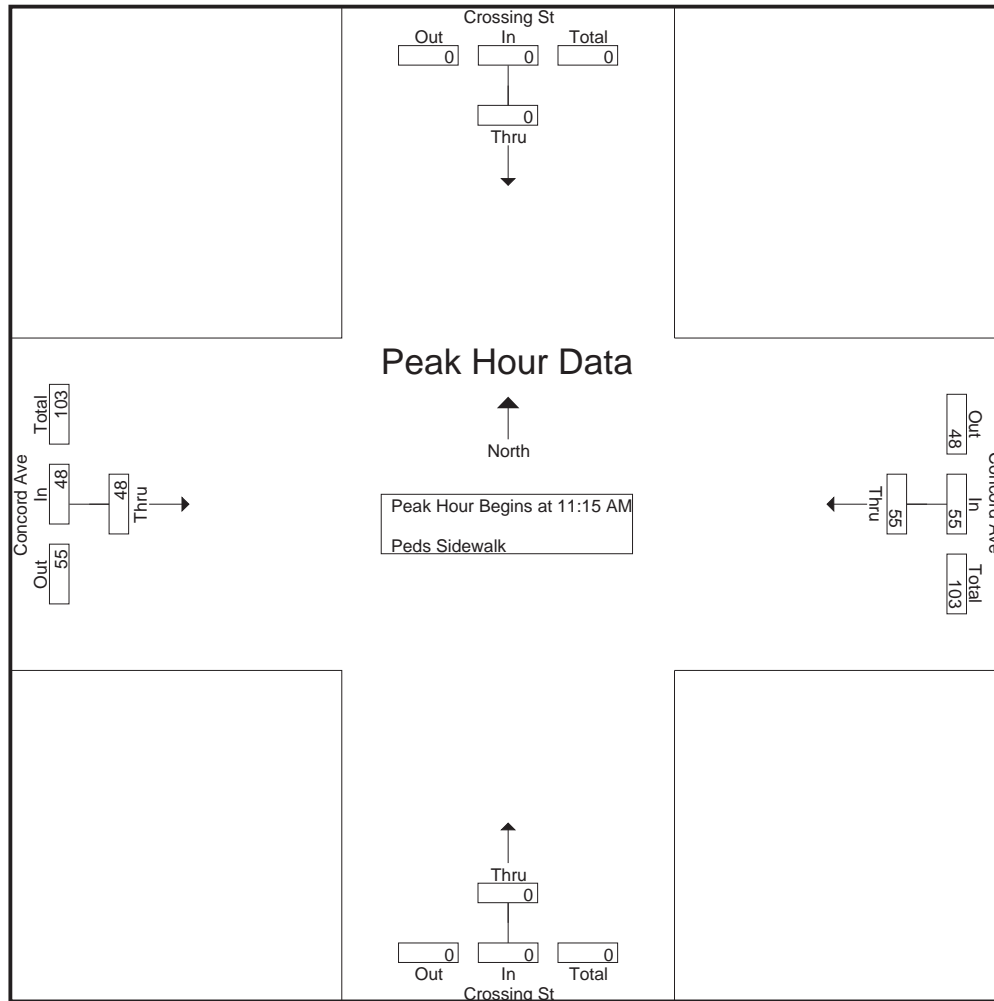
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 5

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 11:15 AM									
11:15 AM	0	0	13	13	0	0	11	11	24
11:30 AM	0	0	11	11	0	0	9	9	20
11:45 AM	0	0	13	13	0	0	7	7	20
12:00 PM	0	0	18	18	0	0	21	21	39
Total Volume	0	0	55	55	0	0	48	48	103
% App. Total	0		100		0		100		
PHF	.000	.000	.764	.764	.000	.000	.571	.571	.660



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

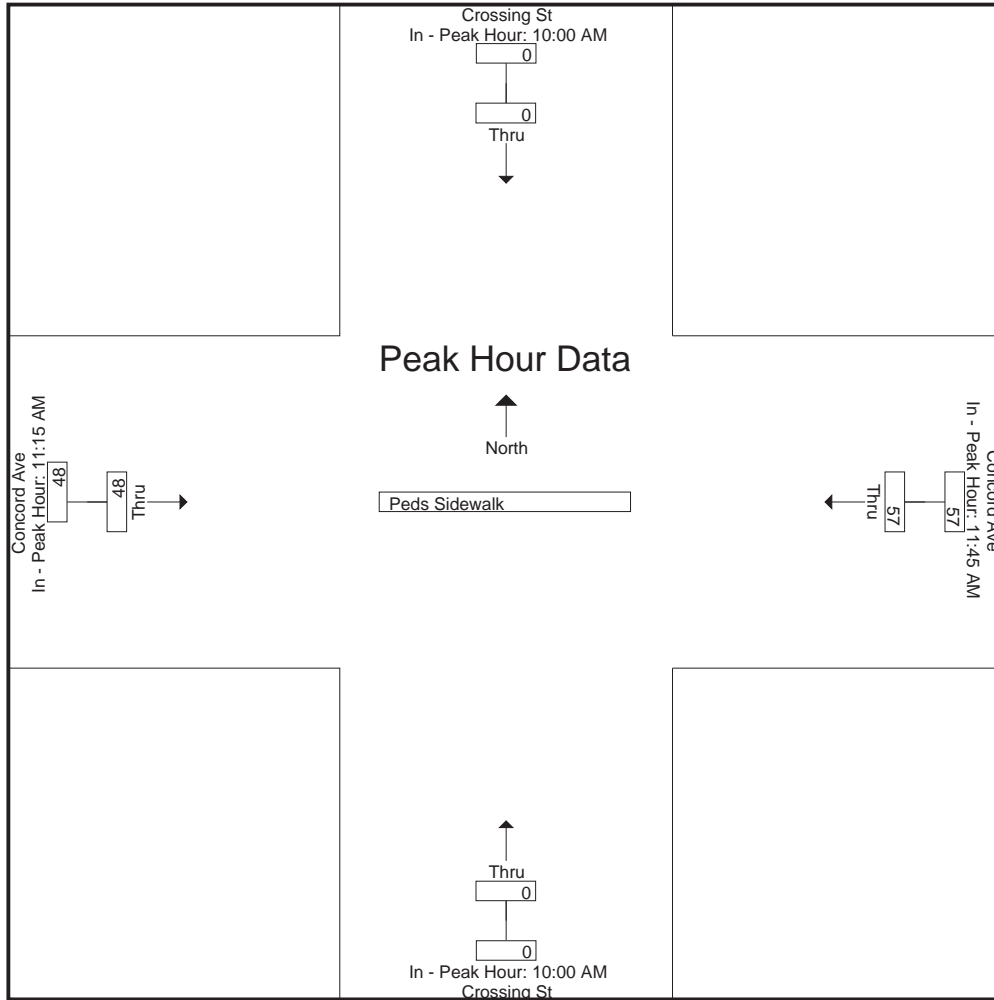
	10:00 AM		11:45 AM		10:00 AM		11:15 AM	
+0 mins.	0	0	13	13	0	0	11	11
+15 mins.	0	0	18	18	0	0	9	9
+30 mins.	0	0	11	11	0	0	7	7
+45 mins.	0	0	15	15	0	0	21	21
Total Volume	0	0	57	57	0	0	48	48
% App. Total	0		100		0		100	
PHF	.000	.000	.792	.792	.000	.000	.571	.571

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 6



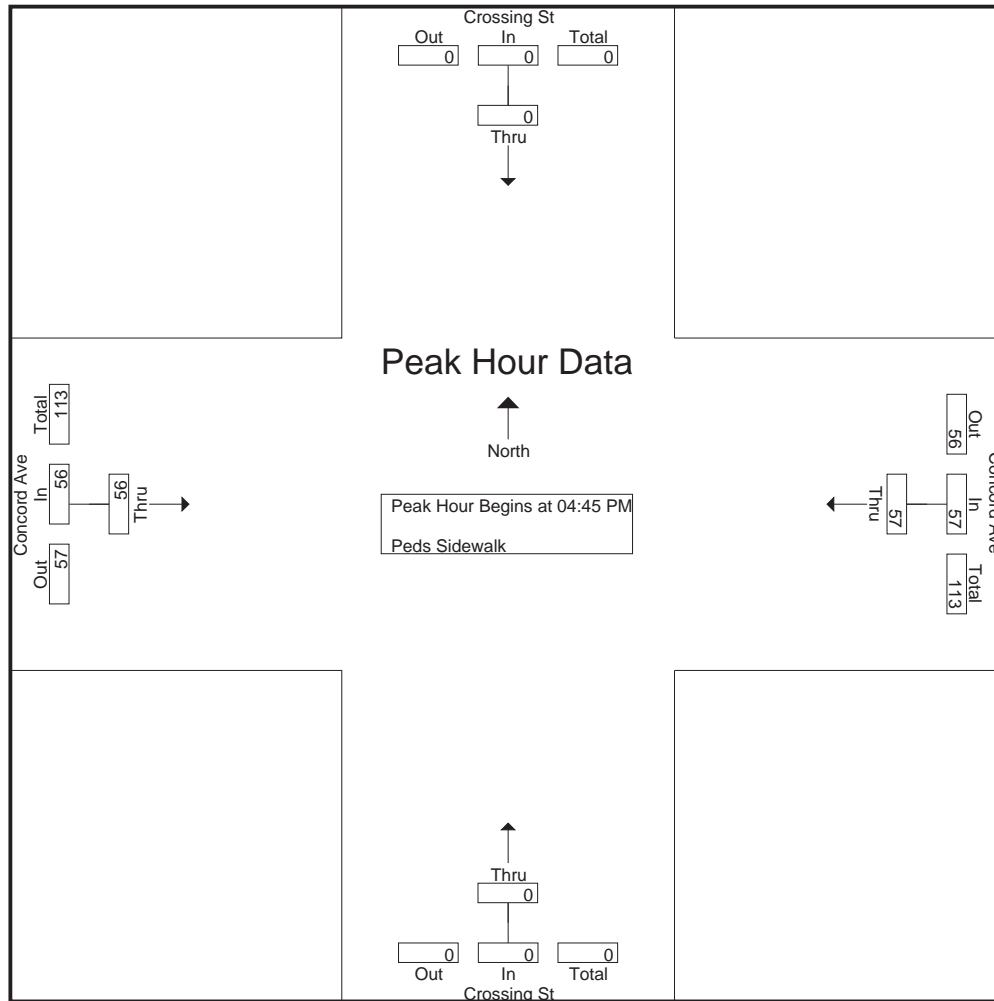
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Concord Avenue
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009006
 Site Code : 15009006
 Start Date : 9/9/2015
 Page No : 7

Start Time	Crossing St From North		Concord Ave From East		Crossing St From South		Concord Ave From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 04:45 PM									
04:45 PM	0	0	17	17	0	0	14	14	31
05:00 PM	0	0	15	15	0	0	15	15	30
05:15 PM	0	0	14	14	0	0	11	11	25
05:30 PM	0	0	11	11	0	0	16	16	27
Total Volume	0	0	57	57	0	0	56	56	113
% App. Total	0		100		0		100		
PHF	.000	.000	.838	.838	.000	.000	.875	.875	.911



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

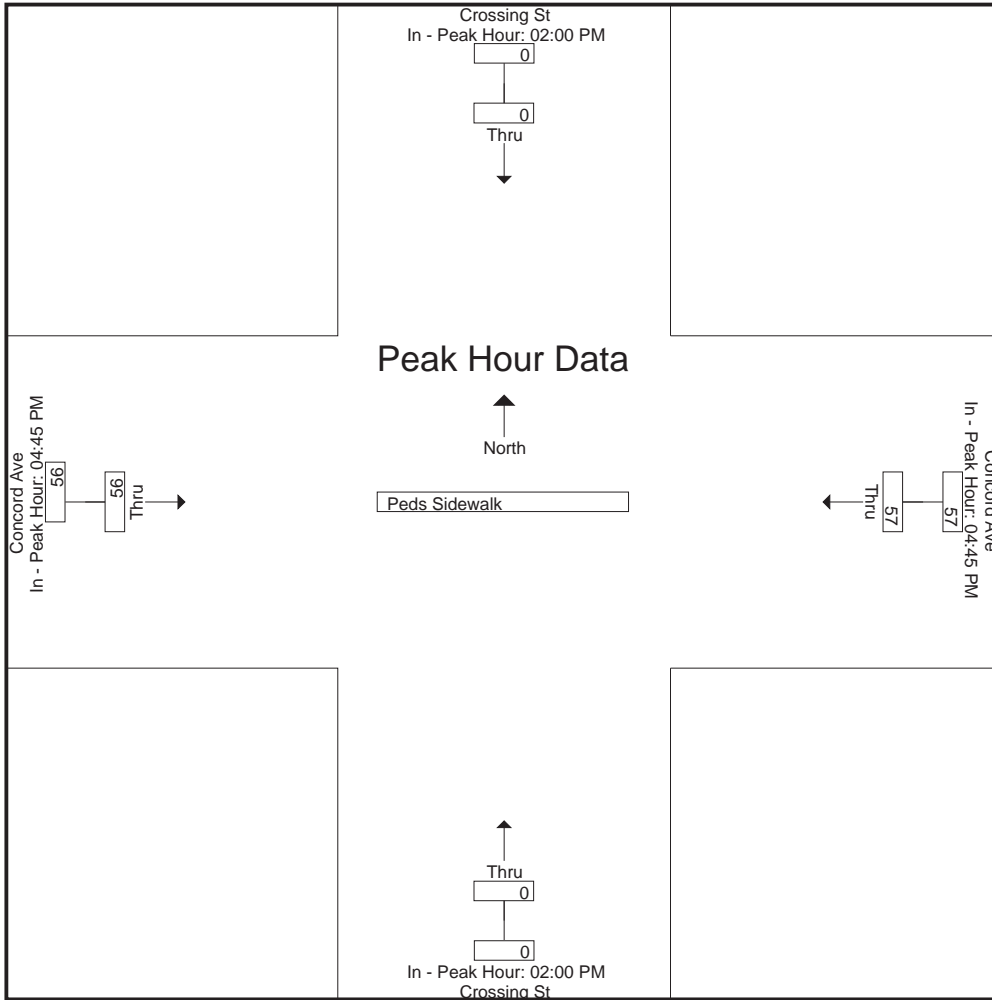
	02:00 PM		04:45 PM		02:00 PM		04:45 PM	
+0 mins.	0	0	17	17	0	0	14	14
+15 mins.	0	0	15	15	0	0	15	15
+30 mins.	0	0	14	14	0	0	11	11
+45 mins.	0	0	11	11	0	0	16	16
Total Volume	0	0	57	57	0	0	56	56
% App. Total	0		100		0		100	
PHF	.000	.000	.838	.838	.000	.000	.875	.875

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Concord Avenue
City/State : Cambridge, MA
Weather : Clear

File Name : 15009006
Site Code : 15009006
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Street - Peds Street - Bikes Sidewalk - Peds Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	8	0	0	0	8
06:45 AM	6	0	3	0	9
Total	14	0	3	0	17
07:00 AM	6	0	0	0	6
07:15 AM	13	0	3	0	16
07:30 AM	8	1	2	0	11
07:45 AM	11	0	5	0	16
Total	38	1	10	0	49
08:00 AM	11	1	6	0	18
08:15 AM	8	0	4	0	12
08:30 AM	5	0	1	0	6
08:45 AM	8	1	3	0	12
Total	32	2	14	0	48
09:00 AM	7	0	5	1	13
09:15 AM	4	0	4	0	8
09:30 AM	5	0	2	0	7
09:45 AM	2	1	2	1	6
Total	18	1	13	2	34
10:00 AM	2	0	4	1	7
10:15 AM	1	0	3	0	4
10:30 AM	4	0	1	0	5
10:45 AM	3	0	2	0	5
Total	10	0	10	1	21
11:00 AM	4	0	0	0	4
11:15 AM	5	0	3	0	8
11:30 AM	3	0	3	0	6
11:45 AM	4	0	3	0	7
Total	16	0	9	0	25
12:00 PM	16	0	5	0	21
12:15 PM	6	0	12	0	18
12:30 PM	5	0	1	0	6
12:45 PM	6	0	7	0	13
Total	33	0	25	0	58

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Bikes Street - Peds Street - Bikes Sidewalk - Peds Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	2	0	6	0	8
01:15 PM	3	0	4	0	7
01:30 PM	3	0	6	0	9
01:45 PM	2	0	4	0	6
Total	10	0	20	0	30
02:00 PM	5	0	1	0	6
02:15 PM	2	0	6	0	8
02:30 PM	8	0	12	1	21
02:45 PM	6	0	4	0	10
Total	21	0	23	1	45
03:00 PM	10	0	9	0	19
03:15 PM	1	0	2	0	3
03:30 PM	3	0	7	0	10
03:45 PM	6	0	2	0	8
Total	20	0	20	0	40
04:00 PM	3	0	4	0	7
04:15 PM	3	0	8	0	11
04:30 PM	6	0	2	0	8
04:45 PM	6	0	10	0	16
Total	18	0	24	0	42
05:00 PM	11	0	5	0	16
05:15 PM	8	0	7	0	15
05:30 PM	3	0	7	0	10
05:45 PM	5	0	8	0	13
Total	27	0	27	0	54
06:00 PM	8	0	14	1	23
06:15 PM	5	0	3	0	8
Grand Total	270	4	215	5	494
Apprch %	100	100	100	100	
Total %	54.7	0.8	43.5	1	
Bikes Street	23	0	17	0	40
% Bikes Street	8.5	0	7.9	0	8.1
Peds Street	1	4	11	5	21
% Peds Street	0.4	100	5.1	100	4.3
Bikes Sidewalk	11	0	9	0	20
% Bikes Sidewalk	4.1	0	4.2	0	4
Peds Sidewalk	235	0	178	0	413
% Peds Sidewalk	87	0	82.8	0	83.6

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

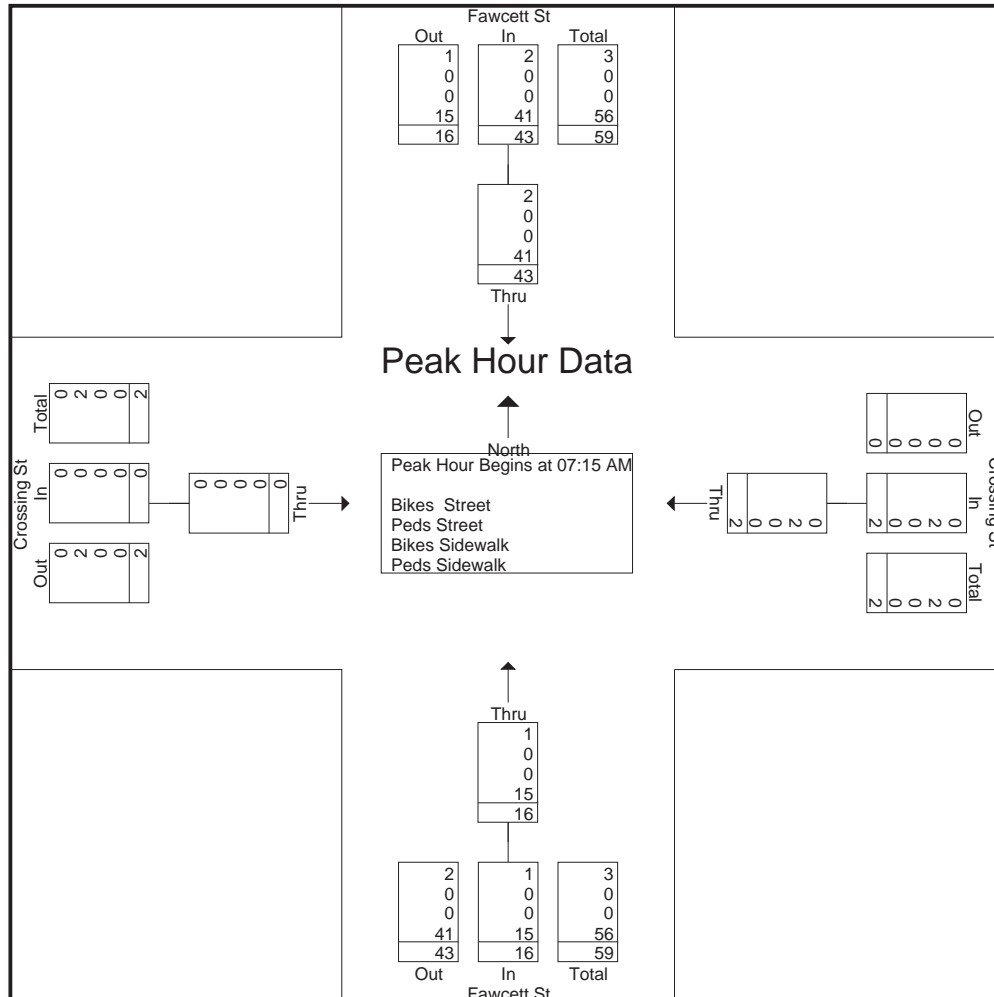
File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

07:15 AM	13	13	0	0	3	3	0	0	16
07:30 AM	8	8	1	1	2	2	0	0	11
07:45 AM	11	11	0	0	5	5	0	0	16
08:00 AM	11	11	1	1	6	6	0	0	18
Total Volume	43	43	2	2	16	16	0	0	61
% App. Total	100		100		100		0		
PHF	.827	.827	.500	.500	.667	.667	.000	.000	.847
Bikes Street	2	2	0	0	1	1	0	0	3
% Bikes Street	4.7	4.7	0	0	6.3	6.3	0	0	4.9
Peds Street	0	0	2	2	0	0	0	0	2
% Peds Street	0	0	100	100	0	0	0	0	3.3
Bikes Sidewalk	0	0	0	0	0	0	0	0	0
% Bikes Sidewalk	0	0	0	0	0	0	0	0	0
Peds Sidewalk	41	41	0	0	15	15	0	0	56
% Peds Sidewalk	95.3	95.3	0	0	93.8	93.8	0	0	91.8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

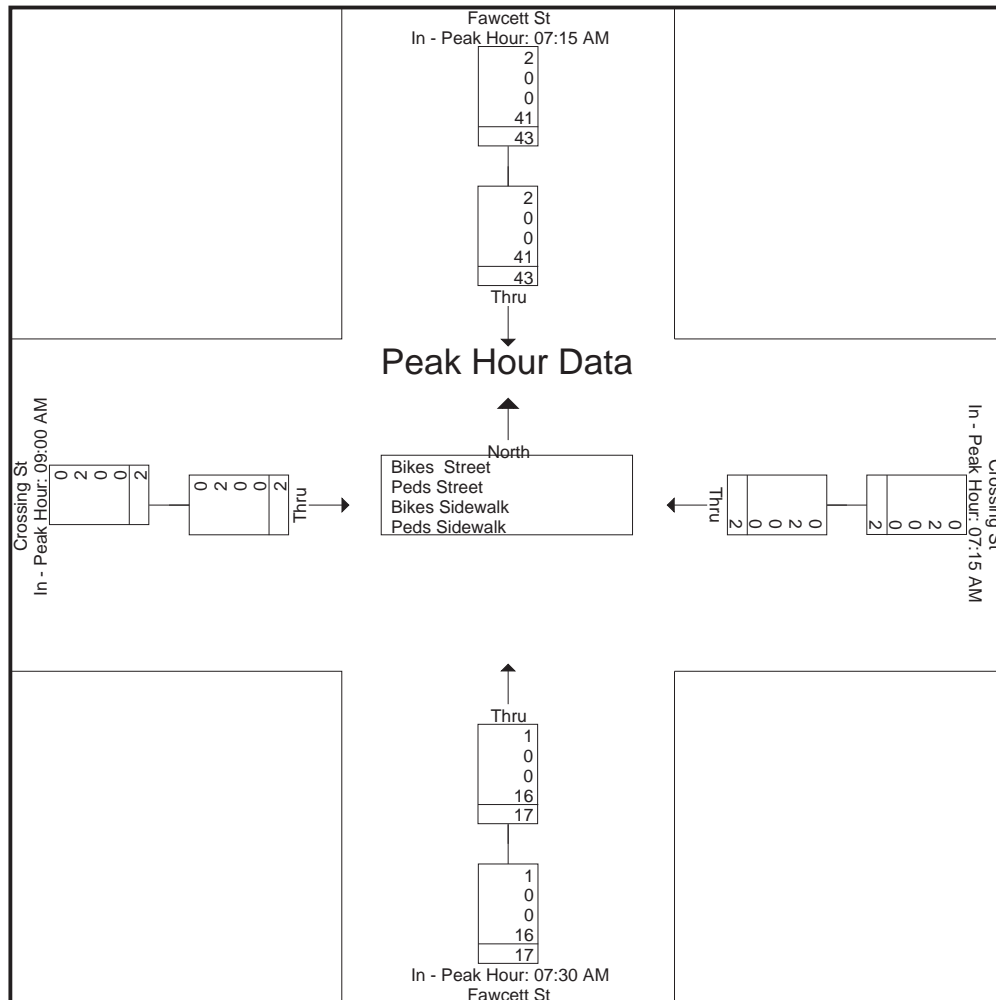
File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 4

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM		07:15 AM		07:30 AM		09:00 AM	
+0 mins.	13	13	0	0	2	2	1	1
+15 mins.	8	8	1	1	5	5	0	0
+30 mins.	11	11	0	0	6	6	0	0
+45 mins.	11	11	1	1	4	4	1	1
Total Volume	43	43	2	2	17	17	2	2
% App. Total	100		100		100		100	
PHF	.827	.827	.500	.500	.708	.708	.500	.500
Bikes Street	2	2	0	0	1	1	0	0
% Bikes Street	4.7	4.7	0	0	5.9	5.9	0	0
Peds Street	0	0	2	2	0	0	2	2
% Peds Street	0	0	100	100	0	0	100	100
Bikes Sidewalk	0	0	0	0	0	0	0	0
% Bikes Sidewalk	0	0	0	0	0	0	0	0
Peds Sidewalk	41	41	0	0	16	16	0	0
% Peds Sidewalk	95.3	95.3	0	0	94.1	94.1	0	0



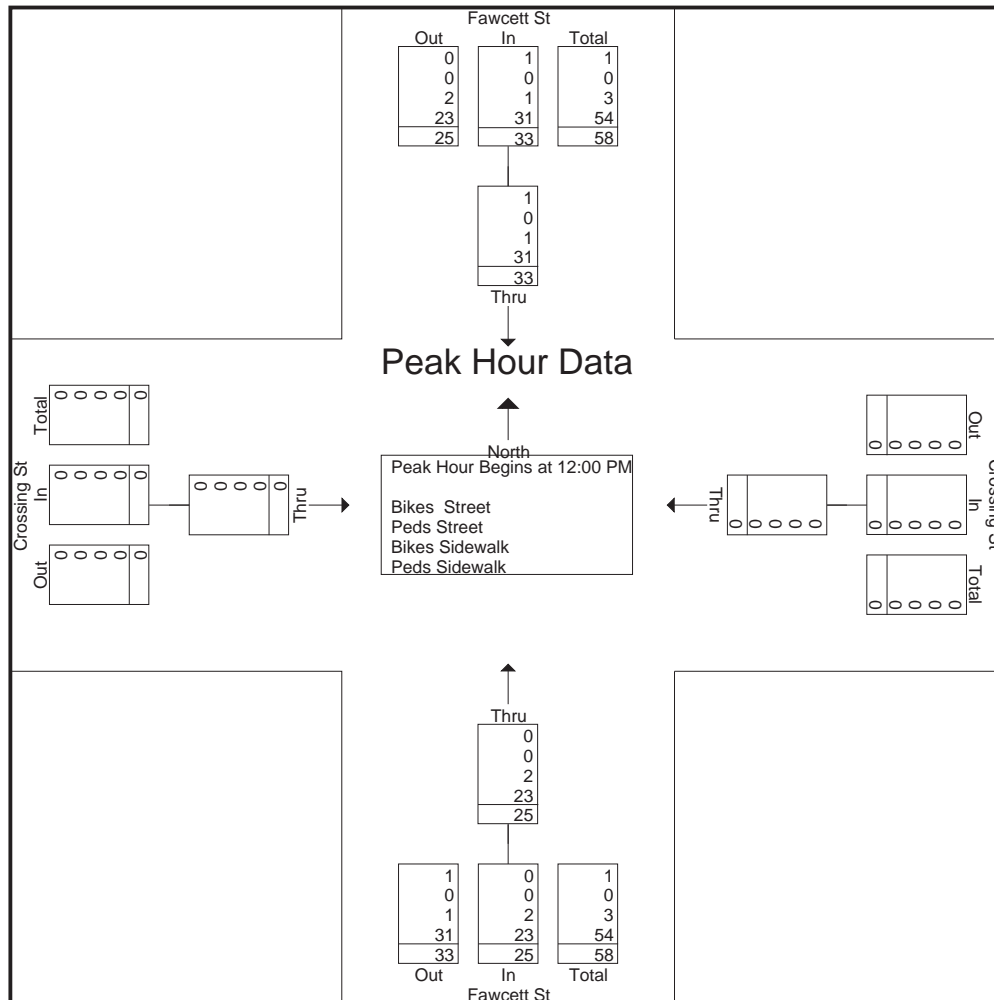
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total	
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total		
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	16	16	0	0	5	5	0	0	21	
12:15 PM	6	6	0	0	12	12	0	0	18	
12:30 PM	5	5	0	0	1	1	0	0	6	
12:45 PM	6	6	0	0	7	7	0	0	13	
Total Volume	33	33	0	0	25	25	0	0	58	
% App. Total	100		0		100		0			
PHF	.516	.516	.000	.000	.521	.521	.000	.000	.690	
Bikes Street	1	1	0	0	0	0	0	0	1	
% Bikes Street	3.0	3.0	0	0	0	0	0	0	1.7	
Peds Street	0	0	0	0	0	0	0	0	0	
% Peds Street	0	0	0	0	0	0	0	0	0	
Bikes Sidewalk	1	1	0	0	2	2	0	0	3	
% Bikes Sidewalk	3.0	3.0	0	0	8.0	8.0	0	0	5.2	
Peds Sidewalk	31	31	0	0	23	23	0	0	54	
% Peds Sidewalk	93.9	93.9	0	0	92.0	92.0	0	0	93.1	



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

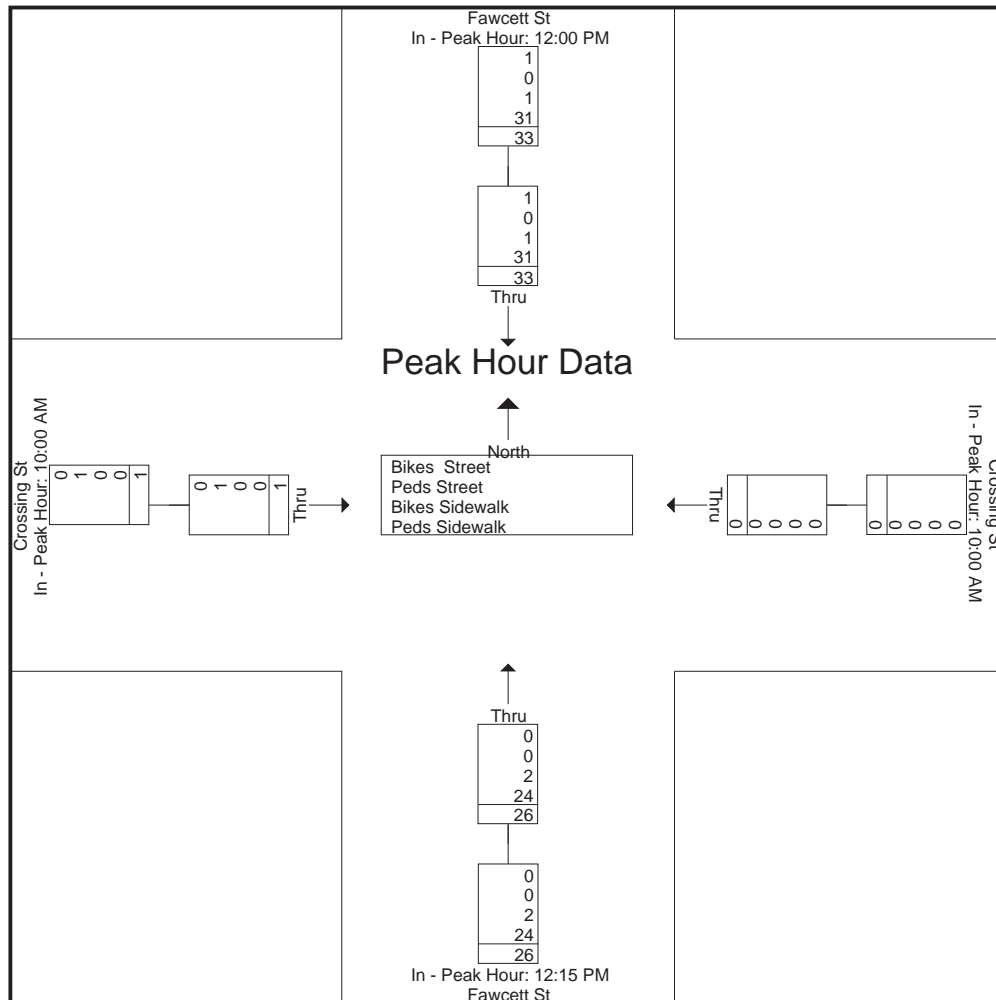
File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 6

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:00 PM		10:00 AM		12:15 PM		10:00 AM	
+0 mins.	16	16	0	0	12	12	1	1
+15 mins.	6	6	0	0	1	1	0	0
+30 mins.	5	5	0	0	7	7	0	0
+45 mins.	6	6	0	0	6	6	0	0
Total Volume	33	33	0	0	26	26	1	1
% App. Total	100		0		100		100	
PHF	.516	.516	.000	.000	.542	.542	.250	.250
Bikes Street	1	1	0	0	0	0	0	0
% Bikes Street	3	3	0	0	0	0	0	0
Peds Street	0	0	0	0	0	0	1	1
% Peds Street	0	0	0	0	0	0	100	100
Bikes Sidewalk	1	1	0	0	2	2	0	0
% Bikes Sidewalk	3	3	0	0	7.7	7.7	0	0
Peds Sidewalk	31	31	0	0	24	24	0	0
% Peds Sidewalk	93.9	93.9	0	0	92.3	92.3	0	0



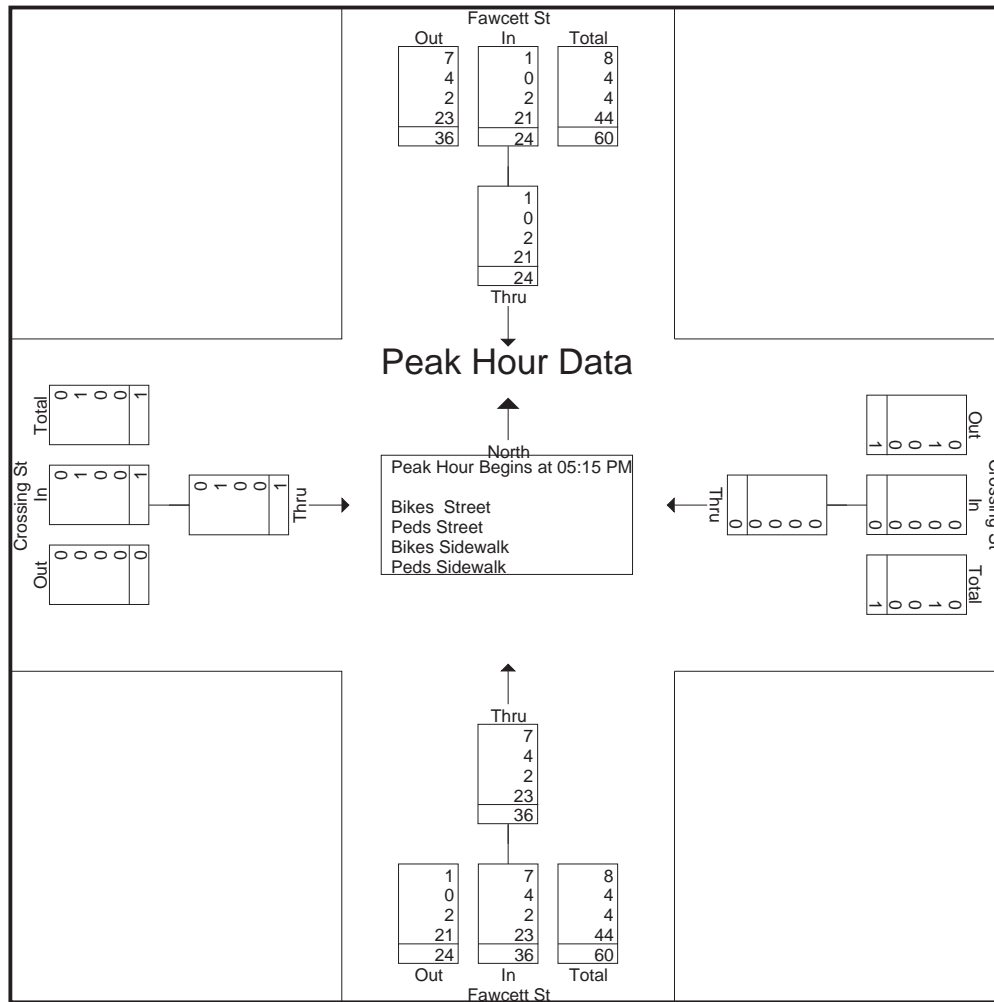
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 7

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:15 PM									
05:15 PM	8	8	0	0	7	7	0	0	15
05:30 PM	3	3	0	0	7	7	0	0	10
05:45 PM	5	5	0	0	8	8	0	0	13
06:00 PM	8	8	0	0	14	14	1	1	23
Total Volume	24	24	0	0	36	36	1	1	61
% App. Total	100		0		100		100		
PHF	.750	.750	.000	.000	.643	.643	.250	.250	.663
Bikes Street	1	1	0	0	7	7	0	0	8
% Bikes Street	4.2	4.2	0	0	19.4	19.4	0	0	13.1
Peds Street	0	0	0	0	4	4	1	1	5
% Peds Street	0	0	0	0	11.1	11.1	100	100	8.2
Bikes Sidewalk	2	2	0	0	2	2	0	0	4
% Bikes Sidewalk	8.3	8.3	0	0	5.6	5.6	0	0	6.6
Peds Sidewalk	21	21	0	0	23	23	0	0	44
% Peds Sidewalk	87.5	87.5	0	0	63.9	63.9	0	0	72.1



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

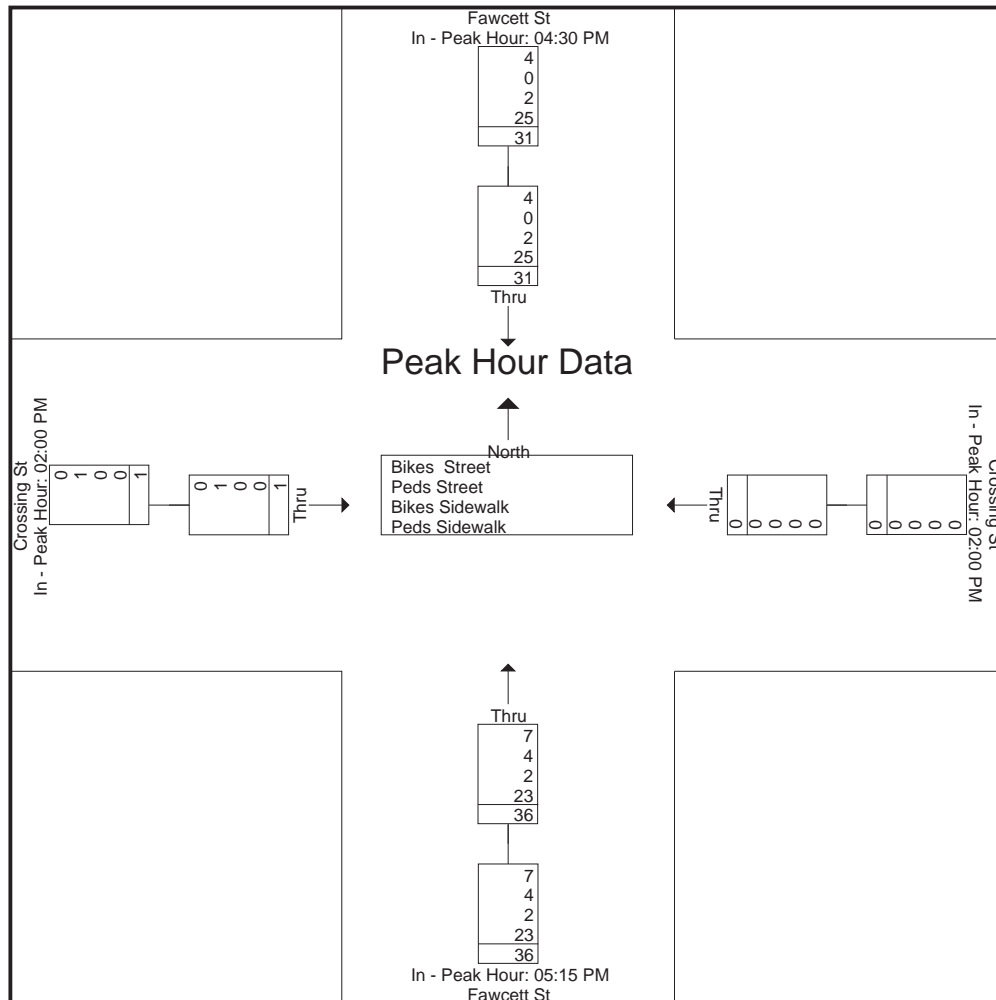
File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 8

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM		02:00 PM		05:15 PM		02:00 PM		
+0 mins.	6	6	0	0	7	7	0	0	
+15 mins.	6	6	0	0	7	7	0	0	
+30 mins.	11	11	0	0	8	8	1	1	
+45 mins.	8	8	0	0	14	14	0	0	
Total Volume	31	31	0	0	36	36	1	1	
% App. Total	100		0		100		100		
PHF	.705	.705	.000	.000	.643	.643	.250	.250	
Bikes Street	4	4	0	0	7	7	0	0	
% Bikes Street	12.9	12.9	0	0	19.4	19.4	0	0	
Peds Street	0	0	0	0	4	4	1	1	
% Peds Street	0	0	0	0	11.1	11.1	100	100	
Bikes Sidewalk	2	2	0	0	2	2	0	0	
% Bikes Sidewalk	6.5	6.5	0	0	5.6	5.6	0	0	
Peds Sidewalk	25	25	0	0	23	23	0	0	
% Peds Sidewalk	80.6	80.6	0	0	63.9	63.9	0	0	



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Street

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	1	0	0	0	1
06:45 AM	1	0	0	0	1
Total	2	0	0	0	2
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	0	0
07:30 AM	0	0	0	0	0
07:45 AM	0	0	0	0	0
Total	0	0	0	0	0
08:00 AM	2	0	1	0	3
08:15 AM	2	0	0	0	2
08:30 AM	1	0	0	0	1
08:45 AM	0	0	1	0	1
Total	5	0	2	0	7
09:00 AM	1	0	0	0	1
09:15 AM	0	0	0	0	0
09:30 AM	1	0	0	0	1
09:45 AM	1	0	0	0	1
Total	3	0	0	0	3
10:00 AM	0	0	0	0	0
10:15 AM	0	0	0	0	0
10:30 AM	0	0	0	0	0
10:45 AM	1	0	0	0	1
Total	1	0	0	0	1
11:00 AM	1	0	0	0	1
11:15 AM	0	0	1	0	1
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
Total	1	0	1	0	2
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	1	0	0	0	1
Total	1	0	0	0	1

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Bikes Street

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	0	0	0	0
01:15 PM	0	0	0	0	0
01:30 PM	0	0	1	0	1
01:45 PM	0	0	0	0	0
Total	0	0	1	0	1
02:00 PM	1	0	0	0	1
02:15 PM	0	0	1	0	1
02:30 PM	0	0	1	0	1
02:45 PM	0	0	0	0	0
Total	1	0	2	0	3
03:00 PM	2	0	2	0	4
03:15 PM	1	0	1	0	2
03:30 PM	0	0	0	0	0
03:45 PM	0	0	0	0	0
Total	3	0	3	0	6
04:00 PM	0	0	0	0	0
04:15 PM	1	0	0	0	1
04:30 PM	0	0	0	0	0
04:45 PM	2	0	1	0	3
Total	3	0	1	0	4
05:00 PM	1	0	0	0	1
05:15 PM	1	0	3	0	4
05:30 PM	0	0	0	0	0
05:45 PM	0	0	1	0	1
Total	2	0	4	0	6
06:00 PM	0	0	3	0	3
06:15 PM	1	0	0	0	1
Grand Total	23	0	17	0	40
Apprch %	100	0	100	0	
Total %	57.5	0	42.5	0	

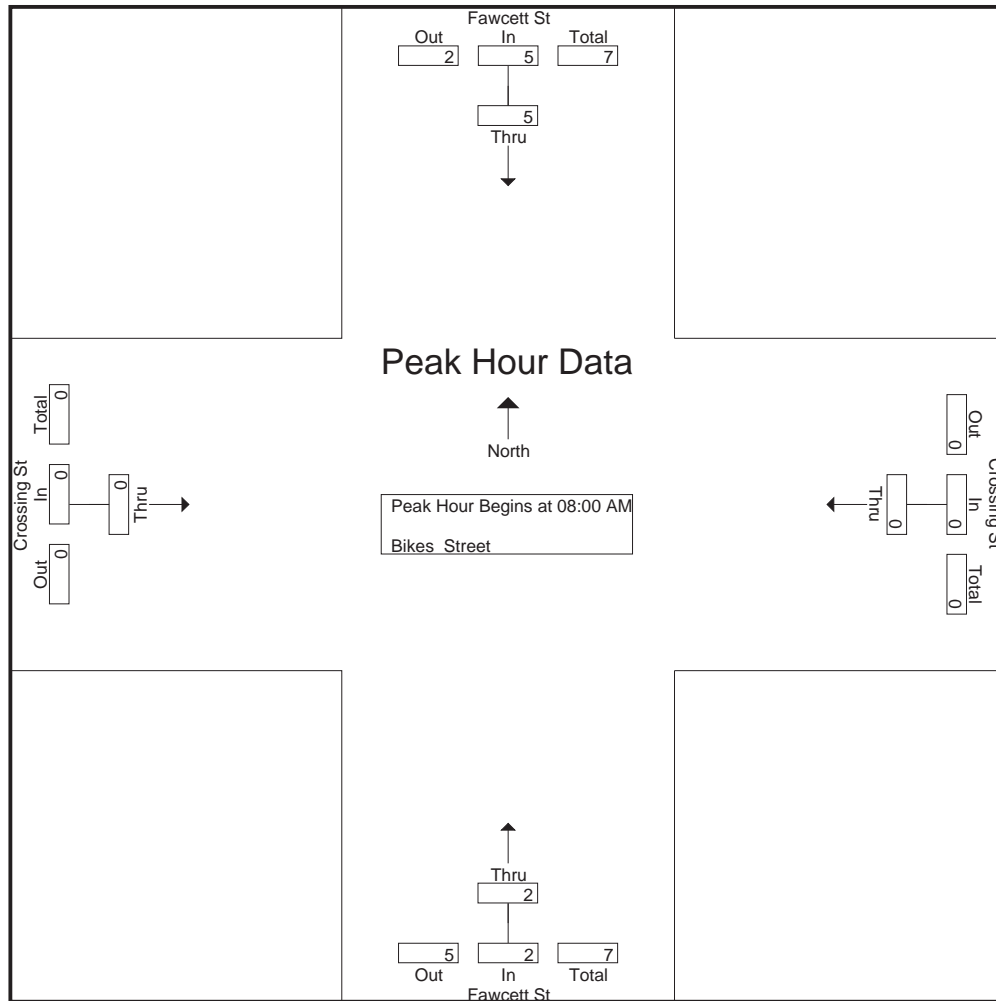
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:00 AM									
08:00 AM	2	2	0	0	1	1	0	0	3
08:15 AM	2	2	0	0	0	0	0	0	2
08:30 AM	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	1	1	0	0	1
Total Volume	5	5	0	0	2	2	0	0	7
% App. Total	100		0		100		0		
PHF	.625	.625	.000	.000	.500	.500	.000	.000	.583



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

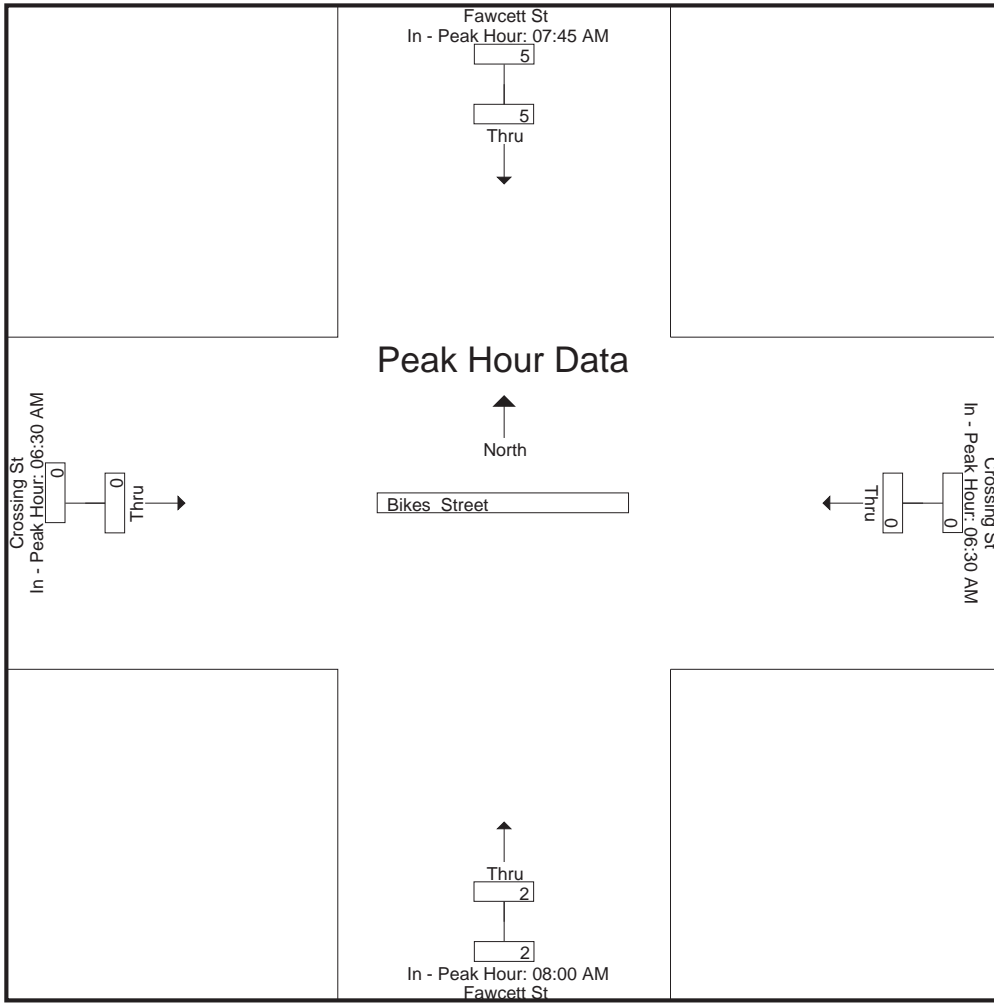
Peak Hour for Each Approach Begins at:

	07:45 AM		06:30 AM		08:00 AM		06:30 AM	
+0 mins.	0	0	0	0	1	1	0	0
+15 mins.	2	2	0	0	0	0	0	0
+30 mins.	2	2	0	0	0	0	0	0
+45 mins.	1	1	0	0	1	1	0	0
Total Volume	5	5	0	0	2	2	0	0
% App. Total	100		0		100		0	

Accurate Counts

978-664-2565

PHF | .625 | .625 | .000 | .000 | .500 | .500 | .000 | .000



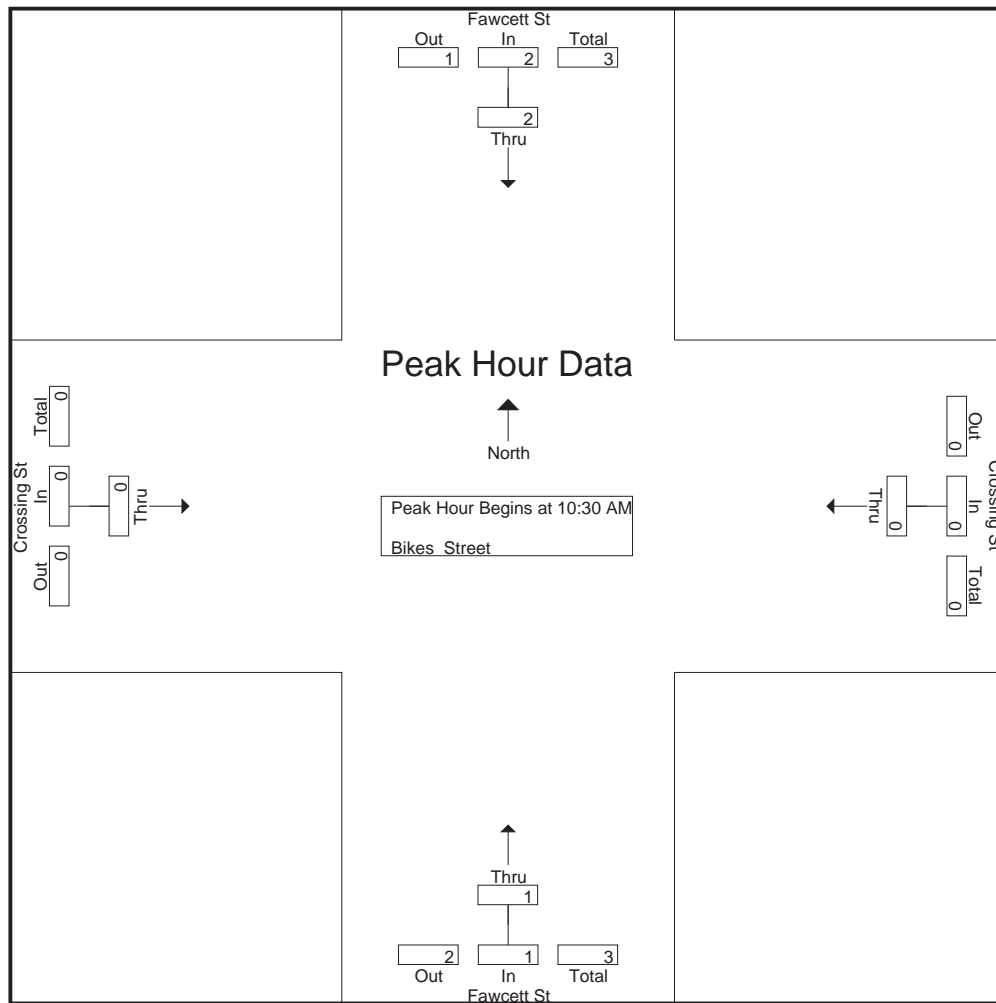
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 10:30 AM									
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	1	1	0	0	0	0	0	0	1
11:00 AM	1	1	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	1	1	0	0	1
Total Volume	2	2	0	0	1	1	0	0	3
% App. Total	100		0		100		0		
PHF	.500	.500	.000	.000	.250	.250	.000	.000	.750



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

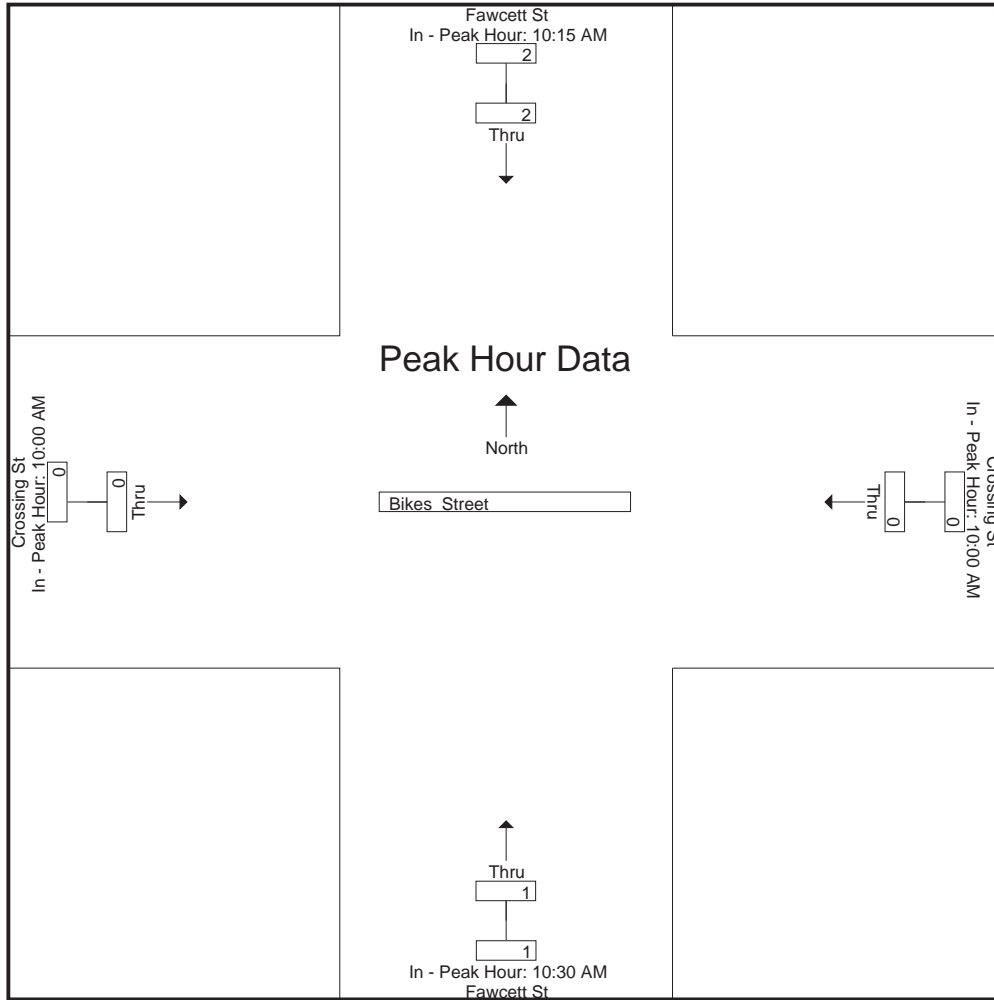
	10:15 AM		10:00 AM		10:30 AM		10:00 AM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	1	1	0	0	0	0	0	0
+45 mins.	1	1	0	0	1	1	0	0
Total Volume	2	2	0	0	1	1	0	0
% App. Total	100		0		100		0	
PHF	.500	.500	.000	.000	.250	.250	.000	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 6



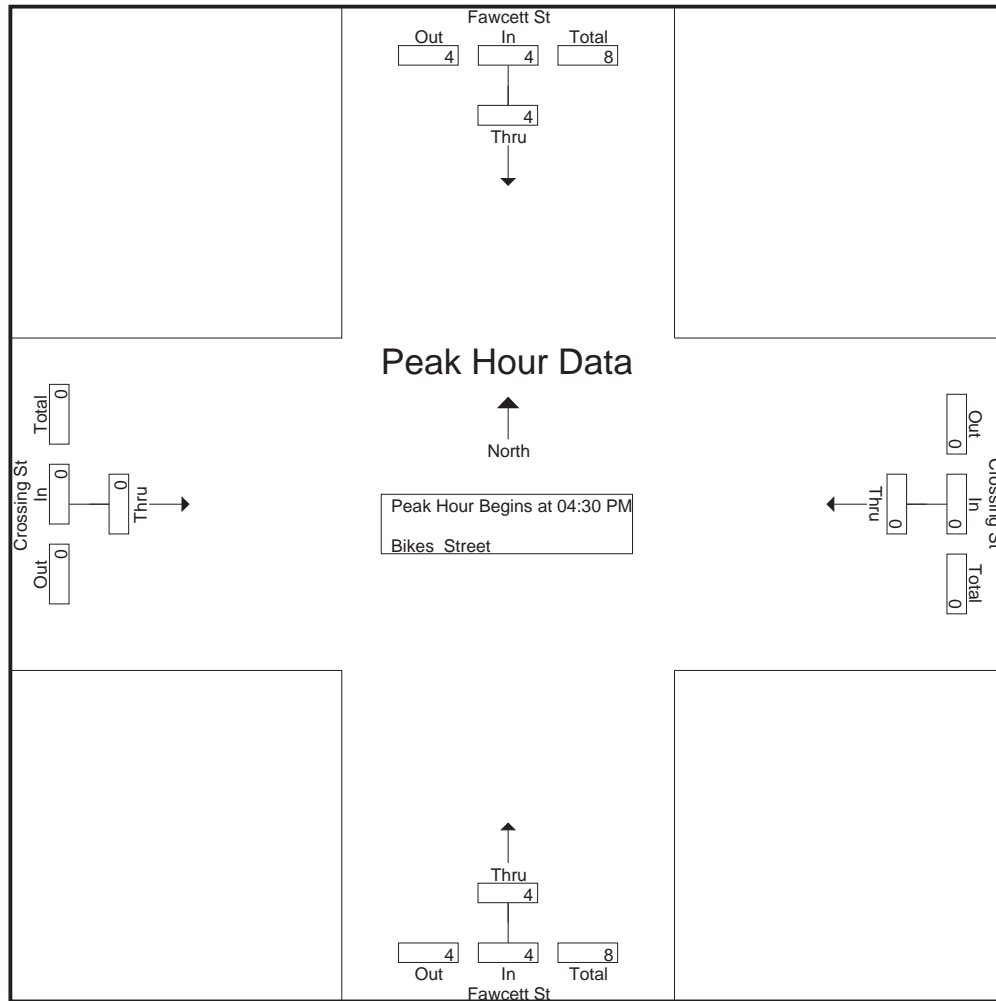
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 7

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 04:30 PM									
04:30 PM	0	0	0	0	0	0	0	0	0
04:45 PM	2	2	0	0	1	1	0	0	3
05:00 PM	1	1	0	0	0	0	0	0	1
05:15 PM	1	1	0	0	3	3	0	0	4
Total Volume	4	4	0	0	4	4	0	0	8
% App. Total	100		0		100		0		
PHF	.500	.500	.000	.000	.333	.333	.000	.000	.500



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

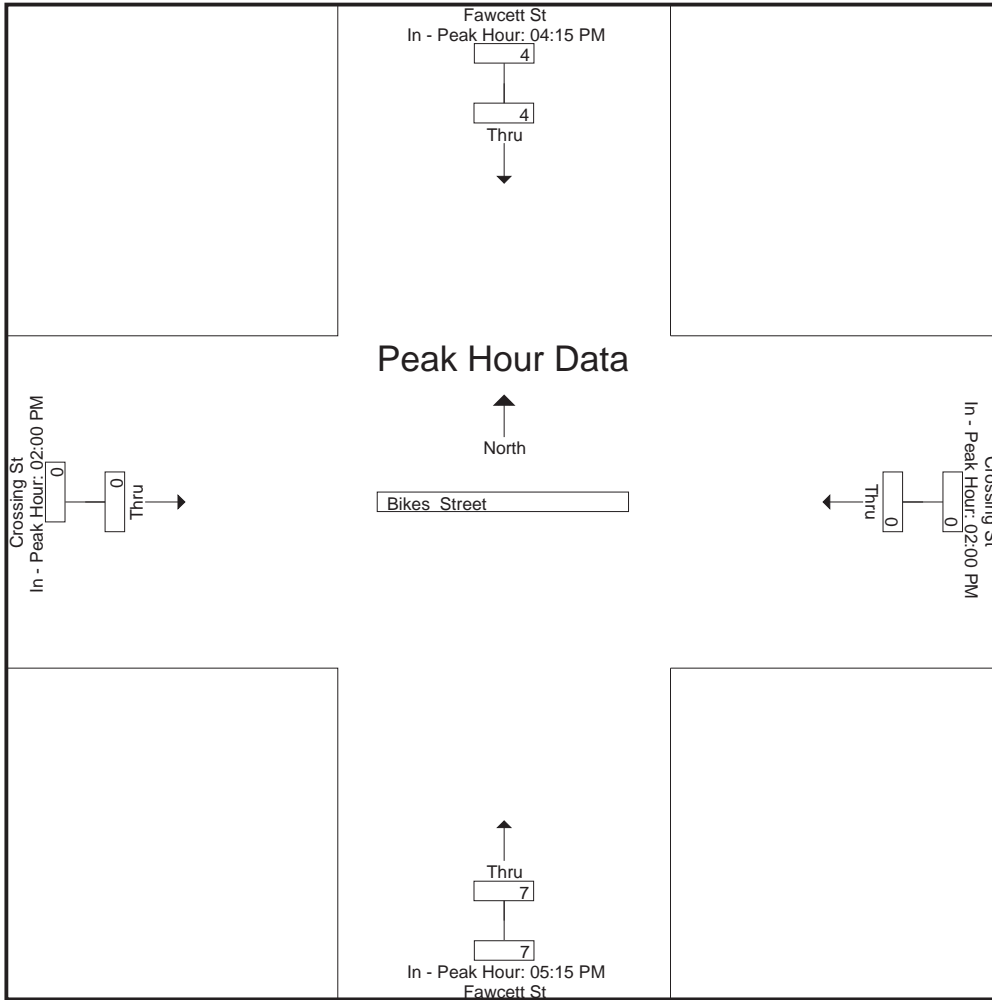
	04:15 PM		02:00 PM		05:15 PM		02:00 PM	
+0 mins.	1	1	0	0	3	3	0	0
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	2	2	0	0	1	1	0	0
+45 mins.	1	1	0	0	3	3	0	0
Total Volume	4	4	0	0	7	7	0	0
% App. Total	100		0		100		0	
PHF	.500	.500	.000	.000	.583	.583	.000	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Peds Street

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	0	0	0	0
06:45 AM	0	0	1	0	1
Total	0	0	1	0	1
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	0	0
07:30 AM	0	1	0	0	1
07:45 AM	0	0	0	0	0
Total	0	1	0	0	1
08:00 AM	0	1	0	0	1
08:15 AM	0	0	0	0	0
08:30 AM	0	0	0	0	0
08:45 AM	0	1	1	0	2
Total	0	2	1	0	3
09:00 AM	1	0	1	1	3
09:15 AM	0	0	0	0	0
09:30 AM	0	0	0	0	0
09:45 AM	0	1	0	1	2
Total	1	1	1	2	5
10:00 AM	0	0	0	1	1
10:15 AM	0	0	0	0	0
10:30 AM	0	0	0	0	0
10:45 AM	0	0	0	0	0
Total	0	0	0	1	1
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
Total	0	0	0	0	0
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
Total	0	0	0	0	0

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Peds Street

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	0	0	0	0	0
01:15 PM	0	0	0	0	0
01:30 PM	0	0	0	0	0
01:45 PM	0	0	0	0	0
Total	0	0	0	0	0
02:00 PM	0	0	0	0	0
02:15 PM	0	0	0	0	0
02:30 PM	0	0	0	1	1
02:45 PM	0	0	0	0	0
Total	0	0	0	1	1
03:00 PM	0	0	0	0	0
03:15 PM	0	0	0	0	0
03:30 PM	0	0	2	0	2
03:45 PM	0	0	0	0	0
Total	0	0	2	0	2
04:00 PM	0	0	0	0	0
04:15 PM	0	0	0	0	0
04:30 PM	0	0	0	0	0
04:45 PM	0	0	0	0	0
Total	0	0	0	0	0
05:00 PM	0	0	2	0	2
05:15 PM	0	0	1	0	1
05:30 PM	0	0	0	0	0
05:45 PM	0	0	3	0	3
Total	0	0	6	0	6
06:00 PM	0	0	0	1	1
06:15 PM	0	0	0	0	0
Grand Total	1	4	11	5	21
Apprch %	100	100	100	100	
Total %	4.8	19	52.4	23.8	

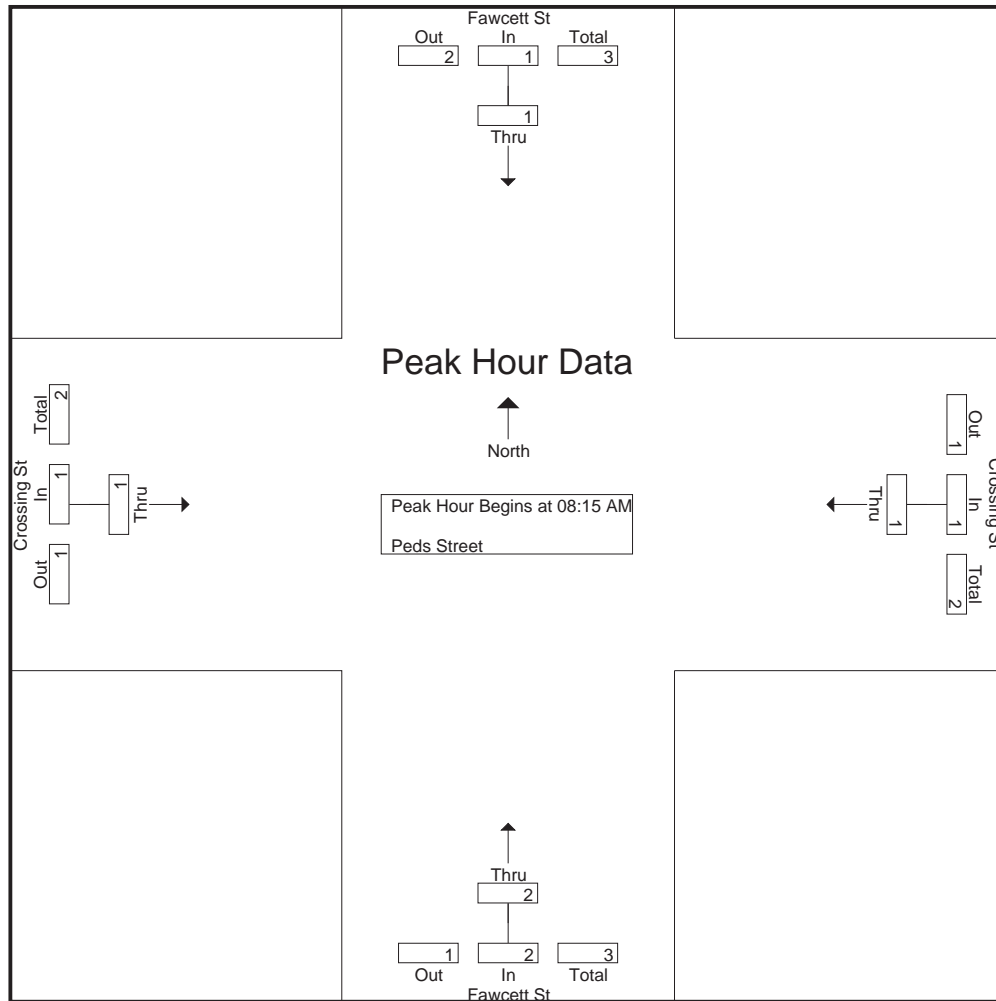
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:15 AM									
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	1	1	1	1	0	0	2
09:00 AM	1	1	0	0	1	1	1	1	3
Total Volume	1	1	1	1	2	2	1	1	5
% App. Total	100		100		100		100		
PHF	.250	.250	.250	.250	.500	.500	.250	.250	.417



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

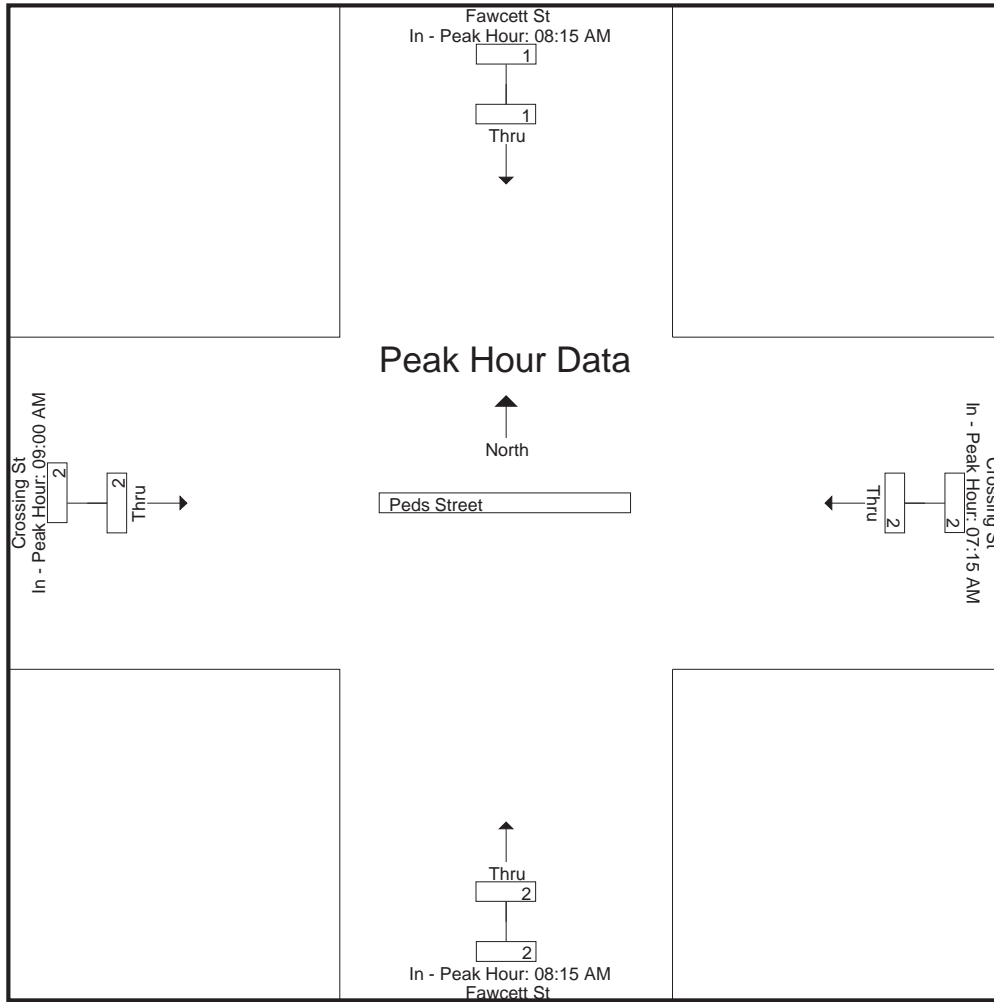
Peak Hour for Each Approach Begins at:

	08:15 AM	07:15 AM	08:15 AM	09:00 AM
+0 mins.	0	0	0	1
+15 mins.	0	1	0	0
+30 mins.	0	0	1	0
+45 mins.	1	1	1	1
Total Volume	1	2	2	2
% App. Total	100	100	100	100

Accurate Counts

978-664-2565

PHF | .250 | .250 | .500 | .500 | .500 | .500 | .500



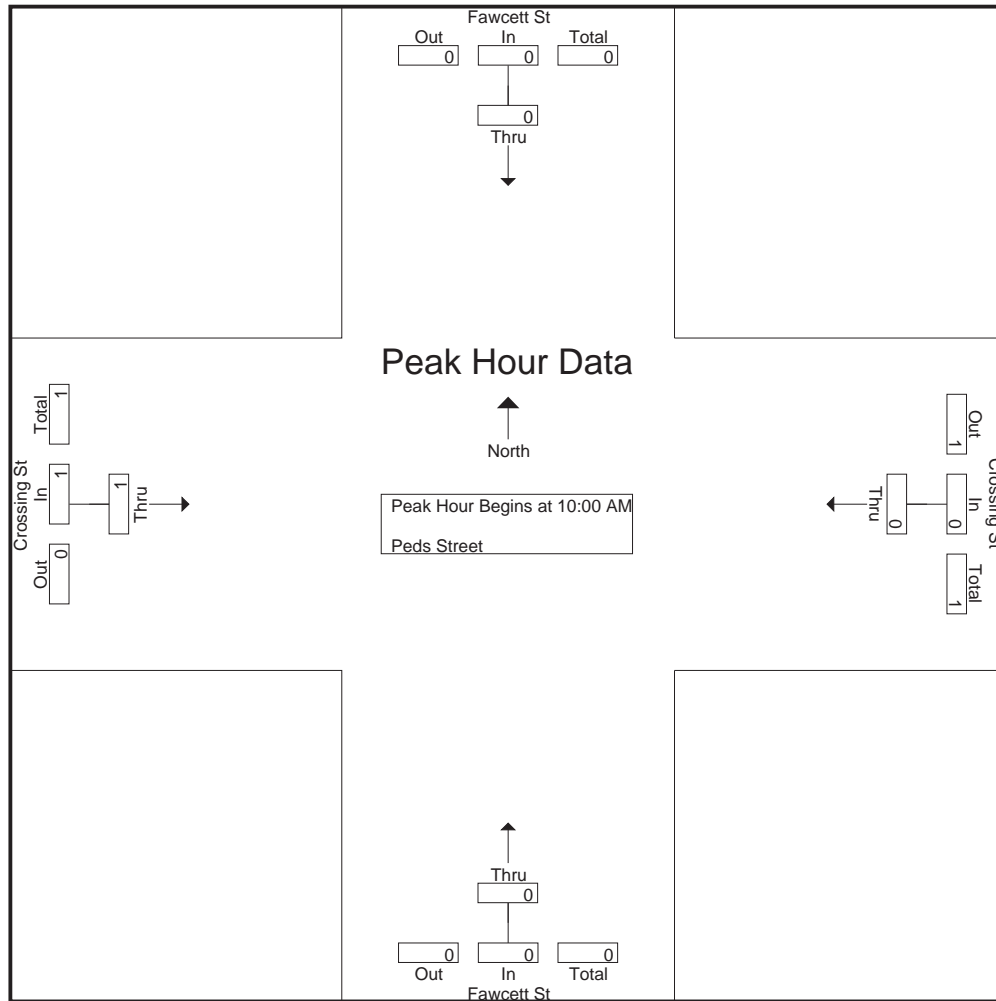
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 10:00 AM									
10:00 AM	0	0	0	0	0	0	1	1	1
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	1
% App. Total	0		0		0		100		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.250



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

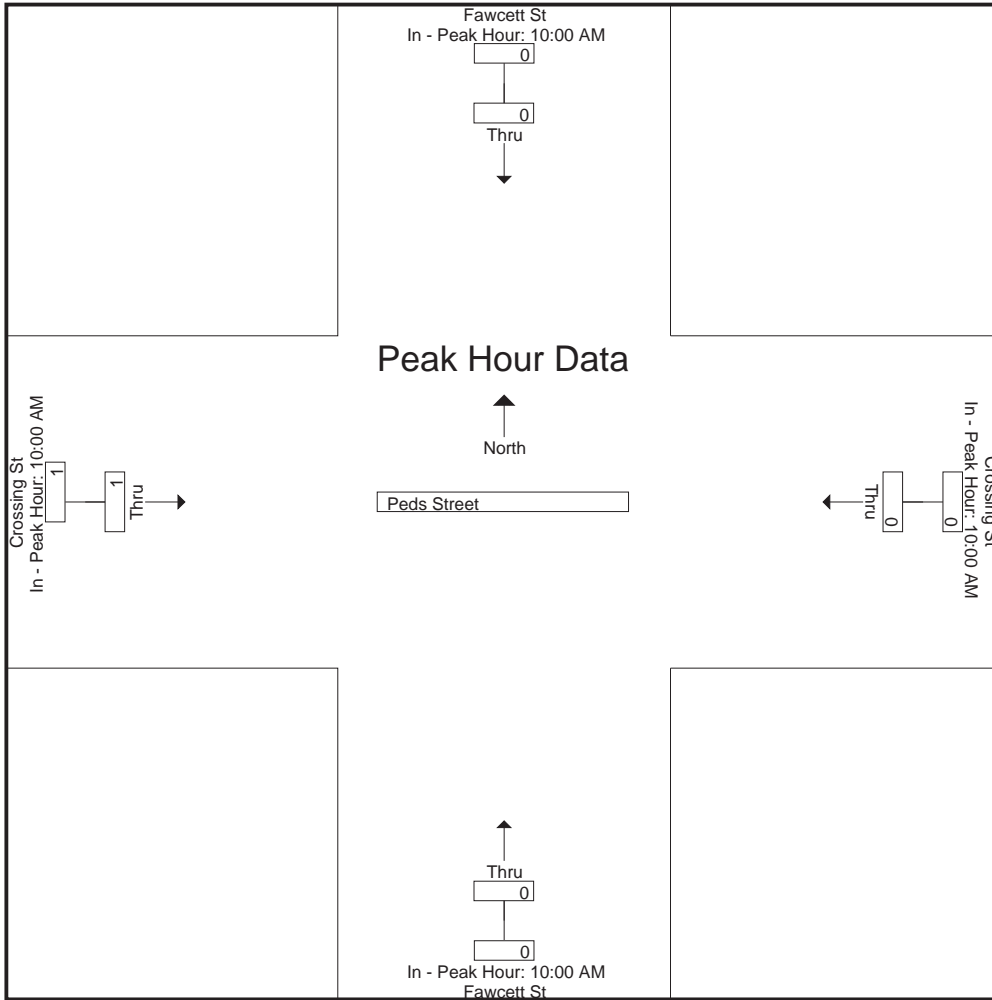
	10:00 AM		10:00 AM		10:00 AM		10:00 AM	
+0 mins.	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1
% App. Total	0		0		0		100	
PHF	.000	.000	.000	.000	.000	.000	.250	.250

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 6



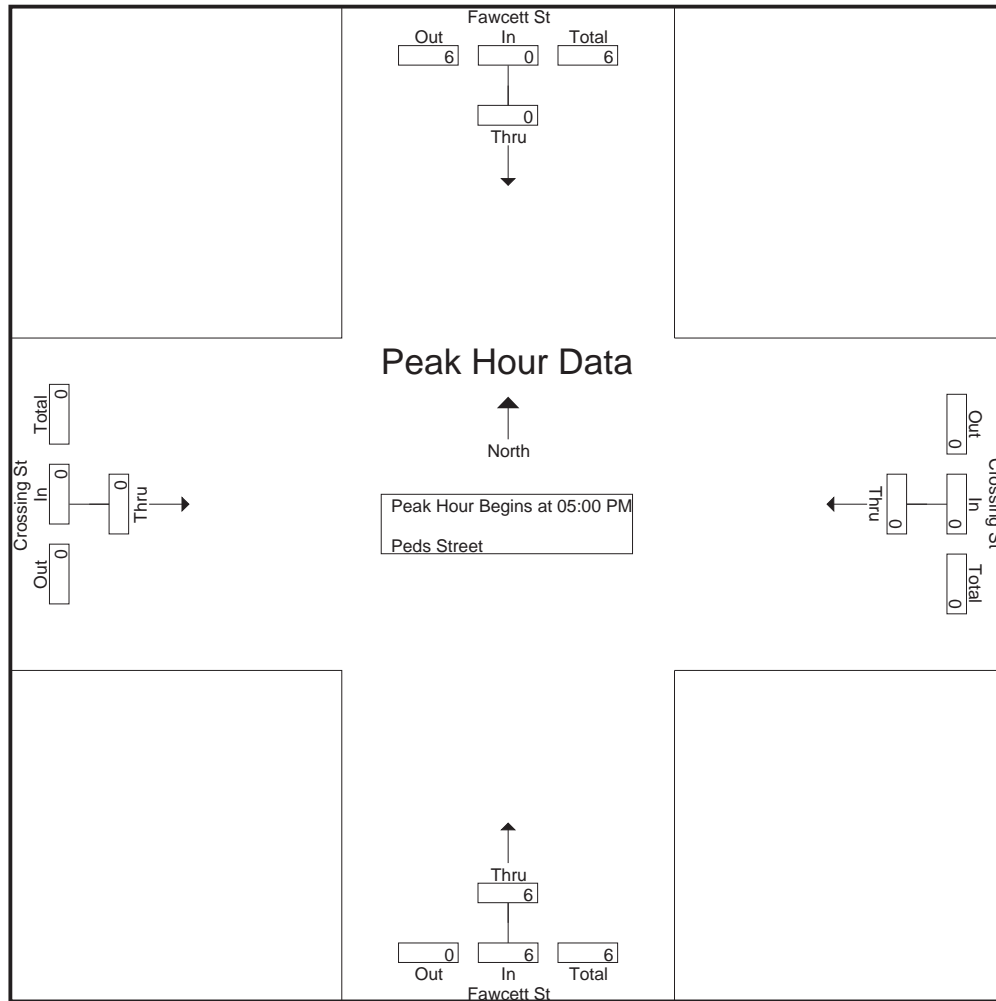
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 7

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:00 PM									
05:00 PM	0	0	0	0	2	2	0	0	2
05:15 PM	0	0	0	0	1	1	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	3	3	0	0	3
Total Volume	0	0	0	0	6	6	0	0	6
% App. Total	0		0		100		0		
PHF	.000	.000	.000	.000	.500	.500	.000	.000	.500



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

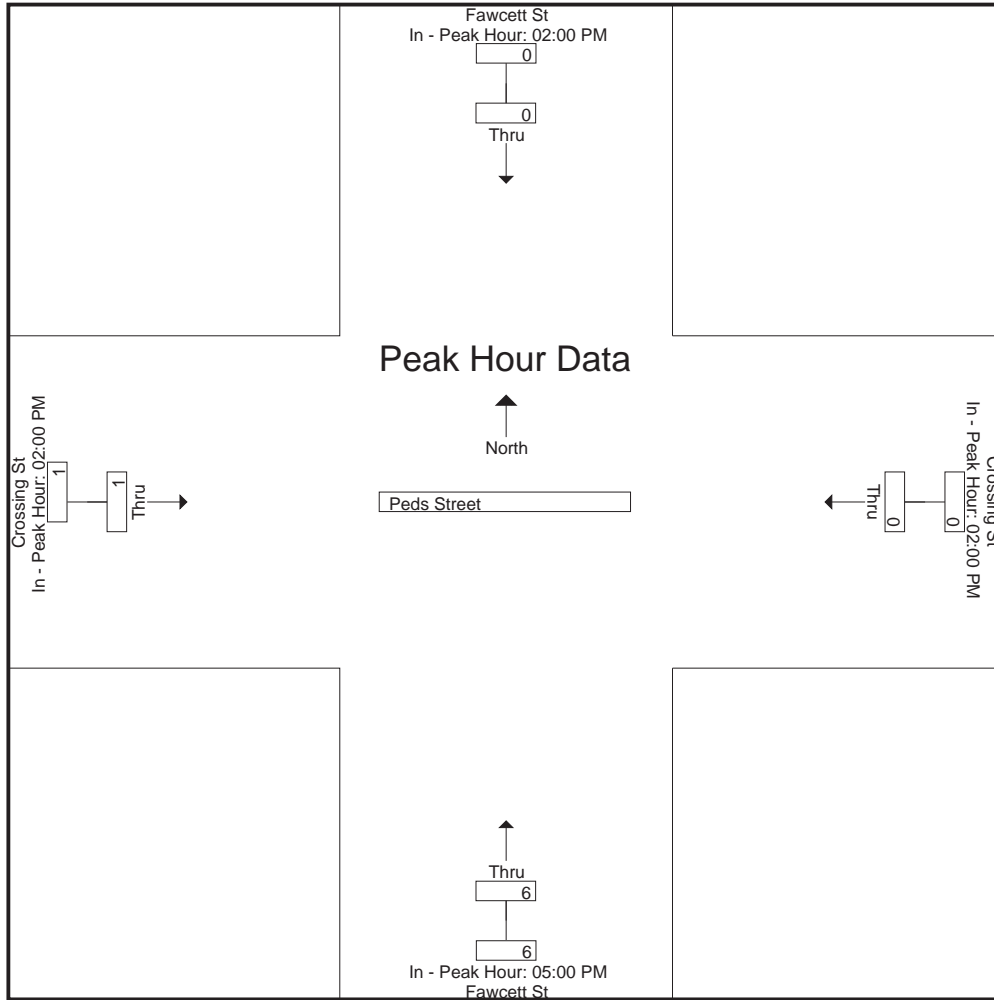
	02:00 PM		02:00 PM		05:00 PM		02:00 PM	
+0 mins.	0	0	0	0	2	2	0	0
+15 mins.	0	0	0	0	1	1	0	0
+30 mins.	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	3	3	0	0
Total Volume	0	0	0	0	6	6	1	1
% App. Total	0		0		100		100	
PHF	.000	.000	.000	.000	.500	.500	.250	.250

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Bikes Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	0	0	0	0	0
06:45 AM	0	0	0	0	0
Total	0	0	0	0	0
07:00 AM	0	0	0	0	0
07:15 AM	0	0	0	0	0
07:30 AM	0	0	0	0	0
07:45 AM	0	0	0	0	0
Total	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
09:00 AM	1	0	0	0	1
09:15 AM	0	0	0	0	0
09:30 AM	1	0	0	0	1
09:45 AM	0	0	0	0	0
Total	2	0	0	0	2
10:00 AM	0	0	0	0	0
10:15 AM	0	0	1	0	1
10:30 AM	0	0	0	0	0
10:45 AM	0	0	0	0	0
Total	0	0	1	0	1
11:00 AM	0	0	0	0	0
11:15 AM	1	0	0	0	1
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
Total	1	0	0	0	1
12:00 PM	1	0	0	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	2	0	2
Total	1	0	2	0	3

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Bikes Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	1	0	0	0	1
01:15 PM	1	0	0	0	1
01:30 PM	0	0	0	0	0
01:45 PM	0	0	0	0	0
Total	2	0	0	0	2
02:00 PM	0	0	0	0	0
02:15 PM	0	0	0	0	0
02:30 PM	3	0	3	0	6
02:45 PM	0	0	0	0	0
Total	3	0	3	0	6
03:00 PM	0	0	1	0	1
03:15 PM	0	0	0	0	0
03:30 PM	0	0	0	0	0
03:45 PM	0	0	0	0	0
Total	0	0	1	0	1
04:00 PM	0	0	0	0	0
04:15 PM	0	0	0	0	0
04:30 PM	0	0	0	0	0
04:45 PM	0	0	0	0	0
Total	0	0	0	0	0
05:00 PM	0	0	0	0	0
05:15 PM	2	0	0	0	2
05:30 PM	0	0	2	0	2
05:45 PM	0	0	0	0	0
Total	2	0	2	0	4
06:00 PM	0	0	0	0	0
06:15 PM	0	0	0	0	0
Grand Total	11	0	9	0	20
Apprch %	100	0	100	0	
Total %	55	0	45	0	

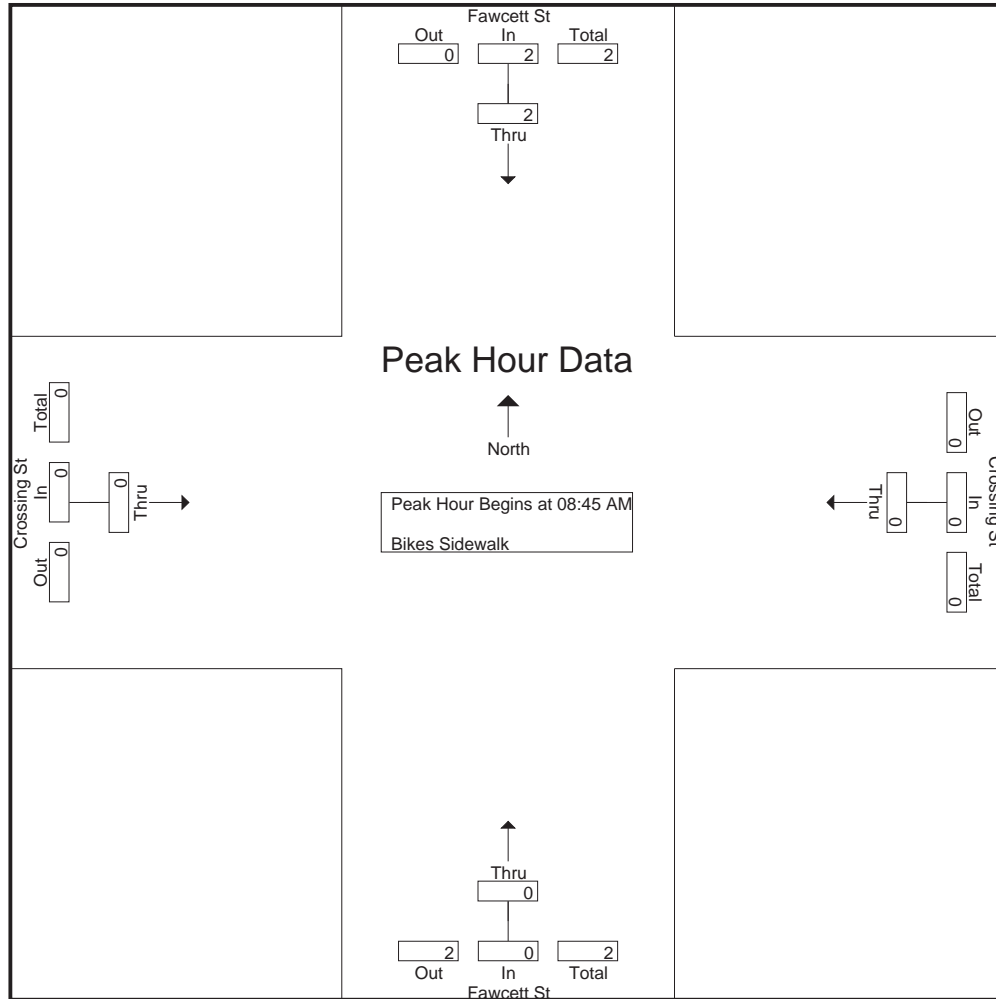
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:45 AM									
08:45 AM	0	0	0	0	0	0	0	0	0
09:00 AM	1	1	0	0	0	0	0	0	1
09:15 AM	0	0	0	0	0	0	0	0	0
09:30 AM	1	1	0	0	0	0	0	0	1
Total Volume	2	2	0	0	0	0	0	0	2
% App. Total	100		0		0		0		
PHF	.500	.500	.000	.000	.000	.000	.000	.000	.500



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

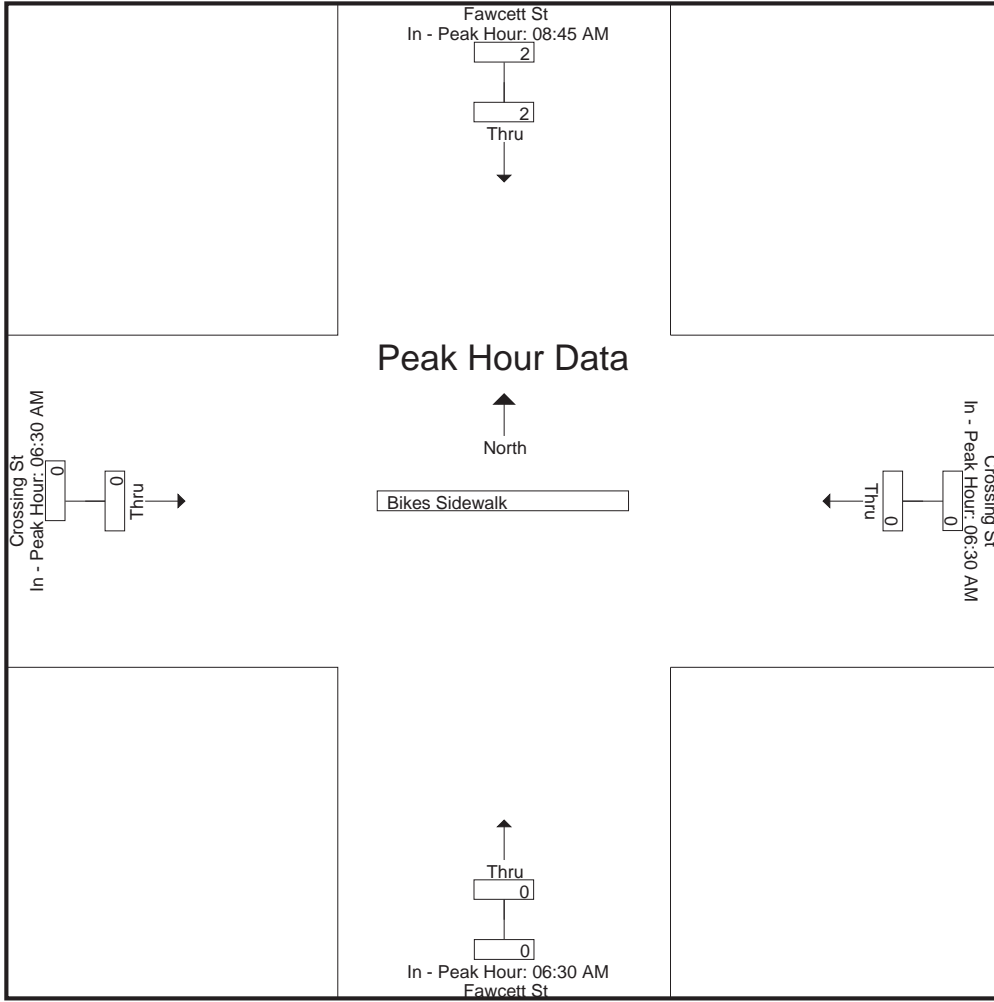
Peak Hour for Each Approach Begins at:

	08:45 AM		06:30 AM		06:30 AM		06:30 AM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0
+45 mins.	1	1	0	0	0	0	0	0
Total Volume	2	2	0	0	0	0	0	0
% App. Total	100		0		0		0	

Accurate Counts

978-664-2565

PHF | .500 | .500 | .000 | .000 | .000 | .000 | .000



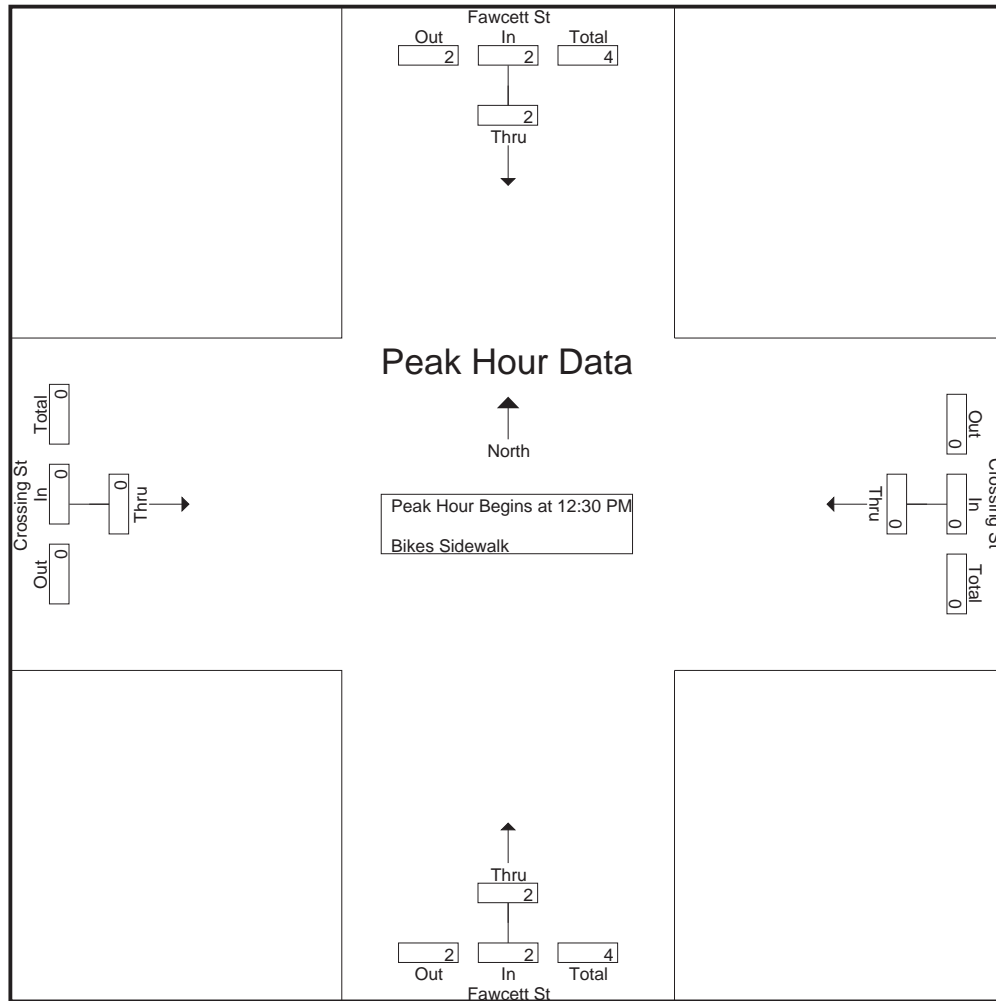
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 12:30 PM									
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	2	2	0	0	2
01:00 PM	1	1	0	0	0	0	0	0	1
01:15 PM	1	1	0	0	0	0	0	0	1
Total Volume	2	2	0	0	2	2	0	0	4
% App. Total	100		0		100		0		
PHF	.500	.500	.000	.000	.250	.250	.000	.000	.500



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

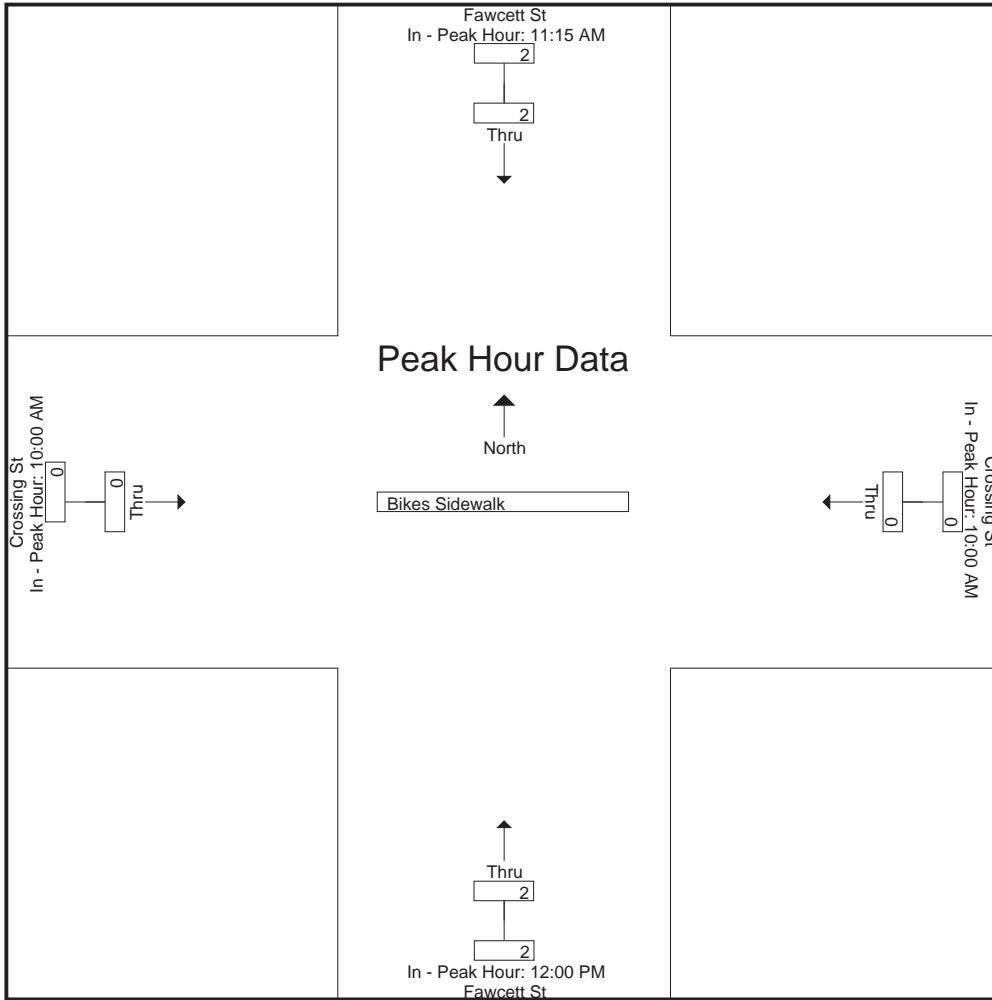
	11:15 AM	10:00 AM	12:00 PM	10:00 AM
+0 mins.	1	0	0	0
+15 mins.	0	0	0	0
+30 mins.	0	0	0	0
+45 mins.	1	0	2	0
Total Volume	2	0	2	0
% App. Total	100	0	100	0
PHF	.500	.000	.250	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 6



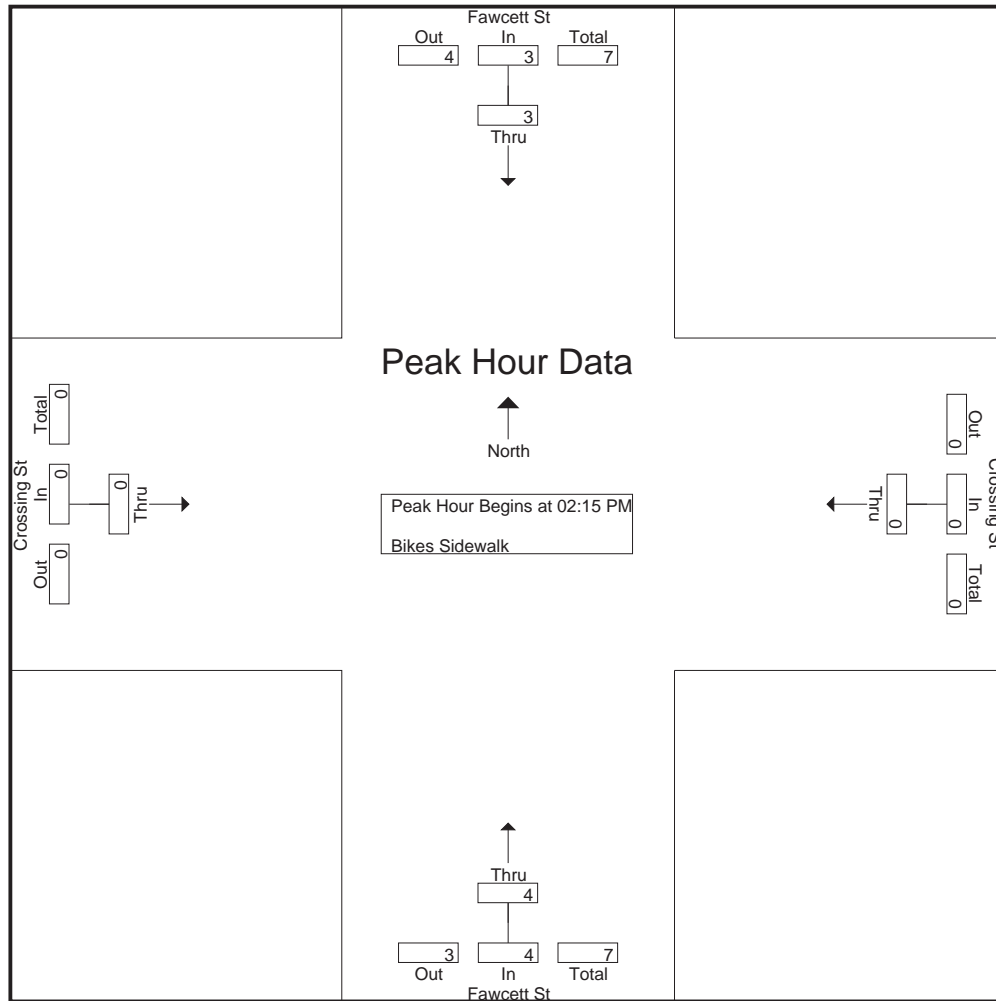
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 7

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 02:15 PM									
02:15 PM	0	0	0	0	0	0	0	0	0
02:30 PM	3	3	0	0	3	3	0	0	6
02:45 PM	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	1	1	0	0	1
Total Volume	3	3	0	0	4	4	0	0	7
% App. Total	100		0		100		0		
PHF	.250	.250	.000	.000	.333	.333	.000	.000	.292



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

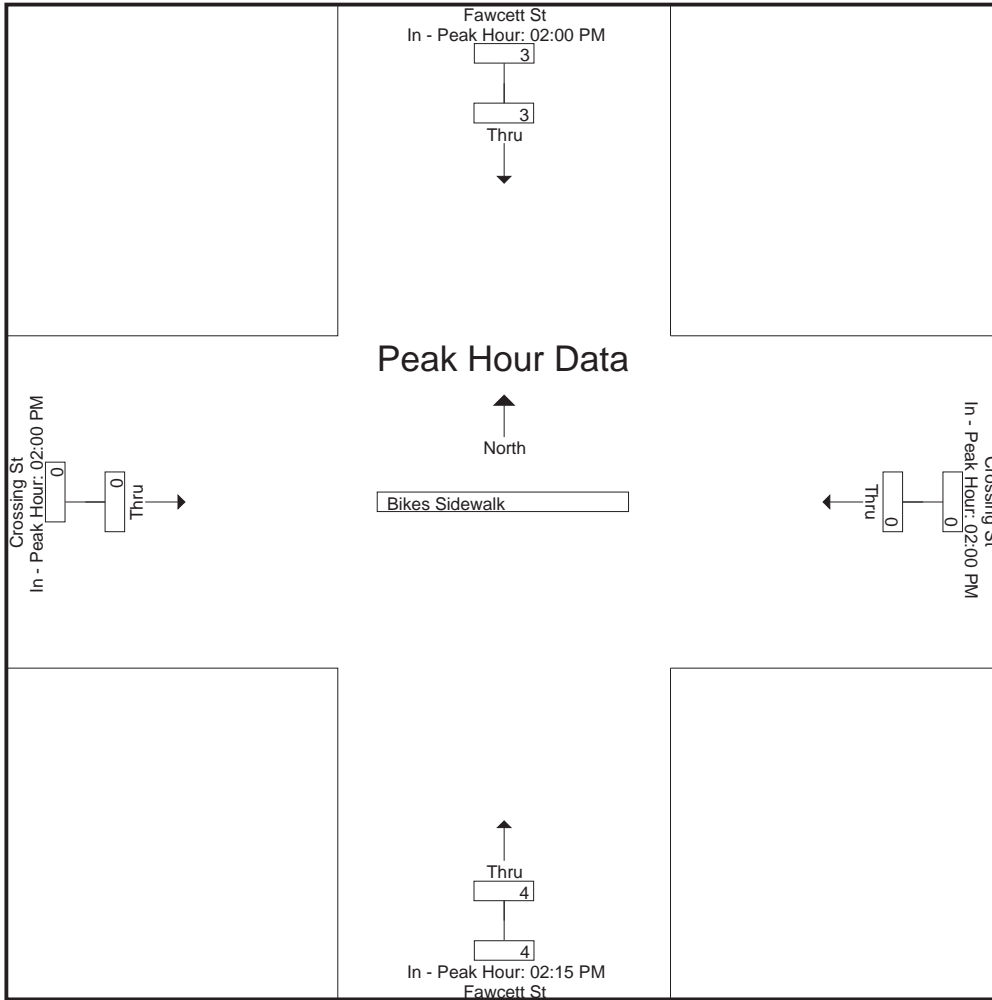
	02:00 PM		02:00 PM		02:15 PM		02:00 PM	
+0 mins.	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	3	3	0	0
+30 mins.	3	3	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	1	0	0
Total Volume	3	3	0	0	4	4	0	0
% App. Total	100		0		100		0	
PHF	.250	.250	.000	.000	.333	.333	.000	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 1

Groups Printed- Peds Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
06:30 AM	7	0	0	0	7
06:45 AM	5	0	2	0	7
Total	12	0	2	0	14
07:00 AM	6	0	0	0	6
07:15 AM	13	0	3	0	16
07:30 AM	8	0	2	0	10
07:45 AM	11	0	5	0	16
Total	38	0	10	0	48
08:00 AM	9	0	5	0	14
08:15 AM	6	0	4	0	10
08:30 AM	4	0	1	0	5
08:45 AM	8	0	1	0	9
Total	27	0	11	0	38
09:00 AM	4	0	4	0	8
09:15 AM	4	0	4	0	8
09:30 AM	3	0	2	0	5
09:45 AM	1	0	2	0	3
Total	12	0	12	0	24
10:00 AM	2	0	4	0	6
10:15 AM	1	0	2	0	3
10:30 AM	4	0	1	0	5
10:45 AM	2	0	2	0	4
Total	9	0	9	0	18
11:00 AM	3	0	0	0	3
11:15 AM	4	0	2	0	6
11:30 AM	3	0	3	0	6
11:45 AM	4	0	3	0	7
Total	14	0	8	0	22
12:00 PM	15	0	5	0	20
12:15 PM	6	0	12	0	18
12:30 PM	5	0	1	0	6
12:45 PM	5	0	5	0	10
Total	31	0	23	0	54

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 2

Groups Printed- Peds Sidewalk

Start Time	Fawcett St From North	Crossing St From East	Fawcett St From South	Crossing St From West	Int. Total
	Thru	Thru	Thru	Thru	
01:00 PM	1	0	6	0	7
01:15 PM	2	0	4	0	6
01:30 PM	3	0	5	0	8
01:45 PM	2	0	4	0	6
Total	8	0	19	0	27
02:00 PM	4	0	1	0	5
02:15 PM	2	0	5	0	7
02:30 PM	5	0	8	0	13
02:45 PM	6	0	4	0	10
Total	17	0	18	0	35
03:00 PM	8	0	6	0	14
03:15 PM	0	0	1	0	1
03:30 PM	3	0	5	0	8
03:45 PM	6	0	2	0	8
Total	17	0	14	0	31
04:00 PM	3	0	4	0	7
04:15 PM	2	0	8	0	10
04:30 PM	6	0	2	0	8
04:45 PM	4	0	9	0	13
Total	15	0	23	0	38
05:00 PM	10	0	3	0	13
05:15 PM	5	0	3	0	8
05:30 PM	3	0	5	0	8
05:45 PM	5	0	4	0	9
Total	23	0	15	0	38
06:00 PM	8	0	11	0	19
06:15 PM	4	0	3	0	7
Grand Total	235	0	178	0	413
Apprch %	100	0	100	0	
Total %	56.9	0	43.1	0	

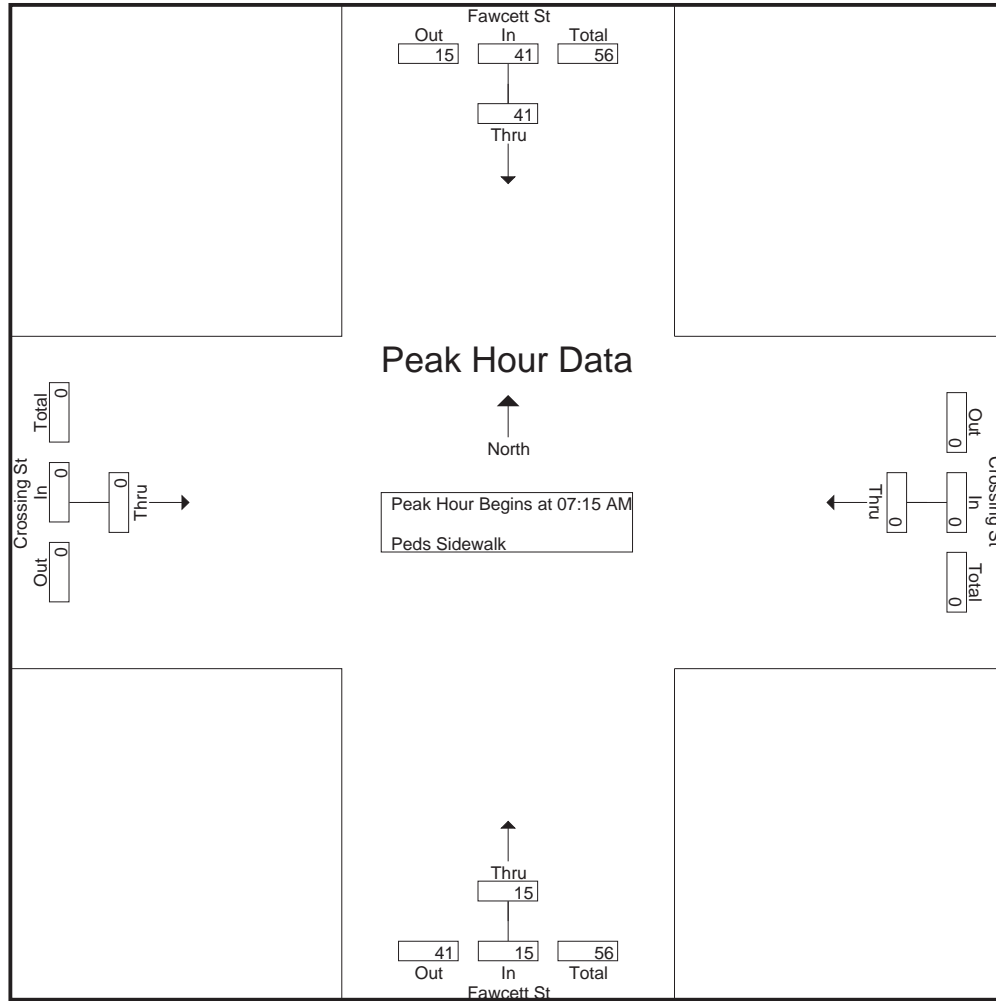
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 3

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 07:15 AM									
07:15 AM	13	13	0	0	3	3	0	0	16
07:30 AM	8	8	0	0	2	2	0	0	10
07:45 AM	11	11	0	0	5	5	0	0	16
08:00 AM	9	9	0	0	5	5	0	0	14
Total Volume	41	41	0	0	15	15	0	0	56
% App. Total	100		0		100		0		
PHF	.788	.788	.000	.000	.750	.750	.000	.000	.875



Peak Hour Analysis From 06:30 AM to 09:45 AM - Peak 1 of 1

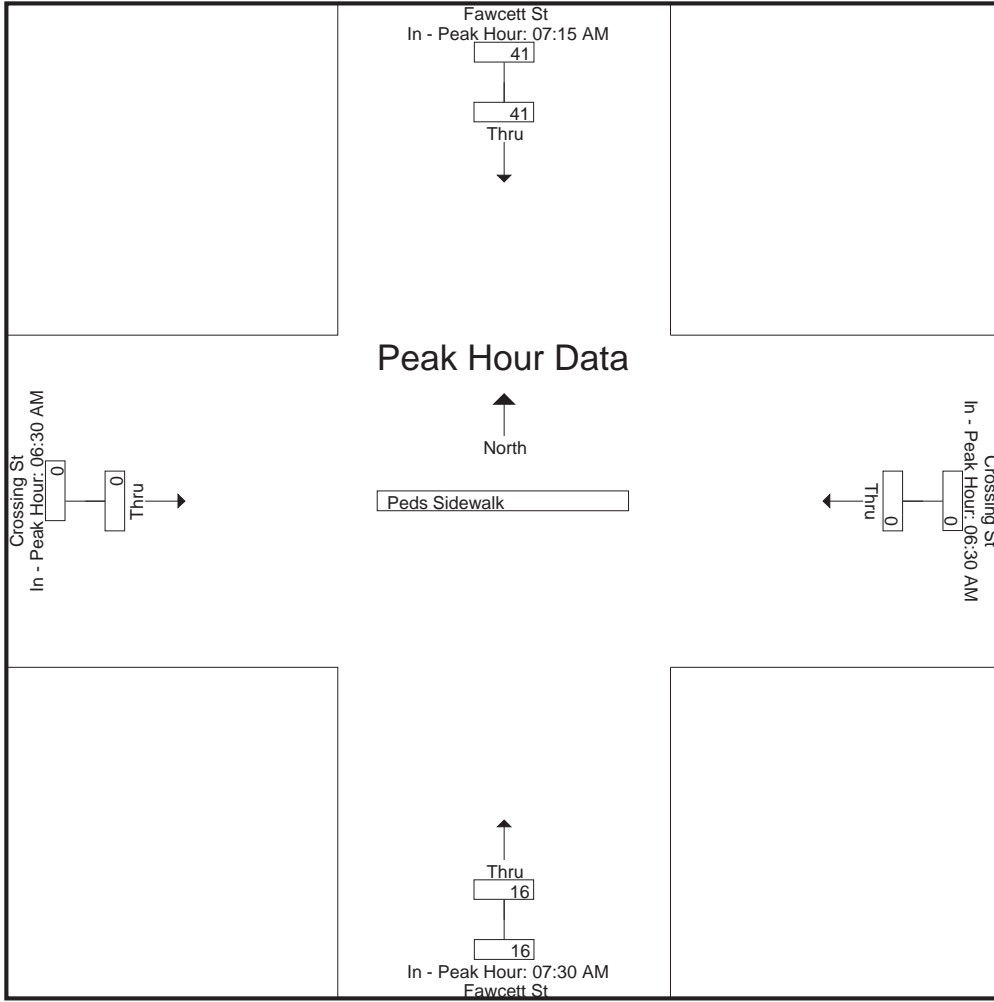
Peak Hour for Each Approach Begins at:

	07:15 AM		06:30 AM		07:30 AM		06:30 AM	
+0 mins.	13	13	0	0	2	2	0	0
+15 mins.	8	8	0	0	5	5	0	0
+30 mins.	11	11	0	0	5	5	0	0
+45 mins.	9	9	0	0	4	4	0	0
Total Volume	41	41	0	0	16	16	0	0
% App. Total	100		0		100		0	

Accurate Counts

978-664-2565

PHF | .788 | .788 | .000 | .000 | .800 | .800 | .000 | .000



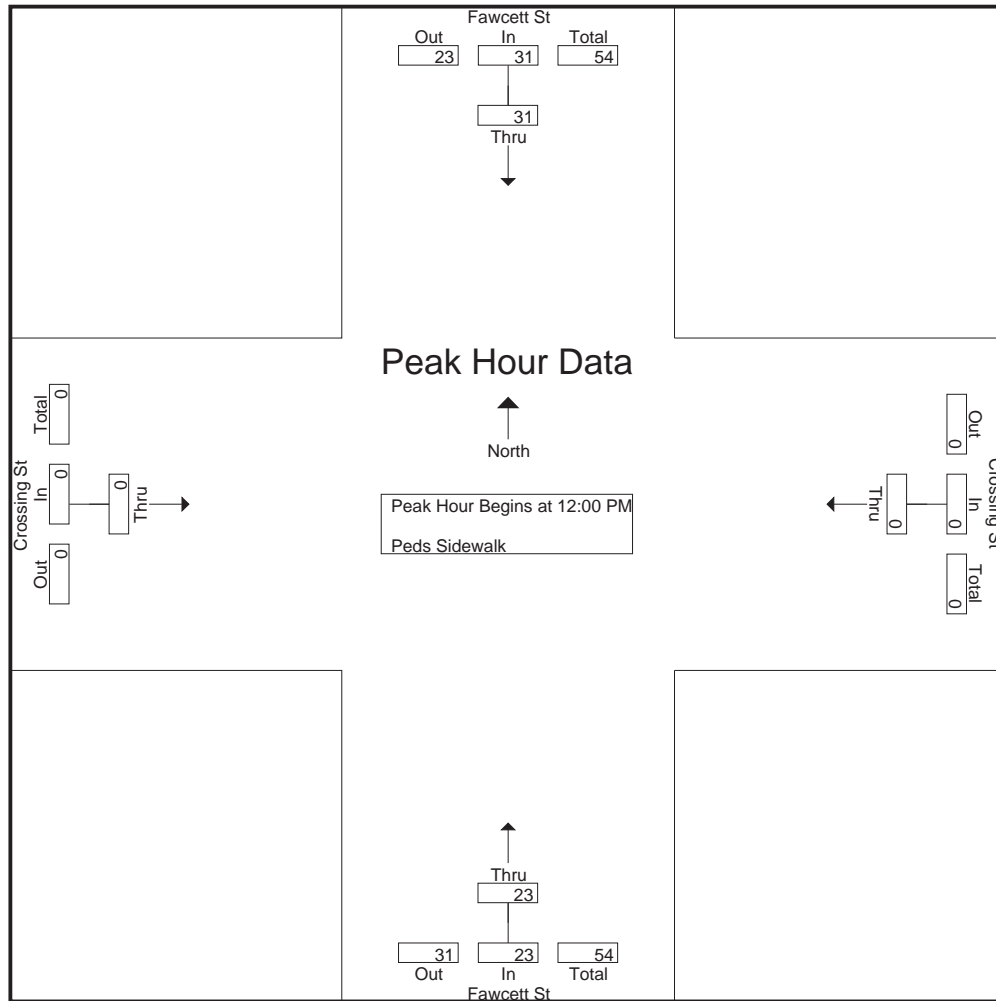
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 5

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 12:00 PM									
12:00 PM	15	15	0	0	5	5	0	0	20
12:15 PM	6	6	0	0	12	12	0	0	18
12:30 PM	5	5	0	0	1	1	0	0	6
12:45 PM	5	5	0	0	5	5	0	0	10
Total Volume	31	31	0	0	23	23	0	0	54
% App. Total	100		0		100		0		
PHF	.517	.517	.000	.000	.479	.479	.000	.000	.675



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

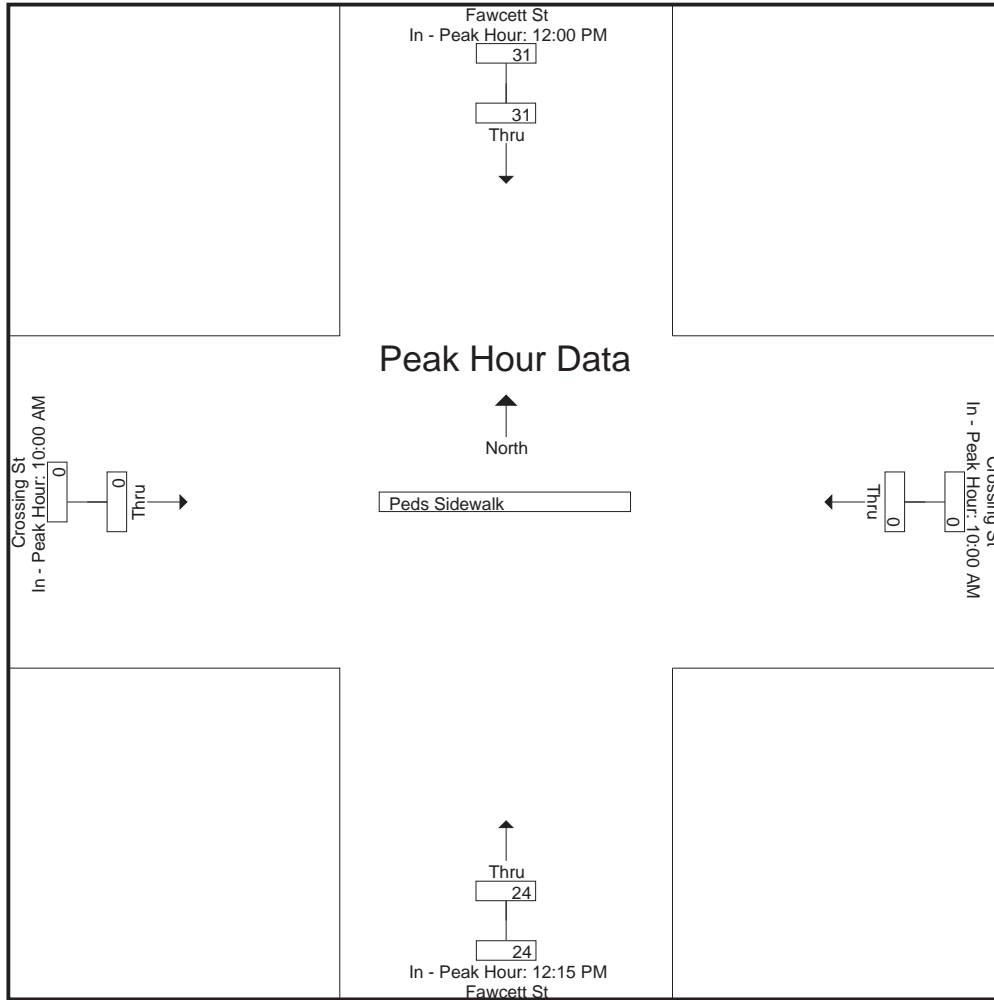
	12:00 PM		10:00 AM		12:15 PM		10:00 AM	
+0 mins.	15	15	0	0	12	12	0	0
+15 mins.	6	6	0	0	1	1	0	0
+30 mins.	5	5	0	0	5	5	0	0
+45 mins.	5	5	0	0	6	6	0	0
Total Volume	31	31	0	0	24	24	0	0
% App. Total	100		0		100		0	
PHF	.517	.517	.000	.000	.500	.500	.000	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 6



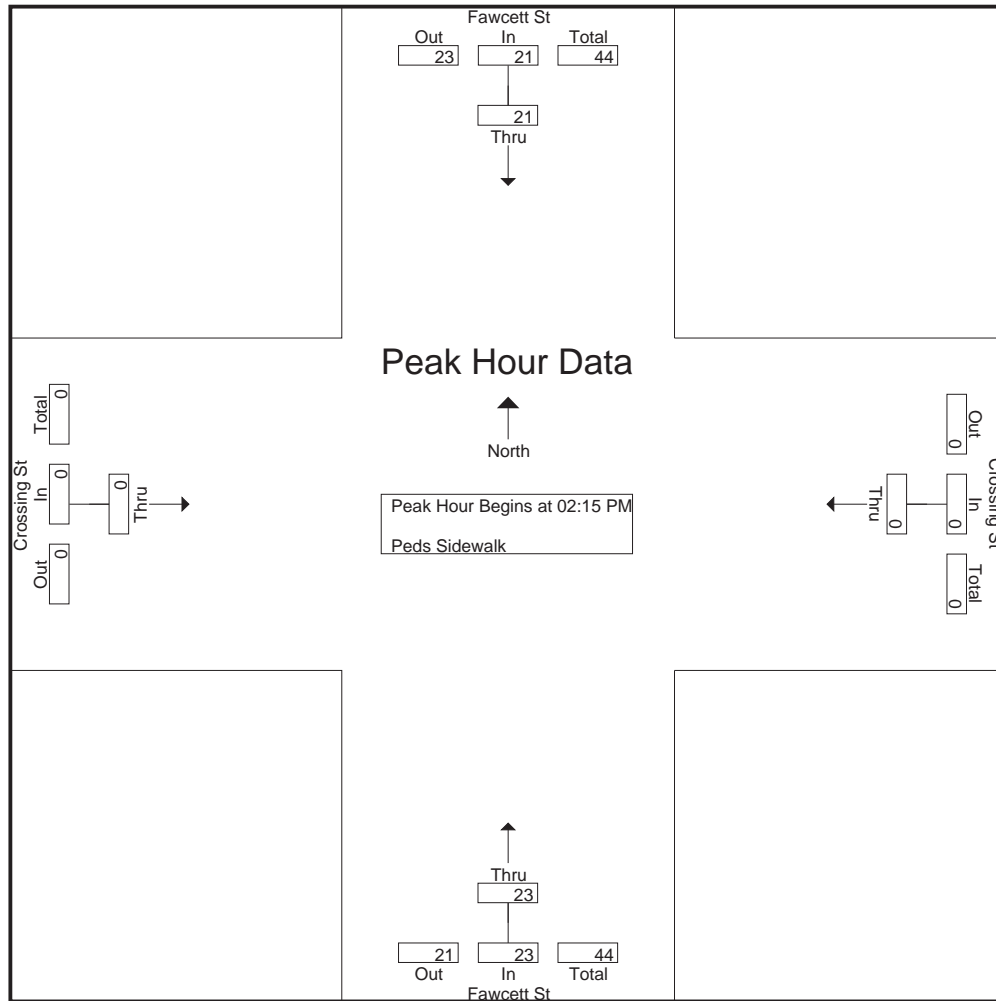
Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
 E/W Street : Fawcett Street
 City/State : Cambridge, MA
 Weather : Clear

File Name : 15009007
 Site Code : 15009007
 Start Date : 9/9/2015
 Page No : 7

Start Time	Fawcett St From North		Crossing St From East		Fawcett St From South		Crossing St From West		Int. Total
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	
Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 02:15 PM									
02:15 PM	2	2	0	0	5	5	0	0	7
02:30 PM	5	5	0	0	8	8	0	0	13
02:45 PM	6	6	0	0	4	4	0	0	10
03:00 PM	8	8	0	0	6	6	0	0	14
Total Volume	21	21	0	0	23	23	0	0	44
% App. Total	100		0		100		0		
PHF	.656	.656	.000	.000	.719	.719	.000	.000	.786



Peak Hour Analysis From 02:00 PM to 06:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

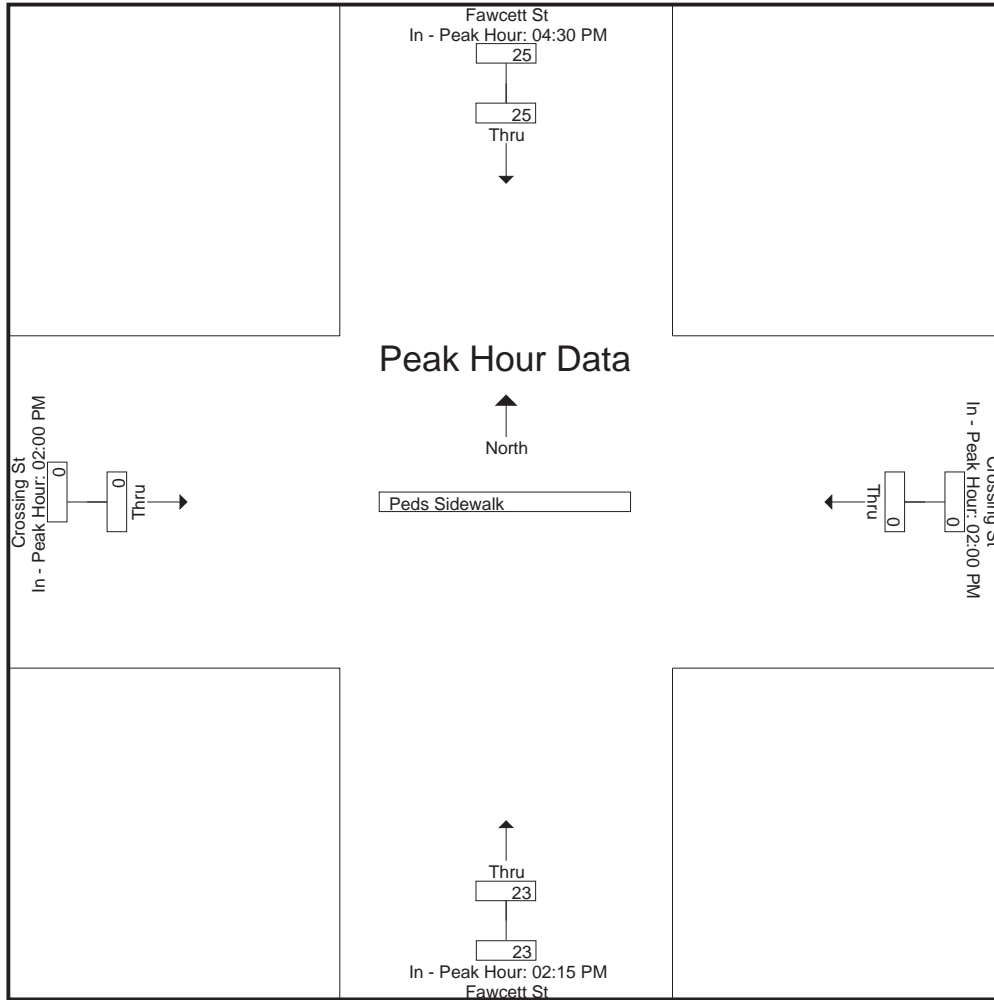
	04:30 PM		02:00 PM		02:15 PM		02:00 PM	
+0 mins.	6	6	0	0	5	5	0	0
+15 mins.	4	4	0	0	8	8	0	0
+30 mins.	10	10	0	0	4	4	0	0
+45 mins.	5	5	0	0	6	6	0	0
Total Volume	25	25	0	0	23	23	0	0
% App. Total	100		0		100		0	
PHF	.625	.625	.000	.000	.719	.719	.000	.000

Accurate Counts

978-664-2565

N/S Street : Ped & Bike Counts
E/W Street : Fawcett Street
City/State : Cambridge, MA
Weather : Clear

File Name : 15009007
Site Code : 15009007
Start Date : 9/9/2015
Page No : 8



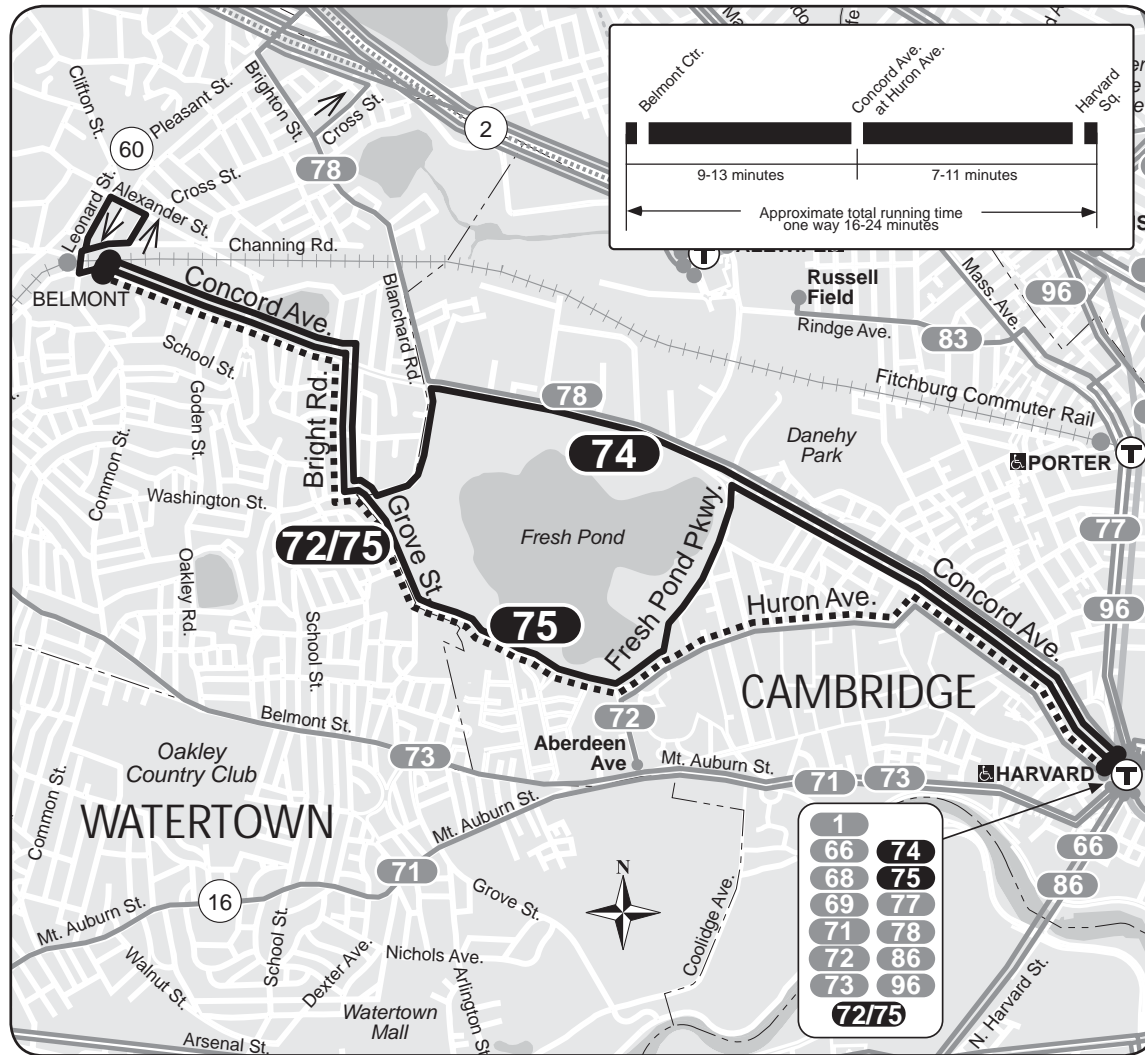


APPENDIX B – CRASH RATE WORKSHEETS



APPENDIX C – PUBLIC TRANSPORTATION INFORMATION

Route 74/75 Belmont Center - Harvard Station



schedule change

74•75


Fall September 5, 2015 - December 25, 2015

Belmont Center- Harvard Station

Serving

- Belmont High School
- 700 Huron Avenue
- Harvard University
- Eliot Street
- Red Line
- Fitchburg Commuter Rail



 Massachusetts Bay Transportation Authority *massDOT*
Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

74 & 75

Weekday

Inbound			Outbound		
Leave Belmont Center	Arrive Blanchard Rd. at Concord Ave.	Arrive Harvard Station	Leave Harvard Station	Arrive Blanchard Rd. at Concord Ave.	Arrive Belmont Center
5:20A	5:24A	5:35A	5:40A	5:50A	5:55A
5:50	5:54	6:06	6:10	6:20	6:25
a 6:15	.....	6:34	6:35	6:48	6:56
6:30	6:36	6:48	a 7:00	.....	7:24
a 7:05	.....	7:24	7:40	7:53	8:01
7:30	7:38	7:54	8:00	8:13	8:21
7:50	7:58	8:16	a 8:25	.....	8:46
a 8:15	.....	8:43	8:45	8:58	9:06
8:45	8:54	9:09	9:15	9:28	9:35
a 9:20	.....	9:42	a 9:50	.....	10:14
9:55	10:01	10:15	10:25	10:37	10:44
a 10:30	.....	10:52	a 11:00	.....	11:24
11:05	11:11	11:25	11:35	11:47	11:54
a 11:40	.....	12:03P			
			a 12:10P	.....	12:34P
12:15P	12:21P	12:35P	12:45	1:00P	1:09
a 12:50	.....	1:13	a 1:20	.....	1:44
1:25	1:31	1:45	1:55	2:10	2:19
a 2:00	.....	2:23	a 2:30	.....	2:54
2:35	2:41	2:55	3:05	3:20	3:29
a 3:10	.....	3:34	a 3:40	.....	4:00
3:40	3:48	4:05	4:10	4:26	4:36
a 4:15	.....	4:42	4:45	4:51	5:02
4:50	4:58	5:15	a 5:00	.....	5:20
a 5:15	.....	5:42	5:45	5:54	5:54
a 5:40	5:46	6:00	a 5:50	.....	6:10
a 6:05	.....	6:32	6:35	6:33	6:42
6:30	6:36	6:50	6:40	6:57	7:06
a 7:10	.....	7:30	a 7:05	.....	7:25
7:40	7:46	8:00	7:40	7:53	8:01
8:25	8:31	8:45	a 8:15	.....	8:35
9:15	9:20	9:30	8:50	9:03	9:11
10:00	10:05	10:15	9:35	9:45	9:52
10:45	10:50	11:00	a 10:20	.....	10:38
11:30	11:34	11:43	11:05	11:15	11:22
12:10A	12:14A	12:23A	11:50	12:00M	12:07A
12:50	12:54	1:03	12:30A	12:40A	12:47
			w 1:10	1:20	1:27

74 & 75

Saturday

Inbound			Outbound		
Leave Belmont Center	Arrive Concord Ave. at Huron Ave.	Arrive Harvard Station	Leave Harvard Station	Arrive Concord Ave. at Huron Ave.	Arrive Belmont Center
5:35A	5:42A	5:49A	5:53A	5:55A	6:08A
6:10	6:17	6:24	6:28	6:30	6:43
a 6:45	6:54	6:59	a 7:02	7:04	7:17
7:20	7:27	7:34	7:37	7:39	7:52
a 7:55	8:04	8:11	a 8:15	8:18	8:32
8:35	8:43	8:50	8:40	8:42	8:55
a 9:10	9:19	9:26	a 9:10	9:13	9:27
9:40	9:50	9:58	9:40	9:43	9:59
a 10:10	10:21	10:28	a 10:10	10:13	10:27
10:40	10:52	10:59	10:40	10:43	10:59
a 11:10	11:21	11:28	a 11:10	11:13	11:28
11:40	11:52	12:00N	11:40	11:44	12:00N
a 12:10P	12:22P	12:29P	a 12:10P	12:13P	12:28P
12:40	12:52	1:00	12:40	12:44	1:00
a 1:10	1:22	1:30	a 1:10	1:13	1:28
1:40	1:51	1:59	1:40	1:43	1:58
a 2:10	2:22	2:28	a 2:10	2:12	2:29
2:40	2:50	2:58	2:40	2:45	2:58
a 3:10	3:22	3:28	a 3:10	3:12	3:29
3:40	3:50	3:58	3:40	3:43	3:58
a 4:10	4:22	4:28	a 4:10	4:12	4:29
4:40	4:49	4:56	4:40	4:43	4:58
a 5:10	5:22	5:28	a 5:10	5:13	5:28
5:40	5:50	5:55	5:40	5:42	5:57
a 6:10	6:22	6:28	a 6:10	6:13	6:28
6:40	6:50	6:55			

72/75

Saturday

Inbound			Outbound		
Leave Belmont Center	Arrive Concord Ave. at Huron Ave.	Arrive Harvard Station	Lv/Arrive Harvard Station Upper Busway	Arrive Concord Ave. at Huron Ave.	Arrive Belmont Center
7:20P	7:30P	7:36P	7:00P	7:03P	7:16P
8:00	8:10	8:15	7:40	7:43	7:56
8:40	8:50	8:55	8:20	8:24	8:38
9:20	9:30	9:35	9:00	9:03	9:17
10:00	10:10	10:17	9:40	9:43	9:57
10:40	10:49	10:55	10:20	10:23	10:37
11:20	11:29	11:35	11:00	11:03	11:15
12:00M	12:08A	12:14A	11:40	11:43	11:55
12:40A	12:48	12:54	12:20A	12:23A	12:36A
1:20	1:29	1:37	1:00	1:03	1:15

72/75

Sunday

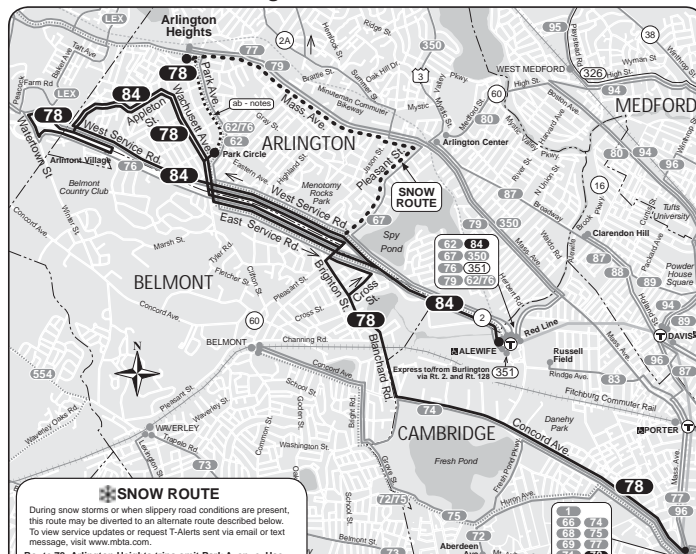
Inbound			Outbound		
Leave Belmont Center	Arrive Concord Ave. at Huron Ave.	Arrive Harvard Station	Leave Harvard Station	Arrive Concord Ave. at Huron Ave.	Arrive Belmont Center
6:40A	6:49A	6:53A	6:20A	6:25A	6:35A
7:20	7:29	7:33	7:00	7:05	7:15
8:00	8:09	8:13	7:40	7:45	7:55
8:40	8:49	8:53	8:20	8:25	8:35
9:20	9:29	9:34	9:00	9:05	9:15
10:00	10:10	10:15	9:40	9:45	9:55
10:40	10:50	10:55	10:20	10:26	10:36
11:20	11:30	11:35	11:00	11:06	11:16
			11:40	11:46	11:56
12:00N	12:10P	12:15P	12:20P	12:26P	12:36P
12:40P	12:50	12:55	1:00	1:06	1:16
1:20	1:30	1:36	1:40	1:47	1:57
2:00	2:10	2:16	2:20	2:27	2:37
2:40	2:50	2:56	3:00	3:07	3:17
3:20	3:30	3:36	3:40	3:47	3:57
4:00	4:10	4:16	4:20	4:27	4:37
4:40	4:50	4:56	5:00	5:07	5:17
5:20	5:30	5:36	5:40	5:47	5:57
6:00	6:10	6:15	6:20	6:26	6:36
6:40	6:50	6:55	7:00	7:06	7:16
7:20	7:30	7:35	7:40	7:46	7:56
8:00	8:10	8:15	8:20	8:26	8:36
8:40	8:50	8:55	9:00	9:05	9:15
9:20	9:29	9:33	9:40	9:45	9:55
10:00	10:09	10:13			

Harvard Station: buses depart from upper busway.
NOTE: Saturday evening & Sunday service to most areas of Route 74 is provided by Routes 72/75 or 78. No Saturday evening or Sunday service on Blanchard Road between Concord Avenue and Grove Street.

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.60	\$1.60	\$2.10	\$2.10
CharlieTicket	\$2.10	\$2.10	\$2.65	\$4.75
Cash-on-Board	\$2.10	\$4.20	\$2.65	\$4.75
Student CharlieCard*	\$0.80	\$0.80	\$1.05	\$1.05
Senior/TAP CharlieCard**	\$0.80	\$0.80	\$1.05	\$1.05

VALID PASSES: LinkPass (\$75/mo.); Monthly Local Bus (\$50/mo.); *StudentPass (\$25.00/Month for 5 Day validity Mon-Fri or 7 Day validity on all days); **Senior/TAP Pass (\$29/mo.), and express bus, commuter rail, and boat passes.
FREE PASSES: Children 11 and under ride free when accompanied by an adult. Blind Access: CharlieCard holders ride free and (using a guide), the guide ride free.
 * Requires Student CharlieCard, available to students through participating middle schools and high schools.

Route 78 Arlmont Village - Harvard Station
Route 84 Arlmont Village - Alewife Station

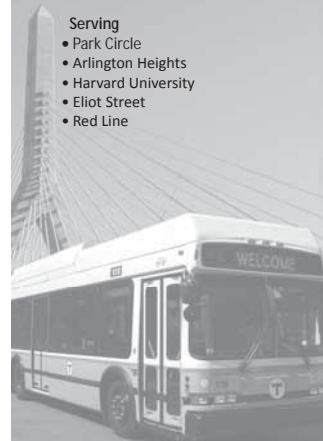


78•84

Fall September 5, 2015 - December 25, 2015

78 Arlmont Village-Harvard Station
84 Arlmont Village-Alewife Station

- Serving
- Park Circle
 - Arlington Heights
 - Harvard University
 - Eliot Street
 - Red Line



78

Weekday

Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Station	Leave Harvard Station Upper Busway	Arrive Pleasant Street	Arrive Arlmont Village
5:42A	5:50A	6:06A	5:55A	6:10A	6:22A
6:07	6:15	6:31	6:20	6:35	6:47
6:32	6:40	7:02	b 6:45	7:01	7:07
6:57	7:05	7:27	b 7:10	7:26	7:33
a 7:15	7:22	7:48	b 7:35	7:54	8:02
a 7:34	7:41	8:06	b 8:00	8:19	8:27
a 7:53	8:00	8:31	8:25	8:45	8:56
a 8:12	8:18	8:49	9:00	9:17	9:28
a 8:37	8:43	9:07	9:35	9:52	10:03
9:02	9:10	9:28	10:10	10:27	10:38
9:35	9:43	10:02	10:45	11:02	11:13
10:10	10:17	10:37	11:20	11:37	11:48
10:45	10:52	11:12	11:55	12:13P	12:26P
11:20	11:27	11:47			
11:55	12:02P	12:22P			
			12:30P	12:49P	1:02P
12:30P	12:37P	12:57P	1:05	1:24	1:37
1:05	1:12	1:32	1:40	1:59	2:12
1:40	1:47	2:07	2:15	2:34	2:47
2:15	2:22	2:42	2:50	3:09	3:22
2:50	2:57	3:18	3:25	3:42	3:55
3:25	3:33	3:54	b 4:00	4:23	4:36
4:05	4:13	4:34	b 4:25	4:48	5:01
a 4:40	4:45	5:04	b 4:50	5:13	5:26
a 5:05	5:10	5:29	b 5:15	5:38	5:51
a 5:30	5:35	5:54	b 5:40	6:03	6:16
a 5:55	6:00	6:19	b 6:05	6:28	6:41
6:11	6:17	6:33	6:30	6:47	7:00
a 6:20	6:25	6:44	6:55	7:10	7:22
6:30	6:36	6:52	7:25	7:39	7:51
a 6:45	6:50	7:09	7:55	8:09	8:21
7:10	7:16	7:33	8:30	8:44	8:56
8:05	8:11	8:26	9:30	9:44	9:56
9:05	9:11	9:26	10:30	10:44	10:56
10:05	10:11	10:26	11:30	11:44	11:56

78

Saturday

Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Station	Leave Harvard Station Upper Busway	Arrive Pleasant Street	Arrive Arlmont Village
7:05A	7:11A	7:28A	6:32A	6:43A	6:56A
8:05	8:11	8:28	7:32	7:43	7:56
9:05	9:11	9:28	8:32	8:43	8:56
10:05	10:11	10:28	9:35	9:46	9:59
11:05	11:11	11:28	10:35	10:46	10:59
			11:35	11:47	12:00N
12:05P	12:12P	12:30P	12:35P	12:47P	1:00P
1:05	1:12	1:30	1:35	1:48	2:01
2:05	2:12	2:30	2:35	2:48	3:01
3:05	3:12	3:30	3:35	3:48	4:02
4:05	4:12	4:30	4:35	4:48	5:02
5:05	5:11	5:29	5:35	5:48	6:02
6:05	6:11	6:29	6:35	6:48	7:02
7:10	7:16	7:34	7:40	7:53	8:07
8:10	8:16	8:34	8:40	8:53	9:07
9:10	9:16	9:34	9:40	9:52	10:06
10:10	10:16	10:31	10:40	10:52	11:05
11:10	11:16	11:30	11:40	11:50	12:03A
12:10A	12:16A	12:30A	12:40A	12:50A	1:03
12:40P	12:51P	1:04P	12:10P	12:25P	12:38P
1:40	1:51	2:04	1:10	1:25	1:38
2:40	2:51	3:04	2:10	2:25	2:38
3:40	3:51	4:04	3:10	3:25	3:38
4:40	4:51	5:04	4:10	4:25	4:38
5:40	5:51	6:04	5:10	5:25	5:38
6:40	6:51	7:04	6:10	6:25	6:38
7:40	7:51	8:04	7:10	7:25	7:38
8:40	8:51	9:03	8:10	8:25	8:38

78

Sunday

Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Station	Lvl/Harvard Station Upper Busway	Arrive Pleasant Street	Arrive Arlmont Village
6:40A	6:49A	7:02A	6:10A	6:24A	6:37A
7:40	7:51	8:04	7:10	7:25	7:38
8:40	8:51	9:04	8:10	8:25	8:38
9:40	9:51	10:04	9:10	9:25	9:38
10:40	10:51	11:04	10:10	10:25	10:38
11:40	11:51	12:04P	11:10	11:25	11:38

84

Weekday

Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Alewife Station	Leave Alewife Station	Arrive Pleasant Street	Arrive Arlmont Village
6:44A	6:53A	6:57A	7:04A	7:08A	7:12A
7:14	7:24	7:31	7:34	7:38	7:42
7:44	7:54	8:01	8:04	8:08	8:12
8:14	8:24	8:31	8:34	8:37	8:41
8:44	8:54	9:00			
			3:58P	4:02P	4:08P
4:10P	4:17P	4:23P	4:33	4:37	4:43
4:46	4:53	4:59	5:07	5:11	5:17
5:20	5:27	5:33	5:24	5:28	5:34
5:37	5:44	5:50	5:41	5:45	5:51
5:54	6:03	6:08	5:58	6:02	6:08
6:47	6:58	7:02	6:15	6:19	6:25
			6:35	6:39	6:45

No Route 84 service on weekends.

NOTE: Buses arrive at Park Circle approximately 4 minutes after leaving Arlmont Village

**Route 78 & 84
Arlmont Village-Harvard Station or
Alewife Station**

All buses are accessible to persons with disabilities

Fare	Bus + Bus		Rapid Transit		Bus + Rapid Transit	
	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit		
CharlieCard	\$1.60	\$1.60	\$2.10	\$2.10		
CharlieTicket	\$2.10	\$2.10	\$2.65	\$4.75		
Cash-on-Board	\$2.10	\$4.20	\$2.65	\$4.75		
Student CharlieCard*	\$0.80	\$0.80	\$1.05	\$1.05		
Senior/TAP CharlieCard**	\$0.80	\$0.80	\$1.05	\$1.05		

WALD PASSES: LincPass (\$75/mo.) Monthly Local Bus (\$50/mo.) *StudentPass (\$25.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days) **Senior/TAP Pass (\$25/mo.) and express bus, commuter rail, and light rail.
FREE FARES: Children 11 and under ride free when accompanied by an adult. Blind Access CharlieCard holder's ride free and TAPing a guide, the guide's ride free.
 * Requires Student CharlieCard, available to students through participating schools.
 ** Requires Senior CharlieCard, available to seniors through participating organizations.

T Fares				
PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.60	\$1.60	\$2.10	\$2.10
CharlieTicket	\$2.10	\$2.10	\$2.65	\$4.75***
Cash-on-Board	\$2.10	\$4.20	\$2.65	\$4.75***
Student*	\$0.80	\$0.80	\$1.05	\$1.05
Senior/TAP**	\$0.80	\$0.80	\$1.05	\$1.05
UNLIMITED TRIP PASSES				
1-Day	\$12.00	\$12.00	\$12.00	\$12.00
7-Day	\$19.00	\$19.00	\$19.00	\$19.00
Monthly	\$50.00	\$50.00	\$75.00	\$75.00
Senior/TAP Monthly \$29.00/month for unlimited travel on Local Bus and Rapid Transit				

VALID PASSES: LinkPass (\$75/mo.); StudentPass* (\$26/Month for 5-Day validity Mon. - Fri. or 7 day validity on all days); Senior/TAP Pass* (\$29/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free; if using a guide, the guide rides free

* Available to students through participating middle schools and high schools.

** Available to Medicare cardholders, seniors 65+, and persons with disabilities.

*** For Silver Line SL4 or SL5 pay \$2.65. Also see **transfers.**

TRANSFERS

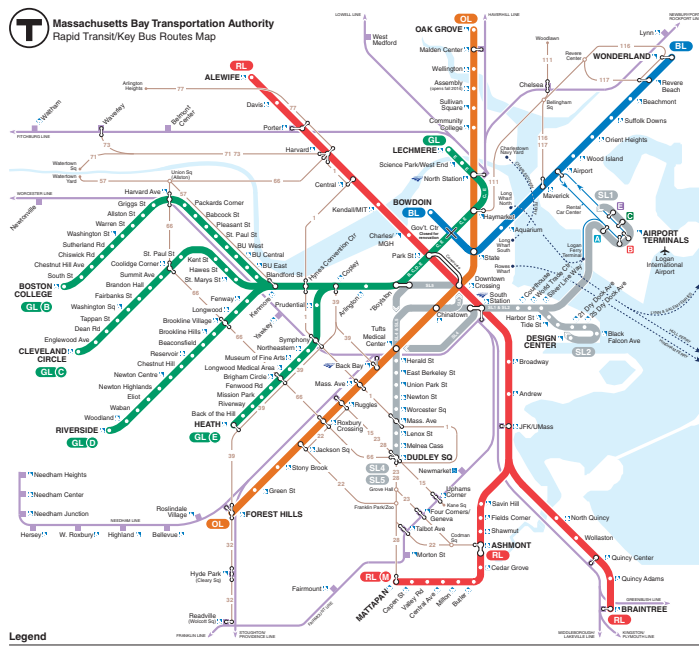
If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines, and in either of the following cases you must ask for a transfer ticket from the operator before paying your fare:

- Boarding Silver Line SL4 or SL5 and transferring to other rapid transit.
- Boarding at a farebox aboard the Green Line or Silver Lines and transferring to Silver Line SL4 or SL5 later in your trip.

Free transfers between the Mattapan High Speed Line and the Red Line at Ashmont.

SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden,



Rapid Transit

Fall September 5, 2015 - December 25, 2015



Blue Line



Green Line



Orange Line



Red Line



Silver Line

Rapid Transit Line	Weekday							Saturday						Sunday							
	First Trip	Rush Hour Service	Midday Service	Evening Service	Late Night Service	Last Trip Monday-Thursday	Last Trip Friday	First Trip	A.M. Peak Service	P.M. Peak Service	Evening Service	Late Night Service	Last Trip	First Trip	A.M. Peak Service	P.M. Peak Service	Evening Service	Late Night Service	Last Trip		
Red Line																					
Alewife	5:24AM	9 min	14 min	12 min	12 min	12:15AM	w 1:38AM	5:24AM	14 min	14 min	14 min	14 min	w 1:38AM	6:08AM	16 min	16 min	16 min	16 min	12:15AM		
Braintree	5:15AM	9 min	14 min	12 min	12 min	12:18AM	1:29AM	5:15AM	14 min	14 min	14 min	14 min	1:29AM	6:00AM	16 min	16 min	16 min	16 min	12:18AM		
Alewife	5:16AM	9 min	14 min	12 min	12 min	w12:22AM	w 1:49AM	5:16AM	14 min	14 min	14 min	14 min	w 1:49AM	6:00AM	16 min	16 min	16 min	16 min	w12:22AM		
Ashmont	5:16AM	9 min	14 min	12 min	12 min	w12:30AM	w 1:46AM	5:16AM	14 min	14 min	14 min	14 min	w 1:46AM	6:00AM	16 min	16 min	16 min	16 min	w12:30AM		
"M" Ashmont	5:17AM	5 min	8 min	12 min	12 min	w1:05AM	w 2:20AM	5:15AM	26 min	12 min	12 min	26 min	w 2:20AM	6:03AM	26 min	12 min	12 min	26 min	w1:05AM		
Mattapan	5:05AM	5 min	8 min	12 min	12 min	12:53AM	2:08AM	5:05AM	26 min	12 min	12 min	26 min	2:08AM	5:51AM	26 min	12 min	12 min	26 min	12:53AM		
Blue Line																					
Wonderland	5:13AM	5 min	9 min	9 min	10 min	12:35AM	1:40AM	5:25AM	9 min	9 min	9 min	13 min	1:40AM	5:58AM	13 min	9 min	9 min	13 min	12:26AM		
Orient Heights	5:13AM	5 min	9 min	9 min	10 min	12:40AM	1:45AM	5:13AM	9 min	9 min	9 min	13 min	1:45AM	6:03AM	13 min	9 min	9 min	13 min	12:31AM		
Bowdoin	5:29AM	5 min	9 min	9 min	10 min	w1:00AM	w 2:05AM	5:29AM	9 min	9 min	9 min	13 min	w 2:05AM	6:21AM	13 min	9 min	9 min	13 min	w1:00AM		
Orange Line																					
Oak Grove	5:16AM	6 min	8 min	10 min	10 min	w12:30AM	w 1:49AM	5:16AM	10 min	8 min	10 min	10 min	w 1:49AM	6:00AM	13 min	10 min	10 min	10 min	w12:30AM		
Forest Hills	5:16AM	6 min	8 min	10 min	10 min	w12:35AM	w 1:45AM	5:16AM	10 min	8 min	10 min	10 min	w 1:45AM	6:00AM	13 min	10 min	10 min	10 min	w12:35AM		
Green Line																					
"B" Boston College	5:01AM	7 min	8 min	8 min	9 min	12:10AM	1:30AM	4:45AM*	7 min	7 min	7 min	11 min	1:30AM	5:20AM*	10 min	9 min	7 min	10 min	12:10AM		
Park Street	5:39AM	7 min	8 min	8 min	9 min	w12:52AM	w 2:10AM	5:33AM	7 min	7 min	7 min	11 min	w 2:10AM	6:06AM	10 min	9 min	7 min	10 min	w12:48AM		
"C" Cleveland Circle	5:01AM*	6 min	8 min	7 min	9 min	12:10AM	1:10AM	4:50AM*	10 min	8 min	8 min	10 min	1:10AM	5:30AM*	10 min	10 min	10 min	10 min	12:10AM		
North Station	5:55AM	6 min	8 min	7 min	9 min	w12:46AM	w 1:46AM	5:30AM	10 min	8 min	8 min	10 min	w 1:46AM	6:06AM	10 min	10 min	10 min	10 min	w12:48AM		
"D" Riverside	4:56AM	7 min	8 min	8 min	10 min	12:05AM	1:05AM	4:55AM	10 min	8 min	10 min	10 min	1:05AM	5:25AM	10 min	10 min	10 min	10 min	12:00AM		
Park Street*	5:36AM	7 min	8 min	8 min	10 min	w12:49AM	w 1:49AM	5:39AM	10 min	8 min	10 min	10 min	w 1:49AM	6:09AM	10 min	10 min	10 min	10 min	w12:45AM		
"E" Lechmere	5:01AM	6 min	7 min	9 min	9 min	12:30AM	1:59AM	5:01AM	10 min	9 min	10 min	10 min	1:59AM	5:35AM	12 min	12 min	12 min	12 min	12:30AM		
Heath Street	5:30AM	6 min	7 min	9 min	9 min	w12:53AM	2:04AM	5:30AM	10 min	9 min	10 min	10 min	2:04AM	6:15AM	12 min	12 min	12 min	12 min	w12:47AM		
Silver Line																					
SL1 Logan Airport	5:38AM	*8 min	8 min	8 min	12 min	12:44AM	1:55AM	5:33AM	12 min	12 min	12 min	12 min	1:55AM	5:50AM	12 min	8 min	8 min	8 min	12:45AM		
South Station	5:40AM	*8 min	8 min	8 min	12 min	12:30AM	1:37AM	5:35AM	12 min	12 min	12 min	12 min	1:37AM	6:12AM	12 min	8 min	8 min	8 min	12:30AM		
SL2 Design Center	6:03AM	5 min	10 min	9 min	15 min	12:30AM	12:30AM	6:10AM	15 min	15 min	15 min	15 min	12:35AM	6:50AM	15 min	15 min	15 min	15 min	12:34AM		
South Station	5:45AM	5 min	10 min	9 min	15 min	w12:50AM	12:50AM	5:50AM	15 min	15 min	15 min	15 min	12:49AM	6:35AM	15 min	15 min	15 min	15 min	w12:48AM		
Additional Waterfront-only service																					
Silver Line Way	5:28AM	5 min	Use SL1/SL2				5:28AM	Use SL1/SL2				6:05AM	Use SL1/SL2								
South Station	5:35AM	5 min				12:53AM	w 2:00AM						w 2:00AM						1:01AM		

Schedule Periods (approximate):
AM Rush Hour: 6:30 AM - 9:00 AM
Midday: 9:00 AM - 3:30 PM
PM Rush Hour: 3:30 PM - 6:30 PM
Evening: 6:30 PM - 8:00 PM
Late Night: 8:00 PM - CLOSE

Government Center:
Due to the closure of Government Center Station, please use Orange Line and Haymarket Station to transfer between Blue and Green Lines. For travel around the Government Center area, walking to/from a nearby station will often be fastest. A shuttle bus (Rt. 608) also operates every 20 minutes from 5:20AM - 1:00AM, starting at Haymarket and serving State, Government Center, and Bowdoin Stations, 7 days a week. Shuttle operates until 2:00AM on Friday/Saturday nights, and begins at 6:00AM on Sundays.

Green Line Notes:
*The first two "C" Line AM inbound trips run through to Lechmere Station on weekdays.
*The first "B" Line and second "C" Line AM inbound trips run through to Lechmere Station on weekends.
*The "D" Line will run to/from North Station off peak, late night and all trips on weekends. Except the last trip on Friday and Saturday will run to/from Park Street Station.
w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.
* Silver Line - For AM rush 8 minutes and



APPENDIX D – TRIP GENERATION



S0801

COMMUTING CHARACTERISTICS BY SEX

2009-2013 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Census Tract 3546, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Workers 16 years and over	2,699	+/-347	1,471	+/-282	1,228
MEANS OF TRANSPORTATION TO WORK					
Car, truck, or van	39.3%	+/-7.2	28.8%	+/-8.6	51.8%
Drove alone	34.9%	+/-7.8	27.5%	+/-8.6	43.8%
Carpooled	4.4%	+/-2.3	1.4%	+/-1.6	8.0%
In 2-person carpool	3.5%	+/-2.9	1.4%	+/-1.6	6.1%
In 3-person carpool	0.0%	+/-1.3	0.0%	+/-2.3	0.0%
In 4-or-more person carpool	0.9%	+/-1.3	0.0%	+/-2.3	1.9%
Workers per car, truck, or van	1.07	+/-0.04	1.02	+/-0.03	1.10
Public transportation (excluding taxicab)	30.8%	+/-8.8	37.8%	+/-11.6	22.3%
Walked	10.5%	+/-4.8	9.7%	+/-6.5	11.4%
Bicycle	5.5%	+/-3.2	10.1%	+/-5.9	0.0%
Taxicab, motorcycle, or other means	0.5%	+/-0.9	1.0%	+/-1.6	0.0%
Worked at home	13.5%	+/-7.0	12.6%	+/-8.8	14.5%
PLACE OF WORK					
Worked in state of residence	100.0%	+/-1.3	100.0%	+/-2.3	100.0%
Worked in county of residence	70.1%	+/-9.2	70.2%	+/-10.7	70.0%
Worked outside county of residence	29.9%	+/-9.2	29.8%	+/-10.7	30.0%
Worked outside state of residence	0.0%	+/-1.3	0.0%	+/-2.3	0.0%
Living in a place					
Living in a place	100.0%	+/-1.3	100.0%	+/-2.3	100.0%
Worked in place of residence	50.9%	+/-8.7	53.8%	+/-10.5	47.6%
Worked outside place of residence	49.1%	+/-8.7	46.2%	+/-10.5	52.4%
Not living in a place	0.0%	+/-1.3	0.0%	+/-2.3	0.0%
Living in 12 selected states					
Living in 12 selected states	100.0%	+/-1.3	100.0%	+/-2.3	100.0%
Worked in minor civil division of residence	50.9%	+/-8.7	53.8%	+/-10.5	47.6%
Worked outside minor civil division of residence	49.1%	+/-8.7	46.2%	+/-10.5	52.4%
Not living in 12 selected states	0.0%	+/-1.3	0.0%	+/-2.3	0.0%
Workers 16 years and over who did not work at home	2,335	+/-386	1,285	+/-298	1,050
TIME LEAVING HOME TO GO TO WORK					
12:00 a.m. to 4:59 a.m.	0.9%	+/-1.2	1.1%	+/-1.8	0.6%
5:00 a.m. to 5:29 a.m.	0.7%	+/-1.2	1.3%	+/-2.1	0.0%

Subject	Census Tract 3546, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
5:30 a.m. to 5:59 a.m.	1.7%	+/-2.7	1.5%	+/-2.3	2.0%
6:00 a.m. to 6:29 a.m.	7.0%	+/-4.5	9.8%	+/-7.1	3.6%
6:30 a.m. to 6:59 a.m.	2.9%	+/-2.4	4.1%	+/-3.9	1.4%
7:00 a.m. to 7:29 a.m.	9.9%	+/-5.4	9.0%	+/-5.6	10.9%
7:30 a.m. to 7:59 a.m.	12.1%	+/-6.3	17.5%	+/-11.5	5.5%
8:00 a.m. to 8:29 a.m.	15.2%	+/-5.6	18.5%	+/-8.9	11.1%
8:30 a.m. to 8:59 a.m.	16.8%	+/-7.0	8.0%	+/-4.9	27.5%
9:00 a.m. to 11:59 p.m.	32.8%	+/-9.5	29.1%	+/-10.3	37.3%
TRAVEL TIME TO WORK					
Less than 10 minutes	8.0%	+/-5.5	7.6%	+/-5.8	8.4%
10 to 14 minutes	11.4%	+/-5.9	12.1%	+/-6.4	10.5%
15 to 19 minutes	11.9%	+/-5.7	5.5%	+/-5.2	19.7%
20 to 24 minutes	19.3%	+/-5.9	17.4%	+/-7.7	21.6%
25 to 29 minutes	12.3%	+/-6.6	6.8%	+/-4.7	19.0%
30 to 34 minutes	24.1%	+/-8.4	34.9%	+/-11.9	10.8%
35 to 44 minutes	6.0%	+/-3.6	6.8%	+/-5.3	5.0%
45 to 59 minutes	5.0%	+/-3.1	6.2%	+/-3.7	3.5%
60 or more minutes	2.1%	+/-1.9	2.6%	+/-3.0	1.4%
Mean travel time to work (minutes)	23.6	+/-1.6	25.4	+/-2.3	21.5
VEHICLES AVAILABLE					
Workers 16 years and over in households	2,689	+/-345	1,464	+/-282	1,225
No vehicle available	14.7%	+/-7.2	11.8%	+/-7.2	18.1%
1 vehicle available	54.6%	+/-10.4	63.0%	+/-12.6	44.4%
2 vehicles available	20.8%	+/-7.6	13.5%	+/-6.1	29.4%
3 or more vehicles available	10.0%	+/-8.0	11.6%	+/-9.5	8.1%
PERCENT IMPUTED					
Means of transportation to work	5.4%	(X)	(X)	(X)	(X)
Private vehicle occupancy	10.1%	(X)	(X)	(X)	(X)
Place of work	5.4%	(X)	(X)	(X)	(X)
Time leaving home to go to work	9.3%	(X)	(X)	(X)	(X)
Travel time to work	7.6%	(X)	(X)	(X)	(X)
Vehicles available	0.6%	(X)	(X)	(X)	(X)

Subject	Census Tract 3546, Middlesex County, Massachusetts
	Female
	Margin of Error
Workers 16 years and over	+/-222
MEANS OF TRANSPORTATION TO WORK	
Car, truck, or van	+/-10.4
Drove alone	+/-11.2
Carpooled	+/-4.5
In 2-person carpool	+/-5.9
In 3-person carpool	+/-2.8
In 4-or-more person carpool	+/-2.9
Workers per car, truck, or van	+/-0.05
Public transportation (excluding taxicab)	+/-12.1
Walked	+/-6.5
Bicycle	+/-2.8
Taxicab, motorcycle, or other means	+/-2.8
Worked at home	+/-9.2
PLACE OF WORK	
Worked in state of residence	+/-2.8
Worked in county of residence	+/-11.3
Worked outside county of residence	+/-11.3
Worked outside state of residence	+/-2.8
Living in a place	
Living in a place	+/-2.8
Worked in place of residence	+/-12.9
Worked outside place of residence	+/-12.9
Not living in a place	+/-2.8
Living in 12 selected states	
Living in 12 selected states	+/-2.8
Worked in minor civil division of residence	+/-12.9
Worked outside minor civil division of residence	+/-12.9
Not living in 12 selected states	+/-2.8
Workers 16 years and over who did not work at home	+/-243
TIME LEAVING HOME TO GO TO WORK	
12:00 a.m. to 4:59 a.m.	+/-1.2
5:00 a.m. to 5:29 a.m.	+/-3.3
5:30 a.m. to 5:59 a.m.	+/-3.2
6:00 a.m. to 6:29 a.m.	+/-4.1
6:30 a.m. to 6:59 a.m.	+/-2.3
7:00 a.m. to 7:29 a.m.	+/-7.4
7:30 a.m. to 7:59 a.m.	+/-4.3
8:00 a.m. to 8:29 a.m.	+/-6.1
8:30 a.m. to 8:59 a.m.	+/-12.7
9:00 a.m. to 11:59 p.m.	+/-13.6
TRAVEL TIME TO WORK	
Less than 10 minutes	+/-8.9
10 to 14 minutes	+/-10.1
15 to 19 minutes	+/-9.3
20 to 24 minutes	+/-9.2
25 to 29 minutes	+/-13.0
30 to 34 minutes	+/-5.7
35 to 44 minutes	+/-4.5
45 to 59 minutes	+/-5.0
60 or more minutes	+/-2.3
Mean travel time to work (minutes)	+/-2.5

Subject	Census Tract 3546, Middlesex County, Massachusetts
	Female
	Margin of Error
VEHICLES AVAILABLE	
Workers 16 years and over in households	+/-222
No vehicle available	+/-11.4
1 vehicle available	+/-11.9
2 vehicles available	+/-11.6
3 or more vehicles available	+/-7.6
PERCENT IMPUTED	
Means of transportation to work	(X)
Private vehicle occupancy	(X)
Place of work	(X)
Time leaving home to go to work	(X)
Travel time to work	(X)
Vehicles available	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2009-2013 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Design Consultants, Inc.

15-Jul-15

87-95 Fawcett St, Cambridge

Trip Generation Calculations

Based on ITE's Trip Generation Manual, 9th Edition (2012)

and US Census Journey to Work data

Census Tract 3546 Mode Split	
Drive Alone + motorcycle =	35.4%
2 person carpool	3.5%
3 person carpool	0.0%
4+ person carpool	0.9%
Public Transit -	30.8%
Bike =	5.5%
Walk =	10.5%
Other Modes =	0.5%
Work at home =	13.5%

Average Vehicle Occupancy (AVO)		
Weighted Average Calculations		
	weighting	vehicle occupancy
Drive Alone + motorcycle =	0.354	1
Carpool (2) =	0.035	2
Carpool (4+) =	0.009	4
AVO =	1.2	

Design Consultants, Inc.

ITE Trip Rates Verification

September 8, 2015

	# of Units	96% occupied units		# of Units	96% occupied units
90 Fawcett Street Garage	168	161	80 Fawcett Street Garage	260	250
	AM	PM		AM	PM
Observed total trips	25	27	Observed total trips	44	34
Exit	25	7	Exit	41	8
Enter	0	20	Enter	3	26
Exit percentage	100%	26%	Exit percentage	93%	24%
Enter percentage	0%	74%	Enter percentage	7%	76%
actual rate	0.16	0.17	actual trip rate	0.18	0.14

80/90 Fawcett St

Total Trips	69	61
Exit	66	15
Enter	3	46
Exit Percentage	96%	25%
Enter Percentage	4%	75%

observed trip rates	
AM	PM
0.17	0.15

ITE trip rates	
AM	PM
0.51	0.62
adjusted w/mode share	
0.18	0.22

Design Consultants, Inc.
 July 24, 2015
 87-95 Fawcett St, Cambridge
 Journey-to-Work Calculations

Cambridge Residents Commuting To	Total Number of Commuters	Total Share of Commuters	Expected Travel Patterns		
			Non-Vehicle Trip Share	Vehicle Trip Share	
				Smith PI	Concord Ave
Cambridge city, Massachusetts	23,395	48.50%	33.60%		14.90%
Boston city, Massachusetts	16,100	33.37%	23.90%		9.47%
Waltham city, Massachusetts	1,130	2.34%	0.40%	0.97%	0.97%
Somerville city, Massachusetts	890	1.84%	1.30%		0.54%
Brookline CDP, Massachusetts	620	1.29%	0.70%		0.59%
Arlington CDP, Massachusetts	600	1.24%	0.70%	0.10%	0.45%
Watertown city, Massachusetts	595	1.23%		0.74%	0.49%
Newton city, Massachusetts	515	1.07%		0.64%	0.43%
Malden city, Massachusetts	395	0.82%			0.82%
Burlington CDP, Massachusetts	325	0.67%			0.67%
Lexington CDP, Massachusetts	310	0.64%			0.64%
Belmont CDP, Massachusetts	305	0.63%	0.10%	0.33%	0.20%
Wellesley CDP, Massachusetts	275	0.57%			0.57%
Woburn city, Massachusetts	265	0.55%			0.55%
Framingham CDP, Massachusetts	240	0.50%		0.00%	0.50%
Quincy city, Massachusetts	235	0.49%	0.10%		0.39%
Winchester CDP, Massachusetts	210	0.44%			0.44%
Braintree CDP, Massachusetts	200	0.41%			0.41%
Medford city, Massachusetts	180	0.37%			0.37%
Chelsea city, Massachusetts	145	0.30%			0.30%
Needham CDP, Massachusetts	140	0.29%		0.15%	0.14%
Wilmington CDP, Massachusetts	120	0.25%			0.25%
Revere city, Massachusetts	105	0.22%			0.22%
Lawrence city, Massachusetts	100	0.21%			0.21%
Lowell city, Massachusetts	90	0.19%			0.19%
Dedham CDP, Massachusetts	75	0.16%			0.16%
Stoneham CDP, Massachusetts	75	0.16%			0.16%
Danvers CDP, Massachusetts	70	0.15%			0.15%
Norwood CDP, Massachusetts	60	0.12%		0.06%	0.06%
Worcester city, Massachusetts	60	0.12%			0.12%
Everett city, Massachusetts	55	0.11%			0.11%
Salem city, Massachusetts	55	0.11%			0.11%
Weymouth CDP, Massachusetts	50	0.10%			0.10%
Lynn city, Massachusetts	45	0.09%			0.09%
Wakefield CDP, Massachusetts	30	0.06%			0.06%
Haverhill city, Massachusetts	25	0.05%			0.05%
Brockton city, Massachusetts	20	0.04%			0.04%
Marlborough city, Massachusetts	20	0.04%		0.02%	0.02%
Milford CDP, Massachusetts	20	0.04%		0.02%	0.02%
Randolph CDP, Massachusetts	20	0.04%			0.04%
Beverly city, Massachusetts	15	0.03%			0.03%
Fitchburg city, Massachusetts	15	0.03%			0.03%
Gardner city, Massachusetts	15	0.03%			0.03%
Melrose city, Massachusetts	15	0.03%			0.03%
Saugus CDP, Massachusetts	15	0.03%			0.03%
	48,240	100%			
% of total commuters using each roadway				3%	36%
% of commuters who are expected to drive, split between Smith PI and Concord Ave				7.73%	92.27%












APPENDIX E – INTERSECTION CAPACITY ANALYSIS

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/17/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	62	2	92	5	0	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993		0.990			
Flt Protected	0.955					
Satd. Flow (prot)	1622	0	1669	0	0	1503
Flt Permitted	0.955					
Satd. Flow (perm)	1622	0	1669	0	0	1503
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Heavy Vehicles (%)	0%	0%	4%	20%	0%	18%
Parking (#/hr)				20		
Adj. Flow (vph)	76	4	100	8	0	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	108	0	0	76
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/17/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Volume (veh/h)	62	2	92	5	0	44
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Hourly flow rate (vph)	76	4	100	8	0	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	180	104			108	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	180	104			108	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	100			100	
cM capacity (veh/h)	814	956			1495	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	80	108	76			
Volume Left	76	0	0			
Volume Right	4	8	0			
cSH	820	1700	1495			
Volume to Capacity	0.10	0.06	0.00			
Queue Length 95th (ft)	8	0	0			
Control Delay (s)	9.9	0.0	0.0			
Lane LOS						
Approach Delay (s)	9.9	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.0			
Intersection Capacity Utilization			15.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/17/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↔		↕↕	
Volume (vph)	32	809	839	140	64	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.981		0.942	
Flt Protected		0.998			0.972	
Satd. Flow (prot)	0	3238	1629	0	1553	0
Flt Permitted		0.998			0.972	
Satd. Flow (perm)	0	3238	1629	0	1553	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Heavy Vehicles (%)	0%	4%	2%	9%	8%	0%
Adj. Flow (vph)	44	1108	953	159	80	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1152	1112	0	140	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 64.8% ICU Level of Service C
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

















9/17/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Volume (veh/h)	32	809	839	140	64	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Hourly flow rate (vph)	44	1108	953	159	80	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.94	
vC, conflicting volume	1112				1675	1033
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1112				1583	1033
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	93				2	74
cM capacity (veh/h)	635				81	233
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	413	739	1112	140		
Volume Left	44	0	0	80		
Volume Right	0	0	159	60		
cSH	635	1700	1700	113		
Volume to Capacity	0.07	0.43	0.65	1.24		
Queue Length 95th (ft)	6	0	0	228		
Control Delay (s)	2.0	0.0	0.0	234.0		
Lane LOS	A			F		
Approach Delay (s)	0.7		0.0	234.0		
Approach LOS				F		
Intersection Summary						
Average Delay			13.9			
Intersection Capacity Utilization			64.8%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/17/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	790	11	18	621	98	5	1	9	40	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.981			0.932			0.962	
Flt Protected		0.998			0.999			0.984			0.965	
Satd. Flow (prot)	0	3260	0	0	1682	0	0	1568	0	0	1755	0
Flt Permitted		0.912			0.960			0.877			0.771	
Satd. Flow (perm)	0	2979	0	0	1617	0	0	1398	0	0	1402	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11			12			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%
Adj. Flow (vph)	36	963	20	24	675	117	8	4	12	52	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1019	0	0	816	0	0	24	0	0	72	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/17/2015

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/17/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		46.2			46.2			7.4			7.4	
Actuated g/C Ratio		0.82			0.82			0.13			0.13	
v/c Ratio		0.42			0.62			0.12			0.31	
Control Delay		3.6			7.0			17.7			13.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.6			7.0			17.7			13.2	
LOS		A			A			B			B	
Approach Delay		3.6			7.0			17.7			13.2	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	56.6
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	5.6
Intersection Capacity Utilization	67.7%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	C

Splits and Phases: 3: Driveway/Moulton Street & Concord Avenue



Lanes, Volumes, Timings
3: Driveway/Moulton Street & Concord Avenue

9/17/2015

Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Driveway/Moulton Street & Concord Avenue





















9/17/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1019	816	24	72
v/c Ratio	0.42	0.62	0.12	0.31
Control Delay	3.6	7.0	17.7	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.6	7.0	17.7	13.2
Queue Length 50th (ft)	62	124	4	4
Queue Length 95th (ft)	90	273	3	0
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	2434	1323	503	535
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.62	0.05	0.13
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

3: Driveway/Moulton Street & Concord Avenue

9/17/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	790	11	18	621	98	5	1	9	40	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			0.98			0.93			0.96	
Flt Protected		1.00			1.00			0.98			0.97	
Satd. Flow (prot)		3261			1681			1568			1756	
Flt Permitted		0.91			0.96			0.88			0.77	
Satd. Flow (perm)		2978			1616			1399			1403	
Peak-hour factor, PHF	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45
Adj. Flow (vph)	36	963	20	24	675	117	8	4	12	52	0	20
RTOR Reduction (vph)	0	1	0	0	3	0	0	11	0	0	54	0
Lane Group Flow (vph)	0	1018	0	0	813	0	0	13	0	0	18	0
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		44.2			44.2			4.5			4.5	
Effective Green, g (s)		44.2			44.2			4.5			4.5	
Actuated g/C Ratio		0.75			0.75			0.08			0.08	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		1.0			1.0			3.0			3.0	
Lane Grp Cap (vph)		2242			1216			107			107	
v/s Ratio Prot												
v/s Ratio Perm		0.34			c0.50			0.01			c0.01	
v/c Ratio		0.45			0.67			0.12			0.16	
Uniform Delay, d1		2.7			3.6			25.3			25.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			2.9			0.5			0.7	
Delay (s)		3.4			6.5			25.8			26.1	
Level of Service		A			A			C			C	
Approach Delay (s)		3.4			6.5			25.8			26.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			5.8									A
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			58.7						13.0			
Intersection Capacity Utilization			67.7%									C
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/17/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	15	1	74	43	2	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985		0.944			
Flt Protected	0.957					0.994
Satd. Flow (prot)	1612	0	1636	0	0	1732
Flt Permitted	0.957					0.994
Satd. Flow (perm)	1612	0	1636	0	0	1732
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Parking (#/hr)				20		
Adj. Flow (vph)	32	4	96	68	8	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	164	0	0	68
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/17/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			Y
Volume (veh/h)	15	1	74	43	2	44
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Hourly flow rate (vph)	32	4	96	68	8	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	207	130			164	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	130			164	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			99	
cM capacity (veh/h)	782	925			1426	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	36	164	68			
Volume Left	32	0	8			
Volume Right	4	68	0			
cSH	796	1700	1426			
Volume to Capacity	0.05	0.10	0.01			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.7	0.0	0.9			
Lane LOS	A		A			
Approach Delay (s)	9.7	0.0	0.9			
Approach LOS	A					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			16.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/17/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔		↕↔	
Volume (vph)	25	775	723	104	103	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.981		0.956	
Flt Protected		0.997			0.967	
Satd. Flow (prot)	0	3328	1663	0	1613	0
Flt Permitted		0.997			0.967	
Satd. Flow (perm)	0	3328	1663	0	1613	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Heavy Vehicles (%)	0%	1%	1%	0%	1%	3%
Adj. Flow (vph)	48	824	803	135	132	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	872	938	0	196	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 59.1% ICU Level of Service B
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

9/17/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Volume (veh/h)	25	775	723	104	103	39
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Hourly flow rate (vph)	48	824	803	135	132	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.95	
vC, conflicting volume	938				1379	871
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	938				1286	871
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				5	78
cM capacity (veh/h)	738				139	292

















Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	323	550	938	196
Volume Left	48	0	0	132
Volume Right	0	0	135	64
cSH	738	1700	1700	168
Volume to Capacity	0.07	0.32	0.55	1.17
Queue Length 95th (ft)	5	0	0	263
Control Delay (s)	2.2	0.0	0.0	176.8
Lane LOS	A			F
Approach Delay (s)	0.8		0.0	176.8
Approach LOS				F

Intersection Summary			
Average Delay		17.6	
Intersection Capacity Utilization		59.1%	ICU Level of Service B
Analysis Period (min)		15	

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/17/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	588	17	17	653	16	8	1	18	153	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.996			0.914			0.963	
Flt Protected					0.999			0.987			0.965	
Satd. Flow (prot)	0	3324	0	0	1748	0	0	1543	0	0	2001	0
Flt Permitted		0.952			0.977			0.910			0.757	
Satd. Flow (perm)	0	3164	0	0	1709	0	0	1422	0	0	1570	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			28			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	661	20	20	702	20	12	4	28	212	0	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	685	0	0	742	0	0	44	0	0	291	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/17/2015

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/17/2015

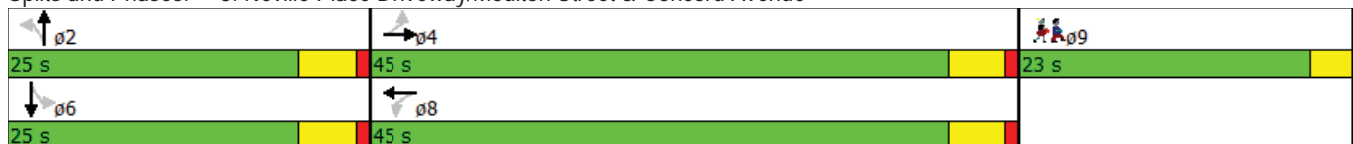


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		40.1			40.1			15.3				15.3
Actuated g/C Ratio		0.61			0.61			0.23				0.23
v/c Ratio		0.35			0.71			0.12				0.71
Control Delay		7.4			14.4			11.4				28.1
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		7.4			14.4			11.4				28.1
LOS		A			B			B				C
Approach Delay		7.4			14.4			11.4				28.1
Approach LOS		A			B			B				C

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	65.4
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	13.9
Intersection Capacity Utilization:	75.8%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	D

Splits and Phases: 3: Neville Place Driveway/Moulton Street & Concord Avenue



Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/17/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	685	742	44	291
v/c Ratio	0.35	0.71	0.12	0.71
Control Delay	7.4	14.4	11.4	28.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	14.4	11.4	28.1
Queue Length 50th (ft)	62	180	5	84
Queue Length 95th (ft)	107	362	1	20
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	1941	1048	455	522
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.71	0.10	0.56
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/17/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	1	588	17	17	653	16	8	1	18	153	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			1.00			0.91			0.96	
Flt Protected		1.00			1.00			0.99			0.96	
Satd. Flow (prot)		3322			1748			1542			2002	
Flt Permitted		0.95			0.98			0.91			0.76	
Satd. Flow (perm)		3164			1709			1422			1570	
Peak-hour factor, PHF	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Adj. Flow (vph)	4	661	20	20	702	20	12	4	28	212	0	79
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	45	0
Lane Group Flow (vph)	0	683	0	0	741	0	0	23	0	0	246	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.1			40.1			15.3			15.3	
Effective Green, g (s)		40.1			40.1			15.3			15.3	
Actuated g/C Ratio		0.61			0.61			0.23			0.23	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		1.0			1.0			3.0			3.0	
Lane Grp Cap (vph)		1940			1047			332			367	
v/s Ratio Prot												
v/s Ratio Perm		0.22			0.43			0.02			0.16	
v/c Ratio		0.35			0.71			0.07			0.67	
Uniform Delay, d1		6.2			8.6			19.5			22.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			4.0			0.1			4.6	
Delay (s)		6.7			12.7			19.6			27.3	
Level of Service		A			B			B			C	
Approach Delay (s)		6.7			12.7			19.6			27.3	
Approach LOS		A			B			B			C	

Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	62	2	92	5	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993		0.990			
Flt Protected	0.955					
Satd. Flow (prot)	1622	0	1669	0	0	1503
Flt Permitted	0.955					
Satd. Flow (perm)	1622	0	1669	0	0	1503
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Heavy Vehicles (%)	0%	0%	4%	20%	0%	18%
Parking (#/hr)				20		
Adj. Flow (vph)	76	4	100	8	0	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	108	0	0	93
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free










Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.4%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	62	2	92	5	0	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Hourly flow rate (vph)	76	4	100	8	0	93
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	197	104			108	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197	104			108	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	100			100	
cM capacity (veh/h)	796	956			1495	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	80	108	93			
Volume Left	76	0	0			
Volume Right	4	8	0			
cSH	803	1700	1495			
Volume to Capacity	0.10	0.06	0.00			
Queue Length 95th (ft)	8	0	0			
Control Delay (s)	10.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	10.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			15.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/22/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↔		↘↘	
Volume (vph)	32	809	839	140	71	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.981		0.943	
Flt Protected		0.998			0.972	
Satd. Flow (prot)	0	3238	1629	0	1554	0
Flt Permitted		0.998			0.972	
Satd. Flow (perm)	0	3238	1629	0	1554	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Heavy Vehicles (%)	0%	4%	2%	9%	8%	0%
Adj. Flow (vph)	44	1108	953	159	89	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1152	1112	0	154	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.3%
Analysis Period (min)	15
	ICU Level of Service C

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

















9/22/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Volume (veh/h)	32	809	839	140	71	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Hourly flow rate (vph)	44	1108	953	159	89	65
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.94	
vC, conflicting volume	1112				1675	1033
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1112				1583	1033
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	93				0	72
cM capacity (veh/h)	635				81	233
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	413	739	1112	154		
Volume Left	44	0	0	89		
Volume Right	0	0	159	65		
cSH	635	1700	1700	113		
Volume to Capacity	0.07	0.43	0.65	1.37		
Queue Length 95th (ft)	6	0	0	266		
Control Delay (s)	2.0	0.0	0.0	283.4		
Lane LOS	A			F		
Approach Delay (s)	0.7		0.0	283.4		
Approach LOS				F		
Intersection Summary						
Average Delay			18.4			
Intersection Capacity Utilization			65.3%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/22/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	790	11	18	624	98	5	1	9	40	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.981			0.932			0.962	
Flt Protected		0.998			0.999			0.984			0.965	
Satd. Flow (prot)	0	3260	0	0	1682	0	0	1568	0	0	1755	0
Flt Permitted		0.912			0.960			0.877			0.771	
Satd. Flow (perm)	0	2979	0	0	1617	0	0	1398	0	0	1402	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11			12			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%
Adj. Flow (vph)	36	963	20	24	678	117	8	4	12	52	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1019	0	0	819	0	0	24	0	0	72	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings

3: Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/22/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		46.2			46.2			7.4			7.4	
Actuated g/C Ratio		0.82			0.82			0.13			0.13	
v/c Ratio		0.42			0.62			0.12			0.31	
Control Delay		3.6			7.1			17.7			13.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.6			7.1			17.7			13.2	
LOS		A			A			B			B	
Approach Delay		3.6			7.1			17.7			13.2	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	56.6
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	5.6
Intersection Capacity Utilization	67.8%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	C

Splits and Phases: 3: Driveway/Moulton Street & Concord Avenue



Lanes, Volumes, Timings
3: Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Driveway/Moulton Street & Concord Avenue





















9/22/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1019	819	24	72
v/c Ratio	0.42	0.62	0.12	0.31
Control Delay	3.6	7.1	17.7	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.6	7.1	17.7	13.2
Queue Length 50th (ft)	62	125	4	4
Queue Length 95th (ft)	90	275	3	0
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	2434	1323	503	535
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.62	0.05	0.13
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

3: Driveway/Moulton Street & Concord Avenue










9/22/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	790	11	18	624	98	5	1	9	40	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			0.98			0.93			0.96	
Flt Protected		1.00			1.00			0.98			0.97	
Satd. Flow (prot)		3261			1681			1568			1756	
Flt Permitted		0.91			0.96			0.88			0.77	
Satd. Flow (perm)		2978			1616			1399			1403	
Peak-hour factor, PHF	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45
Adj. Flow (vph)	36	963	20	24	678	117	8	4	12	52	0	20
RTOR Reduction (vph)	0	1	0	0	3	0	0	11	0	0	54	0
Lane Group Flow (vph)	0	1018	0	0	816	0	0	13	0	0	18	0
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		44.2			44.2			4.5			4.5	
Effective Green, g (s)		44.2			44.2			4.5			4.5	
Actuated g/C Ratio		0.75			0.75			0.08			0.08	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		1.0			1.0			3.0			3.0	
Lane Grp Cap (vph)		2242			1216			107			107	
v/s Ratio Prot												
v/s Ratio Perm		0.34			c0.50			0.01			c0.01	
v/c Ratio		0.45			0.67			0.12			0.16	
Uniform Delay, d1		2.7			3.6			25.3			25.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			3.0			0.5			0.7	
Delay (s)		3.4			6.6			25.8			26.1	
Level of Service		A			A			C			C	
Approach Delay (s)		3.4			6.6			25.8			26.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			5.9					HCM 2000 Level of Service		A		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			58.7					Sum of lost time (s)		13.0		
Intersection Capacity Utilization			67.8%					ICU Level of Service		C		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	15	1	82	43	2	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985		0.947			
Flt Protected	0.957					0.994
Satd. Flow (prot)	1612	0	1639	0	0	1732
Flt Permitted	0.957					0.994
Satd. Flow (perm)	1612	0	1639	0	0	1732
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Parking (#/hr)				20		
Adj. Flow (vph)	32	4	106	68	8	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	174	0	0	72
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.9%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			Y
Volume (veh/h)	15	1	82	43	2	47
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Hourly flow rate (vph)	32	4	106	68	8	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	221	141			175	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	221	141			175	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			99	
cM capacity (veh/h)	767	913			1414	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	36	175	72			
Volume Left	32	0	8			
Volume Right	4	68	0			
cSH	781	1700	1414			
Volume to Capacity	0.05	0.10	0.01			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.8	0.0	0.9			
Lane LOS	A		A			
Approach Delay (s)	9.8	0.0	0.9			
Approach LOS	A					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			16.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/22/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↔		↘↘	
Volume (vph)	26	775	723	111	106	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.979		0.957	
Flt Protected		0.997			0.967	
Satd. Flow (prot)	0	3328	1660	0	1615	0
Flt Permitted		0.997			0.967	
Satd. Flow (perm)	0	3328	1660	0	1615	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Heavy Vehicles (%)	0%	1%	1%	0%	1%	3%
Adj. Flow (vph)	50	824	803	144	136	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	874	947	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 59.7% ICU Level of Service B
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

9/22/2015























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕		↕	
Volume (veh/h)	26	775	723	111	106	39
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Hourly flow rate (vph)	50	824	803	144	136	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.95	
vC, conflicting volume	947				1388	875
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	947				1294	875
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				1	78
cM capacity (veh/h)	733				137	290
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	325	550	947	200		
Volume Left	50	0	0	136		
Volume Right	0	0	144	64		
cSH	733	1700	1700	165		
Volume to Capacity	0.07	0.32	0.56	1.21		
Queue Length 95th (ft)	5	0	0	278		
Control Delay (s)	2.3	0.0	0.0	193.8		
Lane LOS	A			F		
Approach Delay (s)	0.9		0.0	193.8		
Approach LOS				F		
Intersection Summary						
Average Delay			19.5			
Intersection Capacity Utilization			59.7%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	1	589	17	17	653	16	8	1	18	153	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.996			0.914			0.963	
Flt Protected					0.999			0.987			0.965	
Satd. Flow (prot)	0	3324	0	0	1748	0	0	1543	0	0	2001	0
Flt Permitted		0.952			0.977			0.910			0.757	
Satd. Flow (perm)	0	3164	0	0	1709	0	0	1422	0	0	1570	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			28			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	662	20	20	702	20	12	4	28	212	0	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	686	0	0	742	0	0	44	0	0	291	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		40.1			40.1			15.3				15.3
Actuated g/C Ratio		0.61			0.61			0.23				0.23
v/c Ratio		0.35			0.71			0.12				0.71
Control Delay		7.4			14.4			11.4				28.1
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		7.4			14.4			11.4				28.1
LOS		A			B			B				C
Approach Delay		7.4			14.4			11.4				28.1
Approach LOS		A			B			B				C

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	65.4
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	13.9
Intersection Capacity Utilization:	75.8%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	D

Splits and Phases: 3: Neville Place Driveway/Moulton Street & Concord Avenue



Lanes, Volumes, Timings
3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	686	742	44	291
v/c Ratio	0.35	0.71	0.12	0.71
Control Delay	7.4	14.4	11.4	28.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	14.4	11.4	28.1
Queue Length 50th (ft)	63	180	5	84
Queue Length 95th (ft)	107	362	1	20
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	1941	1048	455	522
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.71	0.10	0.56
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	1	589	17	17	653	16	8	1	18	153	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			1.00			0.91			0.96	
Flt Protected		1.00			1.00			0.99			0.96	
Satd. Flow (prot)		3322			1748			1542			2002	
Flt Permitted		0.95			0.98			0.91			0.76	
Satd. Flow (perm)		3164			1709			1422			1570	
Peak-hour factor, PHF	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Adj. Flow (vph)	4	662	20	20	702	20	12	4	28	212	0	79
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	45	0
Lane Group Flow (vph)	0	684	0	0	741	0	0	23	0	0	246	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.1			40.1			15.3			15.3	
Effective Green, g (s)		40.1			40.1			15.3			15.3	
Actuated g/C Ratio		0.61			0.61			0.23			0.23	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		1.0			1.0			3.0			3.0	
Lane Grp Cap (vph)		1940			1047			332			367	
v/s Ratio Prot												
v/s Ratio Perm		0.22			0.43			0.02			0.16	
v/c Ratio		0.35			0.71			0.07			0.67	
Uniform Delay, d1		6.2			8.6			19.5			22.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			4.0			0.1			4.6	
Delay (s)		6.7			12.7			19.6			27.3	
Level of Service		A			B			B			C	
Approach Delay (s)		6.7			12.7			19.6			27.3	
Approach LOS		A			B			B			C	

Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	64	2	98	5	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993		0.991			
Flt Protected	0.955					
Satd. Flow (prot)	1622	0	1672	0	0	1503
Flt Permitted	0.955					
Satd. Flow (perm)	1622	0	1672	0	0	1503
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Heavy Vehicles (%)	0%	0%	4%	20%	0%	18%
Parking (#/hr)				20		
Adj. Flow (vph)	78	4	107	8	0	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	115	0	0	93
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Volume (veh/h)	64	2	98	5	0	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.50	0.92	0.62	0.25	0.58
Hourly flow rate (vph)	78	4	107	8	0	93
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	204	111			115	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	204	111			115	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	100			100	
cM capacity (veh/h)	789	948			1487	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	82	115	93			
Volume Left	78	0	0			
Volume Right	4	8	0			
cSH	796	1700	1487			
Volume to Capacity	0.10	0.07	0.00			
Queue Length 95th (ft)	9	0	0			
Control Delay (s)	10.0	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.0	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			15.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/22/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔		↔	
Volume (vph)	33	833	888	148	72	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.981		0.942	
Flt Protected		0.998			0.972	
Satd. Flow (prot)	0	3238	1629	0	1553	0
Flt Permitted		0.998			0.972	
Satd. Flow (perm)	0	3238	1629	0	1553	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Heavy Vehicles (%)	0%	4%	2%	9%	8%	0%
Adj. Flow (vph)	45	1141	1009	168	90	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1186	1177	0	157	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 68.5% ICU Level of Service C
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

9/22/2015



















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Volume (veh/h)	33	833	888	148	72	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.73	0.73	0.88	0.88	0.80	0.52
Hourly flow rate (vph)	45	1141	1009	168	90	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.93	
vC, conflicting volume	1177				1754	1093
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1177				1656	1093
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				0	68
cM capacity (veh/h)	600				72	213

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	426	761	1177	157
Volume Left	45	0	0	90
Volume Right	0	0	168	67
cSH	600	1700	1700	100
Volume to Capacity	0.08	0.45	0.69	1.57
Queue Length 95th (ft)	6	0	0	302
Control Delay (s)	2.2	0.0	0.0	375.9
Lane LOS	A			F
Approach Delay (s)	0.8		0.0	375.9
Approach LOS				F

Intersection Summary			
Average Delay		23.8	
Intersection Capacity Utilization		68.5%	ICU Level of Service C
Analysis Period (min)		15	

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/22/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	814	11	18	665	104	5	1	9	41	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.981			0.932			0.963	
Flt Protected		0.998			0.999			0.984			0.965	
Satd. Flow (prot)	0	3260	0	0	1682	0	0	1568	0	0	1757	0
Flt Permitted		0.910			0.961			0.881			0.770	
Satd. Flow (perm)	0	2972	0	0	1618	0	0	1404	0	0	1402	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11			12			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%
Adj. Flow (vph)	36	993	20	24	723	124	8	4	12	53	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1049	0	0	871	0	0	24	0	0	73	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings
 3: Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		46.1		46.1			7.4			7.4		
Actuated g/C Ratio		0.82		0.82			0.13			0.13		
v/c Ratio		0.43		0.66			0.12			0.31		
Control Delay		3.8		8.4			17.7			13.4		
Queue Delay		0.0		0.0			0.0			0.0		
Total Delay		3.8		8.4			17.7			13.4		
LOS		A		A			B			B		
Approach Delay		3.8		8.4			17.7			13.4		
Approach LOS		A		A			B			B		

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	56.5
Natural Cycle:	100
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	6.3
Intersection Capacity Utilization	70.5%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	C

Splits and Phases: 3: Driveway/Moulton Street & Concord Avenue

25 s	45 s	23 s
25 s	45 s	

Lanes, Volumes, Timings
3: Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Driveway/Moulton Street & Concord Avenue

9/22/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1049	871	24	73
v/c Ratio	0.43	0.66	0.12	0.31
Control Delay	3.8	8.4	17.7	13.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.8	8.4	17.7	13.4
Queue Length 50th (ft)	65	142	4	4
Queue Length 95th (ft)	94	#356	3	0
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	2427	1323	507	536
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.66	0.05	0.14

















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Driveway/Moulton Street & Concord Avenue










9/22/2015

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	15	814	11	18	665	104	5	1	9	41	0	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12	
Total Lost time (s)		5.0			5.0			5.0			5.0		
Lane Util. Factor		0.95			1.00			1.00			1.00		
Frt		1.00			0.98			0.93			0.96		
Flt Protected		1.00			1.00			0.98			0.96		
Satd. Flow (prot)		3261			1681			1568			1757		
Flt Permitted		0.91			0.96			0.88			0.77		
Satd. Flow (perm)		2972			1618			1405			1402		
Peak-hour factor, PHF	0.42	0.82	0.55	0.75	0.92	0.84	0.62	0.25	0.75	0.77	0.25	0.45	
Adj. Flow (vph)	36	993	20	24	723	124	8	4	12	53	0	20	
RTOR Reduction (vph)	0	1	0	0	3	0	0	11	0	0	54	0	
Lane Group Flow (vph)	0	1048	0	0	868	0	0	13	0	0	19	0	
Heavy Vehicles (%)	0%	3%	0%	0%	4%	0%	0%	0%	0%	15%	0%	11%	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		44.0			44.0			4.5			4.5		
Effective Green, g (s)		44.0			44.0			4.5			4.5		
Actuated g/C Ratio		0.75			0.75			0.08			0.08		
Clearance Time (s)		5.0			5.0			5.0			5.0		
Vehicle Extension (s)		1.0			1.0			3.0			3.0		
Lane Grp Cap (vph)		2235			1216			108			107		
v/s Ratio Prot													
v/s Ratio Perm		0.35			c0.54			0.01			c0.01		
v/c Ratio		0.47			0.71			0.12			0.17		
Uniform Delay, d1		2.8			3.9			25.2			25.3		
Progression Factor		1.00			1.00			1.00			1.00		
Incremental Delay, d2		0.7			3.6			0.5			0.8		
Delay (s)		3.5			7.5			25.7			26.0		
Level of Service		A			A			C			C		
Approach Delay (s)		3.5			7.5			25.7			26.0		
Approach LOS		A			A			C			C		
Intersection Summary													
HCM 2000 Control Delay			6.3									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.71										
Actuated Cycle Length (s)			58.5									Sum of lost time (s)	13.0
Intersection Capacity Utilization			70.5%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Lanes, Volumes, Timings

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	15	1	86	44	2	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	12	10	12	12	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985		0.948			
Flt Protected	0.957					0.995
Satd. Flow (prot)	1612	0	1641	0	0	1733
Flt Permitted	0.957					0.995
Satd. Flow (perm)	1612	0	1641	0	0	1733
Link Speed (mph)	30		30			30
Link Distance (ft)	266		1010			274
Travel Time (s)	6.0		23.0			6.2
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Parking (#/hr)				20		
Adj. Flow (vph)	32	4	112	70	8	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	182	0	0	75
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	9		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.00	1.09	1.00	1.00	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.2%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis

1: Fawcett Street & 70 Fawcett Street Spur Road

9/22/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	1	86	44	2	49
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.47	0.25	0.77	0.63	0.25	0.73
Hourly flow rate (vph)	32	4	112	70	8	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	230	147			182	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	230	147			182	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			99	
cM capacity (veh/h)	759	906			1406	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	36	182	75			
Volume Left	32	0	8			
Volume Right	4	70	0			
cSH	773	1700	1406			
Volume to Capacity	0.05	0.11	0.01			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.9	0.0	0.8			
Lane LOS	A		A			
Approach Delay (s)	9.9	0.0	0.8			
Approach LOS	A					
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utilization			17.2%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings

2: Concord Avenue & Fawcett Street

9/22/2015



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔		↕↔	
Volume (vph)	28	801	757	116	110	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	9	12	10	12
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Flt			0.979		0.957	
Flt Protected		0.997			0.967	
Satd. Flow (prot)	0	3328	1660	0	1615	0
Flt Permitted		0.997			0.967	
Satd. Flow (perm)	0	3328	1660	0	1615	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		615	620		1010	
Travel Time (s)		14.0	14.1		23.0	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Heavy Vehicles (%)	0%	1%	1%	0%	1%	3%
Adj. Flow (vph)	54	852	841	151	141	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	906	992	0	207	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.14	1.09	1.14	1.00	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 62.1% ICU Level of Service B
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis

2: Concord Avenue & Fawcett Street

9/22/2015



















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Volume (veh/h)	28	801	757	116	110	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.52	0.94	0.90	0.77	0.78	0.61
Hourly flow rate (vph)	54	852	841	151	141	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		615				
pX, platoon unblocked					0.94	
vC, conflicting volume	992				1450	916
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	992				1345	916
tC, single (s)	4.1				6.8	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				0	76
cM capacity (veh/h)	705				125	273
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	338	568	992	207		
Volume Left	54	0	0	141		
Volume Right	0	0	151	66		
cSH	705	1700	1700	151		
Volume to Capacity	0.08	0.33	0.58	1.37		
Queue Length 95th (ft)	6	0	0	325		
Control Delay (s)	2.5	0.0	0.0	260.5		
Lane LOS	A			F		
Approach Delay (s)	0.9		0.0	260.5		
Approach LOS				F		
Intersection Summary						
Average Delay			26.0			
Intersection Capacity Utilization			62.1%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	604	17	17	688	16	8	1	18	157	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	12	12	10	12	12	9	12	12	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.914			0.963	
Flt Protected					0.999			0.987			0.965	
Satd. Flow (prot)	0	3324	0	0	1750	0	0	1543	0	0	2001	0
Flt Permitted		0.952			0.977			0.909			0.756	
Satd. Flow (perm)	0	3164	0	0	1711	0	0	1421	0	0	1568	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			2			28			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		687			615			216			349	
Travel Time (s)		15.6			14.0			4.9			7.9	
Peak Hour Factor	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	679	20	20	740	20	12	4	28	218	0	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	703	0	0	780	0	0	44	0	0	299	0
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)		0			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	1.09	1.00	1.00	1.09	1.00	1.00	1.14	1.00	1.00	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
 3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Lanes, Volumes, Timings

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	40.0	40.0		40.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	45.0	45.0		45.0	45.0		21.0	21.0		21.0	21.0	
Total Split (s)	45.0	45.0		45.0	45.0		25.0	25.0		25.0	25.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		26.9%	26.9%		26.9%	26.9%	
Maximum Green (s)	40.0	40.0		40.0	40.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		40.1			40.1			15.7				15.7
Actuated g/C Ratio		0.61			0.61			0.24				0.24
v/c Ratio		0.36			0.75			0.12				0.71
Control Delay		7.7			16.3			11.4				28.3
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		7.7			16.3			11.4				28.3
LOS		A			B			B				C
Approach Delay		7.7			16.3			11.4				28.3
Approach LOS		A			B			B				C

Intersection Summary

Area Type:	Other
Cycle Length:	93
Actuated Cycle Length:	65.9
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	14.8
Intersection Capacity Utilization:	77.9%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	D

Splits and Phases: 3: Neville Place Driveway/Moulton Street & Concord Avenue



Lanes, Volumes, Timings
3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

Lane Group	ø9
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	1.0
Recall Mode	None
Walk Time (s)	14.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	703	780	44	299
v/c Ratio	0.36	0.75	0.12	0.71
Control Delay	7.7	16.3	11.4	28.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.7	16.3	11.4	28.3
Queue Length 50th (ft)	66	202	5	88
Queue Length 95th (ft)	110	#422	1	21
Internal Link Dist (ft)	607	535	136	269
Turn Bay Length (ft)				
Base Capacity (vph)	1928	1042	452	518
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.75	0.10	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

3: Neville Place Driveway/Moulton Street & Concord Avenue

9/22/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	1	604	17	17	688	16	8	1	18	157	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	12	12	10	12	12	9	12	12	16	12
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			1.00			0.91			0.96	
Flt Protected		1.00			1.00			0.99			0.96	
Satd. Flow (prot)		3322			1748			1542			2002	
Flt Permitted		0.95			0.98			0.91			0.76	
Satd. Flow (perm)		3164			1710			1421			1569	
Peak-hour factor, PHF	0.25	0.89	0.85	0.85	0.93	0.80	0.67	0.25	0.64	0.72	0.25	0.68
Adj. Flow (vph)	4	679	20	20	740	20	12	4	28	218	0	81
RTOR Reduction (vph)	0	2	0	0	1	0	0	21	0	0	45	0
Lane Group Flow (vph)	0	701	0	0	779	0	0	23	0	0	254	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.1			40.1			15.7			15.7	
Effective Green, g (s)		40.1			40.1			15.7			15.7	
Actuated g/C Ratio		0.61			0.61			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		1.0			1.0			3.0			3.0	
Lane Grp Cap (vph)		1928			1042			339			374	
v/s Ratio Prot												
v/s Ratio Perm		0.22			0.46			0.02			0.16	
v/c Ratio		0.36			0.75			0.07			0.68	
Uniform Delay, d1		6.4			9.2			19.4			22.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			4.9			0.1			4.9	
Delay (s)		7.0			14.1			19.5			27.6	
Level of Service		A			B			B			C	
Approach Delay (s)		7.0			14.1			19.5			27.6	
Approach LOS		A			B			B			C	

Intersection Summary

HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



APPENDIX F – PEDESTRIAN DELAY ANALYSIS

Design Consultants
 October 8, 2015
 Pedestrian Delay Calculations
 2000 Highway Capacity Analysis

Unsignalized Intersections

Critical gap for a single pedestrian

Equ. 18-17 $t_c = (L / S_p) + t_s$

Assume no pedestrian platooning, therefore $t_c = t_G$

Average Delay to Wait for an Adequate Gap

Equ. 18-21 $d_g = (1 / v) * (e^{(v*t_c)} - (v*t_c) - 1)$

	Weekday AM Peak Hour						Weekday PM Peak Hour					
	Fawcett St/Spur Road crossing south leg			Concord Ave/Fawcett St crossing west leg			Fawcett St/Spur Road crossing south leg			Concord Ave/Fawcett St crossing west leg		
	Existing (2015)	Build (2015)	Future (2020)	Existing (2015)	Build (2015)	Future (2020)	Existing (2015)	Build (2015)	Future (2020)	Existing (2015)	Build (2015)	Future (2020)
(crosswalk Length) L =	24	24	24	45	45	45	24	24	24	45	45	45
S_p =	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
t_s =	3	3	3	3	3	3	3	3	3	3	3	3
t_c =	9.857	9.857	9.857	15.857	15.857	15.857	9.857	9.857	9.857	15.857	15.857	15.857
v =	0.05639	0.05917	0.06139	0.47528	0.47611	0.49694	0.04889	0.05194	0.05389	0.43389	0.43417	0.45167
t_G =	9.857	9.857	9.857	15.857	15.857	15.857	9.857	9.857	9.857	15.857	15.857	15.857
d_g =	3.3	3.5	3.7	3927.8	3973.3	5303.0	2.8	3.0	3.2	2224.0	2232.5	2837.3
Ped. LOS	A	A	A	F	F	F	A	A	A	F	F	F

Signalized Intersection

Equ.18-5 $d_p = 0.5(C-g)^2/C$

	Concord Avenue/Moulton Street					
	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Existing (2015)	Build (2015)	Future (2020)	Existing (2015)	Build (2015)	Future (2020)
Cycle Length C =	90	90	90	90	90	90
effective green time g =	23	23	23	23	23	23
average pedestrian delay d_p =	24.9	24.9	24.9	24.9	24.9	24.9
Ped. LOS	C	C	C	C	C	C



APPENDIX G – SIGNAL WARRANT ANALYSIS

Traffic Signal Warrant Analysis for the Intersection of Concord Avenue and Fawcett Street

Warrant 1, Eight-hour Vehicular Volume

Condition A for Warrant 1 calls for the vehicles per hour given in both of the 100% columns of Condition A in Table 4C-1 to exist on the major-street and the higher-volume minor-street approach. Condition B calls for the vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 to exist on the major-street and the higher-volume minor-street approach. The intersection of Concord Avenue and Fawcett Street does not meet Condition A for Warrant 1, but it does meet Condition B. Only one of these conditions need to be met to satisfy this warrant. See Table 4C-1 below for required volumes.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

^a Basic minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

^d May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

MUTCD, 2009 ed., Section 4C.02, Table 4C-1

The ATR data used to satisfy Condition B is shown in the table below. Note that complete ATR data is included in Appendix A.

Eight-Hour Vehicular Volume		
Condition A + B	Concord Ave	Fawcett St
7:00am - 3:00pm	1412 vph	85 vph

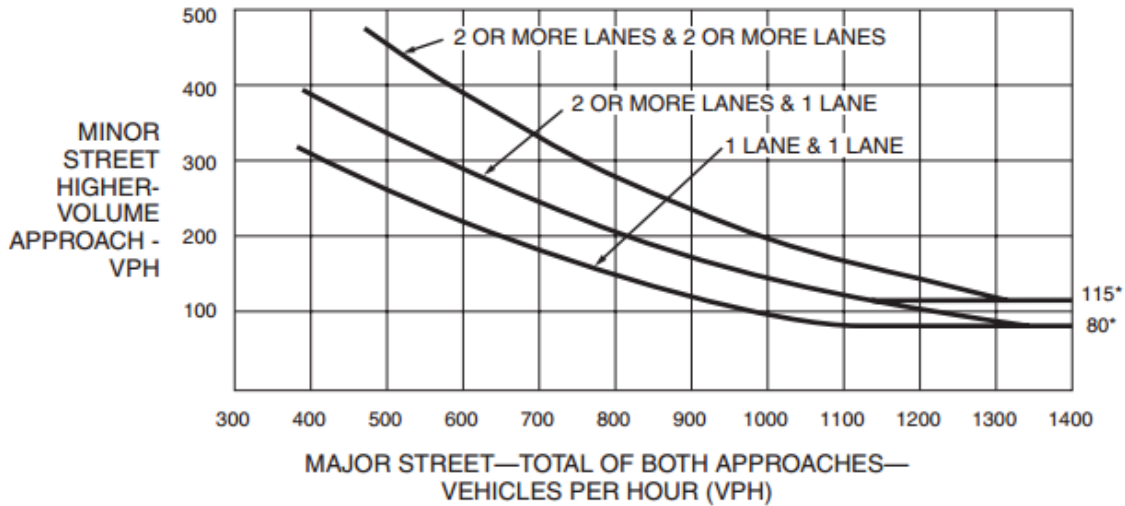
Warrant 2, Four-hour Vehicular Volume

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 2.

Warrant 2 defines thresholds for traffic volumes in terms of vehicles per hour, based on any four hours of data from an average day. To fulfill the condition, the points plotted on Figure 4C-1 (see below)

representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor street must fall above the applicable curve. The threshold volume for the minor street approach is 80 vehicles per hour. The intersection of Concord Avenue and Fawcett Street does not satisfy this warrant, because there was volumes on Fawcett Street do not meet this lower threshold.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

MUTCD, 2009 ed., Section 4C.04, Figure 4C-1

Warrant 3, Peak Hour

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 3.

The standard for this warrant states that it “shall only be applied in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.” The intersection of Concord Avenue and Fawcett Street does not fit this description, therefore the warrant is not satisfied.

Warrant 4, Pedestrian Volume

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 4.

The minimum threshold value for pedestrians crossing the intersection per hour is 107. During September 2015, pedestrian counts were carried out at the study intersection, where a maximum of 49 pedestrians in an hour were observed traversing the intersection. This volume does not meet minimum values, therefore the warrant is not satisfied.

Warrant 5, School Crossing

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 5.

Warrant 5 is for use at intersections where the fact that schoolchildren cross the major street is the principal reason to install a traffic signal. The lower threshold for this warrant is 20 school children crossing the roadway in the highest crossing hour. This threshold was not met, therefore the warrant is not satisfied.

Warrant 6, Coordinated Signal System

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 6.

Warrant 6 is for intersections that fall between two coordinated signals. The following criteria for this warrant are laid out by the MUTCD.

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

- A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.**
- B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.**

MUTCD, 2009 ed., Section 4C.07, Paragraph 02

Neither of these conditions are applicable at the intersection of Concord Avenue and Fawcett Street, therefore the warrant is not satisfied.

Warrant 7, Crash Experience

The intersection of Concord Avenue and Fawcett Street does not meet the conditions for Warrant 7.

There are three conditions that must be met for Warrant 7. Condition A states that adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce crash frequency. Condition B is that five or more reported crashes have occurred within a 12-month period, each involving personal injury or property damage. After reviewing the most recent three years of crash data from MassDOT, there has not been a 12-month period with five or more crashes. Condition C is that vehicular volumes meet the 80% columns in Table 4C-1, shown above. Condition C is not met by the volumes at this intersection, Warrant 7 is not met because not all Conditions are fulfilled.

Warrant 8, Roadway Network

The intersection of Concord Avenue and Fawcett Street does not meet the criteria for Warrant 8.

Warrant 8 is meant for an intersection that is part of a roadway network that would benefit operationally from a traffic control signal. While examining the network, this intersection does not fit this warrant, and it also does not meet the standards described. The MUTCD lays out three characteristics for the major route in this case, at least one of which would have to apply to Concord Avenue. They are shown below.

A major route as used in this signal warrant shall have at least one of the following characteristics:

- A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.**
- B. It includes rural or suburban highways outside, entering, or traversing a city.**
- C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.**

Concord Avenue does not match any of these characteristics, therefore the warrant is not satisfied.

Warrant 9, Intersection Near a Grade Crossing

The intersection of Concord Avenue and Fawcett Street does not meet the criteria for Warrant 9.

In order to fulfill the conditions for Warrant 9, a grade crossing must exist on an approach that is STOP or YIELD controlled (Fawcett Street) within 140 feet of the stop or yield line. This is not the case for this intersection, therefore the warrant is not satisfied.



APPENDIX H – SIGHT LINE ANALYSIS



FAWCETT ST.

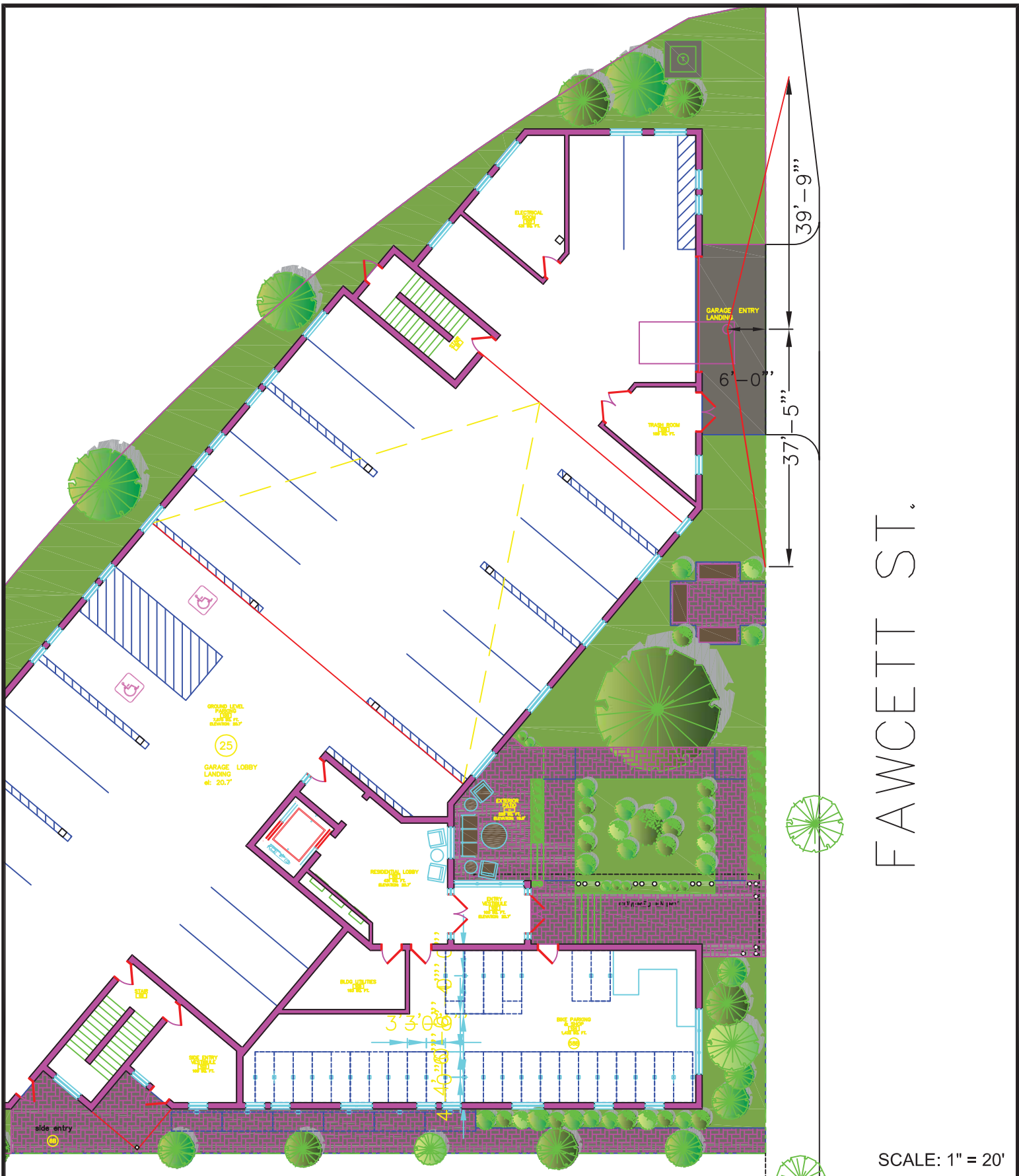
SCALE: 1" = 20'

Design Consultants, Inc.
 CIVIL ENGINEERS and LAND SURVEYORS
 120 Middlesex Avenue, Suite 20
 Somerville, MA 02145
 817-776-3350p 617-776-7710f
 10/26/2015 12:19:05 PM

95 FAWCETT STREET,
 CAMBRIDGE, MASSACHUSETTS

Sight Line Analysis
 Option A

DATE: 10.16.15 DCI PROJECT: 2015-009



FAWCETT ST.

Design Consultants, Inc.
 CIVIL ENGINEERS and LAND SURVEYORS
 120 Middlesex Avenue, Suite 20
 Somerville, MA 02145
 617-776-3350p 617-776-7710f
 10/26/2015 12:23:26 PM

95 FAWCETT STREET,
 CAMBRIDGE, MASSACHUSETTS

Sight Line Analysis
 Option B

DATE: 10.16.15 DCI PROJECT: 2015-009



FAWCETT ST.

potential
new street

SCALE: 1" = 20'

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 10/26/2015 12:23:57 PM

**95 FAWCETT STREET,
 CAMBRIDGE, MASSACHUSETTS**

**Sight Line Analysis
 Option C**

DATE: 10.16.15 DCI PROJECT: 2015-009